State University of New York
Institute of Technology

2009-2011 Undergraduate Catalog

Technology | Professional Studies | Liberal Arts | Great Success Begins Here

Undergraduate Catalog

2009-2011

This catalog represents course offerings and requirements in effect at the time of publication.
Current information may be obtained from the appropriate academic and administrative offices.

— *President's Message* —

Welcome!

SUNYIT—the State University of New York Institute of Technology at Utica/Rome—is a unique member of the largest comprehensive public system of higher education in the nation, the State University of New York.

Founded in 1966, SUNYIT provides undergraduate and graduate degree programs in technology, professional studies, and the liberal arts. Opportunities abound for our undergraduate students—whether they arrive as freshmen or transfer here as juniors—as well as graduate students, who come from all over the region and around the world.

SUNYIT is situated on hundreds of beautiful acres in the foothills of the Adirondacks, and we are currently engaged in a $100 million dollar campus expansion. Even as construction continues on major projects, our students and faculty enjoy 21st century academic facilities in a picturesque, natural setting.

Please refer to this catalog frequently as it is both a valuable resource and a useful guide. On behalf of the faculty and staff, I extend best wishes for your success at SUNYIT.

Sincerely,

Bjong Wolf Yeigh
President and Professor

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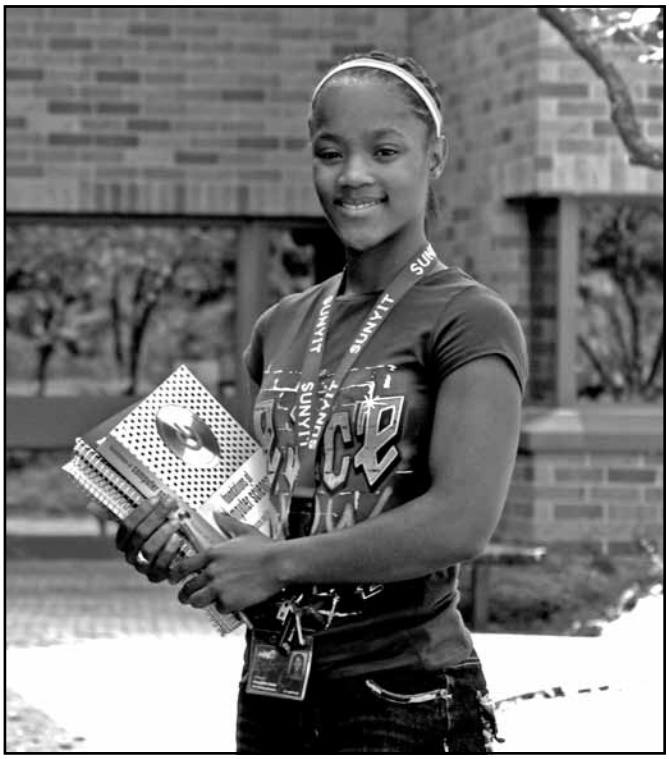

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About SUNYIT

The State University of New York Institute of Technology at Utica/Rome (SUNYIT) offers undergraduate and graduate degree programs in technology, professional studies, and the liberal arts. The SUNYIT campus is a high-tech learning environment on hundreds of acres in Marcy, N.Y., minutes from NYS Thruway Exit 31, Utica. More than 2,900 students come from all over New York, many other states, and more than 20 other nations; a growing number of students also take SUNYIT courses and, in some cases, entire degree programs online.

Established by the SUNY Board of Trustees on June 14, 1966, SUNYIT is the State University's only institute of technology. Originally a graduate and upper-division institution, the college offered classes in temporary locations and at extension sites for several years until the first buildings were constructed on the permanent campus in the 1980s. Funding has been secured for four major campus buildings: a $13.6 million student center, $20 million field house, $23.5 million residence hall, and a $27.5 million advanced technology center.

At SUNYIT, students are mentored by experienced faculty in small classes, many with fewer than 20 students. Through internships, close cooperation with employers, and an annual career fair, graduates enjoy extraordinarily high placement rates. In addition to their commitment to quality teaching, faculty engage in scholarly research including collaborative efforts with the Air Force Research Laboratory in Rome, N.Y.

Apart from their excellent academic experience, SUNYIT students enjoy campus life in highly rated residence halls. The campus's two residential complexes – Mohawk and Adirondack Halls – offer the privacy and convenience of apartments, with students sharing suites in townhouse-style buildings. Students themselves have rated their residential experience highly in SUNY student opinion surveys.

Life on campus also features a full menu of recreational and cultural experiences. The Campus Center houses a gymnasium, racquetball courts, fully-equipped exercise and weight rooms, a swimming pool, saunas, and a 400-seat dining hall. SUNYIT is a member of the National Collegiate Athletic Association (NCAA), the Eastern Collegiate Athletic Conference (ECAC), and the North Eastern Athletic Conference (NEAC). NCAA Division III athletics (men's and women's basketball, cross country, soccer, swimming, and volleyball; men's baseball and golf; and women's bowling and softball) and intramurals are complemented by entertainment, activities and community-building experiences that support and sustain a unique campus culture.

The campus is home to a U.S. Department of Defense Reliability Information Analysis Center (RIAC), a $19 million project operated under the auspices of a team comprising: Wyle Laboratories, Inc., of Huntsville, Ala.; SUNYIT; Quanterion Solutions Incorporated of Utica, N.Y.; the University of Maryland; and The Pennsylvania State University.

SUNYIT is also the lead agency in the Mohawk Valley National Information Technology Apprenticeship System (NITAS) Consortium in partnership with the Workforce Investment Board (WIB) of Herkimer, Madison and Oneida Counties. NITAS combines classroom training, on-the-job learning and industry certifications to produce a qualified pool of IT professionals to meet projected regional IT sector job growth needs and increase the skills of the regional workforce. NITAS provides mentored internships for SUNYIT students in several programs.

The SUNYIT campus is a resource for the region in a variety of ways. Hundreds of senior citizens take part in lifelong-learning courses each year as part of the Mohawk Valley Institute for Learning in Retirement. Business owners and entrepreneurs have obtained help, advice and services from the Small Business Development Center at SUNYIT, one of 23 campus-based regional centers and 50 outreach offices in New York State providing expert management and technical assistance to solve business problems and foster entrepreneurship.

SUNYIT's more than 20,000 alumni are enjoying successful careers in many fields across the country and around the world. With a growing number of degree programs and the continuing development of the campus, SUNYIT continues to build on four decades of providing affordable, quality education and service as part of the nation's largest comprehensive system of public higher education, the State University of New York.

Our Mission

The mission of the State University of New York Institute of Technology at Utica/Rome (SUNYIT) is to offer undergraduate studies in professional, technical, and selected liberal arts fields, as well as graduate studies in selected academic disciplines; to encourage participation in educationally oriented community and public service; and to support basic and applied research appropriate to its curricula.

SUNYIT values and encourages academic and intellectual achievement of the highest quality, broad access to persons motivated to pursue college preparation and experience, the breadth and depth provided by a sound and comprehensive liberal arts education and the technical competencies inherent to the applied disciplines. SUNYIT is committed to the integration of these elements in a coherent program of higher learning.

In addition, SUNYIT strives to provide a challenging, culturally diverse, and supportive educational environment that fosters and encourages active student participation in residential life and student organizations, athletics and recreation, and cultural and social events.

Utica and the Mohawk Valley

Located at the western end of the Mohawk Valley, Utica is the natural gateway to the beautiful Adirondack Mountains and scenic Thousand Islands. The city lies near New York State's geographic center; it is 233 miles from New York City, 190 miles from Buffalo, 100 miles south of the St. Lawrence River, 90 miles north of Binghamton, 90 miles west of Albany (the state capital), and 50 miles east of Syracuse. Utica is a regional transportation hub; visitors can arrive by air (at Hancock International Airport in Syracuse), train or bus (Amtrak and Greyhound service to Utica's historic Union Station), or car (the New York State Thruway or state routes 5, 8, 12).

Utica is a city steeped in history—from the American Revolution through the Industrial Revolution—and is both rich in cultural diversity and supportive of the performing and decorative arts. The city is home to the internationally-recognized Munson-Williams-Proctor Arts Institute, the Utica Symphony Orchestra, Broadway Theater League, and the Stanley Performing Arts Center. Within the city limits are more than 900 acres of parks, the Utica Zoo, a municipal ski facility and youth recreation center, along with facilities for ice skating, golf, tennis, swimming, hiking, and other recreational activities.

Utica is home to the National Distance Running Hall of Fame, and hosts one of the sport's premiere events the second Sunday of July: the Boilermaker Road Race. The race attracts the world's elite runners in an annual field of nearly 10,000 participants; it is the largest 15-kilometer run in the nation.

Additional recreation and entertainment attractions are a short drive from Utica, including: Woods Valley, Snow Ridge, McCauley Mountain and Schumacher Mountain ski resorts; Hinckley, Delta and Oneida Lakes, popular fishing and boating locations; and, hundreds of Adirondack lakes, parks, campgrounds, hiking trails, and scenic views.

With its history, natural beauty, and vibrant communities, the region enjoys numerous social, cultural, and recreational opportunities.

Career Services & Student Transitions

Kunsela Hall, Room B101
315-792-7165
careerservices@sunyit.edu

The mission of the Office of Career Services and Student Transitions is to link the college with the world of work and enhance our students' and alumni's ability to make meaningful career decisions.

Services Available

Career Planning includes everything that must be done in preparation for your work career. Choosing courses, taking notes during lectures, writing papers, reading books, journals, and articles (course-related or otherwise) should all be viewed as components of the career planning process. Career planning becomes more intensive as graduation approaches. You will be updating and editing your resume and cover letters, preparing for and attending job interviews, filling out applications, and arranging for references. Begin the process early, and visit Career Services in Kunsela Hall, Room B101 or phone 315-792-7165 to make an appointment.

Visit the Career Services website at http://careerservices.sunyit.edu/ to learn about career planning and preparation, initiating a job search, resume and cover letter writing tips, interviewing preparation techniques, etc. The website also includes a listing of news and events and links to a host of other career-related websites.

Internship opportunities are coordinated through the Office of Career Services and Student Transitions. An internship may take the form of paid/unpaid or credit/non-credit, or both. If a student wishes to pursue an internship for credit, s/he must contact the academic advisor or set up an appointment with Career Services to discuss the appropriate steps to take before starting an internship experience.

Job Search assistance is available to make your job search process easier. Students have access to our job search database where they may apply for jobs, connect with employers, and learn about internship opportunities. Once an account has been created, you may upload and publish your resume, cover letter, writing samples and other important documents. Students and alumni who are registered also receive emails regarding job and internship opportunities from the Office of Career Services and Student Transitions. Students must register with Career Services and create an account to utilize this service.

Career Fair is a yearly event that provides an opportunity for students, alumni, and employers to meet informally. Students and alumni have the opportunity to learn more about prospective employers while employers have the opportunity to meet students and alumni interested in full-time, part-time, or summer employment and internships.

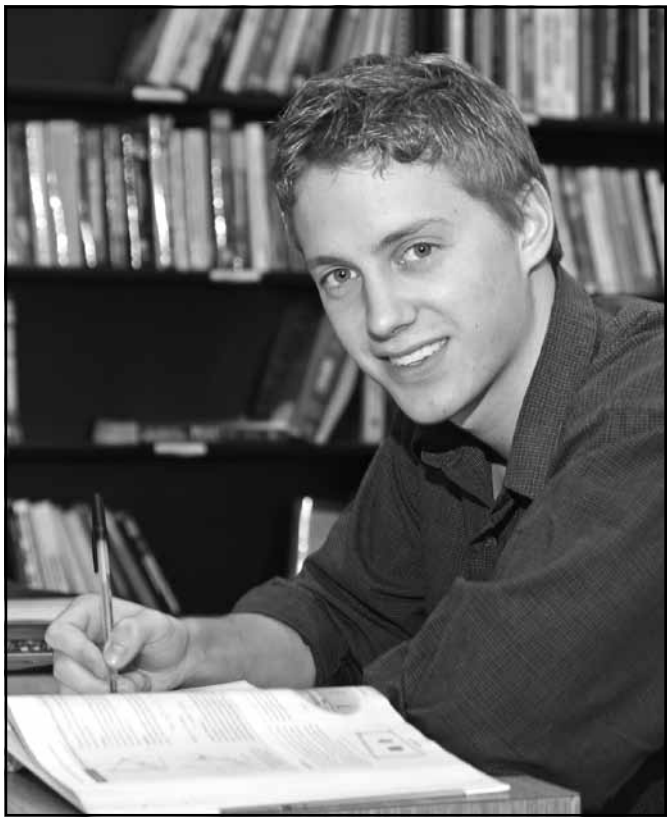
Individual Career Counseling is an opportunity for students and alumni to talk with a counselor about self-assessment (skills, values, interests, and abilities), career decision-making, and job search strategies.

Consulting Sessions are available for students and alumni to meet with a professional staff member primarily for the purpose of resume and cover letter critiques, mock interviews, and career advisement.

Discover is an interactive program that students use to narrow their career choices to certain vocations and determine if additional education is needed for a particular occupation. Students must get a password from Career Services before accessing the website at http://www.act.org/discover/login.

Career Services Events include interview and resume workshops, Professionals for a Day (job shadowing with local employers), a yearly business etiquette luncheon, on-campus recruiting, intern seminars, and an internship panel discussion.

The Career Services Office is equipped with computers for students' use as well as various reference materials. Local and national books and periodicals are available which provide employer, industry, job search, graduate school planning, and career exploration information.



Admissions

Admission of Freshmen

SUNYIT admits freshmen into the following bachelor's degree programs:

- accounting
- applied computing
- applied mathematics
- applied mathematics/electrical engineering*
- business
- civil engineering technology
- communication and information design
- computer and information science *including an accelerated BS/MS program*
- computer information systems
- computer engineering technology
- criminal justice
- electrical engineering technology
- finance
- health services management
- health information management
- industrial engineering technology
- mechanical engineering technology
- psychology
- sociology
- telecommunications *including an accelerated BS/MS program*

** Contact Admissions for details.*

Freshman Admission Requirements

Admission is competitive. To be considered for admission, freshman applicants should generally carry at least a B/B+ average in a college-preparatory program, and have achieved competitive SAT or ACT scores. Admission is based on high school average, SAT or ACT scores, class rank and other relevant supplemental information. A supplemental application may be required. Letters of recommendation and an admissions interview are highly recommended and will be used with supplemental information as factors in determining admission and merit scholarship awards.

SUNYIT participates in the EOP and Early Action Program. Students interested in EOP should refer to the EOP section of this catalog. Students who are interested in applying Early Action must submit their application by November 15. Applications will be reviewed and students will be notified of admission by January 1.

SUNYIT will consider candidates for admission who do not otherwise meet the general admission criteria, but possess or have exhibited special talents (academic, athletics, technology, leadership, etc). Upon request, students may have their special talent reviewed by the admissions staff, faculty and athletic coaches. Contact Admissions for additional information.

Application Deadline and Notification Dates

There is no formal application deadline. The recommended application deadline is February 1. Early application is strongly encouraged for scholarship consideration and residence hall preference.

Decisions regarding freshman applications will begin in December and continue on a rolling admissions basis thereafter. However, following the May 1 deposit deadline, SUNYIT reserves the right to close admission at any time. Students admitted as freshmen must submit a deposit by May 1; transfers within 30 days of receipt of their acceptance notice.

Requirements for Admission

Transfer Students:

To be considered for transfer admission to degree study, generally a student must have earned college credit following high school graduation. In addition, the student must generally present a minimum 2.5 G.P.A. for consideration. Students between a 2.0 and a 2.5 G.P.A will be considered on an individual basis. Students must provide an official transcript from previously attended institutions as well as an official transcript verifying high school graduation (or its equivalent). Students with 24 credit hours or less should also submit college admission test scores.

Acceptable credentials vary by academic program. Because of heavy student demand for certain programs and limited availability of seats, some programs enforce selective admissions standards. A broad area of discretion is practiced in selective admissions. Previous academic record, special talents, and personal factors all play important roles in a decision on admission. These considerations are usually discussed in an on-campus interview.

Decisions regarding transfer applications for fall are made on a rolling basis starting December 1 and continue through early August or until the respective program is full. Spring (January) decisions begin in mid-September and continue through early January on the same rolling basis.

Freshmen and Transfer Students:

Even though the student has been provisionally admitted to SUNYIT, he or she must still present final transcripts for evaluation prior to registration for classes. Failure to meet this requirement will jeopardize financial aid awards and matriculation standing.

All full-time students must submit a completed health history/physical examination form. This form is sent to each student following acceptance and should be completed prior to registration. In addition, New York State Public Health Law requires specific immunization requirements (please refer to Health & Wellness section). Any student who fails to complete this requirement will lose their matriculation standing.

Students may transfer up to 64 lower division semester hours and up to 30 upper division semester hours into SUNYIT, with the total not to exceed 94 semester hours. SUNYIT's residency requirement is 30 semester hours. In assigning transfer credit, coursework offered at two-year colleges, or at the freshman/sophomore level of four-year institutions is designated as lower division credit. Coursework is generally designated as upper division, if it is at least junior level or equivalent.

Information regarding undergraduate admission and forms for admission may be obtained by contacting the Admissions Office; telephone 315/792-7500 or 1 (866) 2 SUNYIT; or e-mail at admissions@sunyit.edu.

Advanced Placement Credit

Administered by the College Entrance Examination Board, Advanced Placement (AP) credit may be awarded for courses taken in high school dependent upon the AP exam scores achieved. Students should send an official copy of their scores directly to the Admissions Office. AP credit cannot be used to fulfill SUNYIT's requirement for the satisfactory completion of one upper-division writing course. In addition, AP credits in biology, chemistry, environmental science or physics will only

fulfill SUNYIT's requirement for the satisfactory completion of one laboratory course in the physical sciences when a score of 4 or 5 has been achieved on any of the four AP examinations. Refer to page 31 in this catalog for a specific listing of AP examinations and acceptable scores.

Admissions Procedures

How To Apply

The prospective student can obtain the State University of New York application from the SUNYIT Web site, a two-year college, high school, or the Admissions Office. Students using the SUNY application or applying on line should note that the SUNYIT code is 48. The program codes for SUNYIT are:

Accounting 0281
Applied Computing.... 2097
Applied Mathematics 0087
Business Administration 0280
Civil Engineering Technology 1102
Communication and Information Design....1912
Computer and Information Science (B.S./M.S.) 0170
Computer and Information Science.... 0286
Computer Information Systems 0095
Computer Engineering Technology 1357
Criminal Justice 0287
Electrical Engineering*
Electrical Engineering Technology....0216
Finance 0282
General Studies 0360
Health Information Management 1126
Health Services Management....0253
Industrial Engineering Technology 0256
Mechanical Engineering Technology 0235
Nursing 0291
Nursing/Adult Nurse Practitioner....1607
Nursing/Family Nurse Practitioner 1608
Nursing/Gerontological Nurse Practitioner 2094
Nursing/Nursing Administration 1609
Nursing/Nursing Education.... 2093
Psychology 0347
Sociology 0352
Telecommunications.... 0890
Telecommunications (B.S./M.S.) 1913

** Binghamton University offers a jointly registered program with SUNYIT in Electrical Engineering. Please contact Admissions for the application process for this program.*

Declaration of Major

The campus allows freshmen to be admitted as undeclared majors. Students admitted in this manner must complete a change of program form to declare their major no later than the beginning of their junior year.

Transcripts

Official transcripts must be forwarded from all previous institutions attended to: Director of Admissions, State University of New York Institute of Technology, P.O. Box 3050, Utica, New York 13504-3050.

Interviews

Although an interview is not required for admission, prospective students are encouraged to visit the campus and discuss educational plans with a member of the admissions staff. For students wishing to visit the campus, telephone (315) 792-7500 or 1 (866) 2 SUNYIT or E-mail: admissions@sunyit.edu. The Admissions Office is open weekdays from 8:30 a.m. to 4:30 p.m. by appointment (phone: 315-792-7500 or 1-866-2 SUNYIT). Summer office hours are 8 a.m. to 4 p.m. Monday-Thursday, Friday 8 a.m. to Noon.

Registration

All new degree students are required to attend an orientation/registration program. Please consult the academic calendar for registration dates.

Foreign Students

Foreign students who meet the admission requirements may obtain foreign student application forms on the SUNYIT Web-site at www.sunyit.edu or E-mail: admissions@sunyit.edu. Foreign students may be required to have their transcripts evaluated through World Education Services (WES). Contact Admissions for more information.

Students with Disabilities

SUNYIT does not discriminate against qualified individuals with disabilities in admissions or in access to programs. See Services for Students with Disabilities section.

Readmission

A student seeking readmission to SUNYIT after missing three consecutive semesters must file a readmission petition with the Admissions Office. Readmission requirements vary from program to program. Credits taken prior to readmission, will be reviewed for appropriateness for the current degree by the department.

Non-Degree Study

Students may register for coursework at SUNYIT without application or admission to the college on a non-degree basis. Seats for non-degree students may be limited for some courses. Students enrolling non-degree must have completed the necessary prerequisites for the coursework to be taken, and must complete a non-matriculated application. Contact the Registrar's Office for details.

Distance Learning

The college offers selected courses in distance learning through the SUNY Learning Network (SLN). SUNYIT continues to offer new courses through this medium each semester. On-line course offerings vary each semester and students should contact the Registrar's Office for a current listing of courses. Currently undergraduate Health Information Management coursework, and programs in Accountancy (M.S.), Health Services Administration (M.S.), Health Services Management (B.S., M.B.A.), and Technology Management (M.B.A.) are offered on-line. Select arts and science and nursing courses are also available. On-line course work is available to both degree and non-degree students in undergraduate areas. On line graduate course work within the School of Business is limited to matriculated students unless special permission is obtained.

Graduate Studies

Degree Programs

SUNYIT offers graduate degree programs in:

	Degree
Accountancy	M.S.
Advanced Technology	M.S.
Adult Nurse Practitioner	M.S., C.A.S.
Applied Sociology	M.S.
Technology Management	M.B.A.
Computer and Information Science	M.S.
Family Nurse Practitioner	M.S., C.A.S.
Gerontological Nurse Practitioner	M.S., C.A.S.
Health Services Administration	M.S.
Health Services Management	M.B.A.
Information Design and Technology	M.S.
Nursing Administration	M.S., C.A.S.
Nursing Education	M.S., C.A.S.
Telecommunications	M.S.

How to Apply

The prospective graduate student can obtain a graduate catalog and application from the Graduate Center at SUNYIT. Admissions procedures and requirements vary by program and are outlined in the SUNYIT graduate catalog. The graduate catalog is available online at sunyit.edu or a copy may be obtained by calling (315) 792-7347 or 1 (866) 2 SUNYIT or e-mailing gradcenter@sunyit.edu.

Non-Degree Graduate Study

Qualified students may enroll in graduate coursework at SUNYIT as non-degree students with the approval of the appropriate dean/program coordinator. Non-degree graduate students requiring such approval must possess a bachelor's degree. The number of credits allowed prior to matriculation vary by program. Non-degree students who plan to matriculate should contact the Graduate Center to begin the application process.

Part-Time Studies

Part-time students seeking matriculation into a degree program must be formally accepted by the Admissions Office at SUNYIT. Refer to section on admissions in this catalog. The Admissions Office is open weekdays from 8:30 a.m. to 4:30 p.m. by appointment (phone: 315/792-7500 or 1 (866) 2 SUNYIT). Summer office hours are 8:00 a.m. to 4:00 p.m.

Part-time degree students register in the same manner as full-time students during both advance registration and formal registration which are scheduled prior to the beginning of each term. All new degree students are required to attend an orientation/registration program. Please consult the academic calendar in the catalog for registration dates.

Students with questions about part-time degree study can visit or call the Admissions Office.

Financial Aid for Part-Time Attendance

Matriculated part-time students may qualify for the following types of financial aid:

- Pell Grant
- Supplemental Education Opportunity Grant
- Federal Nursing Loan
- Perkins Loan (formerly National Direct Student Loan)
- Federal Direct Loans
- College Work Study Program
- Aid for Part-Time Study

Refer to the financial aid information section of this catalog for details.

Tuition, Fees and Refunds

The tuition and fees for full-time and part-time students are given below. Students carrying 12 or more credits are considered full-time. **Tuition and fees are subject to change without prior notice at the discretion of the college administration and the State University of New York.**

Tuition

Undergraduate	*Full-Time*	*Part-Time*
New York Resident*	$2,485 per semester	$207 per credit hour
Out-of-State Resident	$6,435 per semester	$536 per credit hour
Comprehensive Student Fee	$550 per semester	$45.68 per credit hr.

Graduate	*Full-Time*	*Part-Time*
New York Resident*	$4,185 per semester	$349 per credit hour
Out-of-State Resident	$6,625 per semester	$552 per credit hour
MBA (NYS Resident)	$4,305 per semester	$359 per credit hour
MBA (Out-of-State Resident)	$6,880 per semester	$573 per credit hour
Comprehensive Student Fee	$530 per semester	$45.68 per credit hr.

** "Residence" for purposes of tuition refers to a student's principal or permanent home. In order to qualify as a New York State resident for tuition purposes, in addition to other criteria, a student must be "domiciled" in New York State for a 12 month period immediately prior to the date of registration for the academic term for which application is made. A "domicile" is defined as that place where an individual maintains his/her* ***permanent*** *home and to which he/she always intends to return. Mere presence in New York State for educational purposes does not necessarily constitute domicile, regardless of time spent in NYS.*

Effective July 1, 1986, resident tuition rates are applied to members of the Armed Forces of the United States on full-time active duty, stationed in New York State, their spouses and dependents. Spouses and dependents must obtain proof of their dependent status from appropriate personnel at their base education office and present it at the Business Office each semester upon registration. Please contact the Business Office if you require further information.

The Comprehensive Student Fee supports programs not provided by tuition dollars or state subsidy that enrich the quality of a student's total experience at the Institute of Technology. All components of the Comprehensive Student Fee are mandatory. The typical Comprehensive Student Fee supports activities at the following levels:

	Full-time (Per Semester)	*Part-time (Per Credit Hour)*
College Fee	*12.50*	*.85*
Intercollegiate Athletics	*177.00*	*14.75*
Student Activities	*95.00*	*7.95*
Health Services	*123.00*	*10.25*
Technology Applications	*142.50*	*11.88*
	$550.00	*$45.68*

The College Fee is established by the Board of Trustees of the State University of New York.

The Student Activity Fee provides the funding for activities sponsored for the students, under the direction of the students' governing bodies.

The Intercollegiate Athletics Fee provides funding to operate and sustain competitive intercollegiate athletics programs at the campus. It is not a fee for use of athletic facilities by the students.

The Health Services Fee is used to support the services provided by the Health Center. Students must provide a health history and physical examination to be eligible for routine medical care

The Technology Fee is used to upgrade, modify and make significant technological advances in classrooms and laboratories used by SUNYIT students.

First-time transfer students are assessed a mandatory one-time Orientation Program fee of $50, freshmen are assessed a mandatory one-time Orientation Program fee of $150, used to support activities and programs which aid the student transition to a new academic campus environment.

Tuition Refund Policy

Credit Courses

Students withdrawing from the college incur the tuition liabilities listed below based on the date of withdrawl. Liability for tuition is calculated at the time the student completes the official withdrawl process with the Registrar's office. Not attending classes does not reduce or cancel liability.

Undergraduate/Graduate - 15 Week Schedule (Full Semester)

Liability During:	1st week of classes*	0 %
	2nd week of classes*	30 %
	3rd week of classes*	50 %
	4th week of classes*	70 %
	5th week of classes*	100 %

Undergraduate/Graduate - Quarter or 10 Week Term

Liability During:	1st week of classes*	0 %
	2nd week of classes*	50 %
	3rd week of classes*	70 %
	4th week of classes*	100 %

Undergraduate/Graduate - 8 Week Term

Liability During:	1st week of classes*	0 %
	2nd week of classes*	60 %
	3rd week of classes*	80 %
	4th week of classes*	100 %

Undergraduate/Graduate - 7 Week Term

Liability During:	1st week of classes*	0 %
	2nd week of classes*	65 %
	3rd week of classes*	100 %

Undergraduate/Graduate - 5 Week Term

Liability During:	1st week of classes*	0 %
	2nd week of classes*	75 %
	3rd week of classes*	100 %

Undergraduate/Graduate - 4 Week Term

Liability During:	2nd day of classes*	0 %
	Remainder of 1st week*	50 %
	2nd week*	100 %

* The first week of class session is the first day of the semester, quarter or other term. The first week of classes, for purposes of this section, shall be considered ended after seven calendar days, **including** the first day of scheduled classes, have elapsed.

All student fees are non-refundable after the end of the first week of classes. The college fee is non-refundable once classes start. The alumni fee is refundable by petition to the Alumni Office until the last day to withdraw without record.

Please check with the Student Accounts Office **immediately** about any refund/liability if you are contemplating withdrawing from any course. Consult with the Financial Aid Office also, as an aid package could be adversely affected by a decrease in credit hours.

No drop is considered official until the proper forms have been completed and submited to the Registar's Office. Payment of any related fees must also be done at the Student Accounts Office, at this time. **During certain specified times of the year students may Add/Drop courses via the web. When the web is closed students must make changes in person or by telephone with the Registrar's Office. The Registrar's Office does not accept registration changes by email.**

How Receipt of Federal Title IV Funds Affects Student Refunds

(Pell, Direct Student Loans, Perkins Loans, Nursing Loans, and SEOG)

In accordance with the Higher Education Amendments of 1998, a portion of Title IV grant or loan funds, but not Federal Workstudy Funds, ***must*** be returned to the Title IV Program upon a student's withdrawal from school. The law does not specify an institutional refund policy. *This may result in a student incurring a liability to SUNYIT after the Title IV funds are returned.*

Withdrawal Date

Regulation requires SUNYIT to determine a withdrawal date from the student's official notification to the institution. For unofficial withdrawals (dropping out without notification), the withdrawal date becomes the last day we can document, you participated in an academic activity or the midpoint of the semester. If circumstances beyond the student's control (illness, accident, grievous personal loss) caused the unofficial withdrawal, ***and can be documented***, SUNYIT may use discretion in determining an appropriate withdrawal date.

Earned Title IV Aid

Regulation provides a formula for the calculation of the amount of Title IV aid that the student has "earned" and SUNYIT may retain. This depends on the percentage of the enrollment period that the student has completed up to withdrawal. This percentage is calculated by dividing the number of ***calendar days (not weeks)*** completed by the total number of calendar days in the period. Up through the 60% point of the enrollment period, the student is eligible for the actual percentage of aid this calculation provides. For example, if a student attends for 15 days out of a 75 day semester, he/she is eligible for 20% of their total Title IV aid package (15/75 = .20). After the 60% point of the semester, 100% of the Title IV aid is considered "earned" by the student. The earned percentage is applied to the total amount of Title IV grant and loan assistance that was disbursed (and could have been disbursed) to the student.

Application of Unearned Percentage

Any amount in excess of the allowed percentage must be returned to the appropriate Title IV program by SUNYIT, the student, or both. SUNYIT must return the lesser of the unearned Title IV assistance or an amount equal to the total liability incurred by the student multiplied by the unearned percentage. Using the above example, if a student had received $1,000 in Title IV loans and grants, and $500 had been applied to the account and $500 had been applied to the student, the earned portion of the aid package is $200 (.2 x $1000) and the unearned portion is $800 (.8 x $1000). $800 must be returned to the Title IV programs. Of this $800, $500** must be returned by SUNYIT. This may result in the student owing SUNYIT a substantial amount of money.

** $500 is the lesser of $500 vs $1590. ($1987.5 tuition x .8 unearned % applied to institutional costs = $1590)

Student Responsibility

Students should contact the financial aid office to determine how much of their federal aid they may have to repay the school before they withdraw.

Special Rule

The student would not need to repay amounts in excess of 50% of any grant monies received. If the $300 the student was to return came from a Pell disbursement, the student would only need to return $150, or not more than 50% of the grant funds received.

Order of Return of Title IV Funds

Title IV Funds must be returned in the following order:

- Unsubsidized (other than parent loans) Federal Direct Loans
- Subsidized Federal Direct Loans
- Federal Perkins Loans
- Federal Direct PLUS Loans
- Federal Pell Grants
- Academic Competitiveness Grand
- SMART Grant
- Federal SEOG
- Other Title IV assistance for which a return is required

Leaves of Absence

A leave of absence is not to be treated as a withdrawal and no return of Title IV funds is calculated. A student may take a leave of absence from school for not more than a total of 180 days in any 12-month period. SUNYIT's formal leave of absence policy must be followed in requesting the leave. The leave must be approved by SUNYIT in accordance with this policy. **However, if the student does not return at the expiration of an approved leave, then SUNYIT calculates the amount of Title IV grant and loan assistance that is to be returned according to the HEA provision based on the day the student withdrew.**

Other Refunds

Non-Credit Courses

Non-credit programs are operated on a self-sustaining basis. Fees are variable. Therefore, due to the nature of these programs, **no refunds** are allowed.

Room and Board Refunds

Room and board refunds are granted in accordance with stipulations in the current year Room and Board License issued to each resident. Room rental refunds are determined when all personal effects are removed from the room, keys surrendered, room inspected by Residential Life, all debts related to room rental incurred by the resident are paid in full to SUNYIT, and the resident has signed out of the room.

Room and board refund requests **must** be in writing. Failure to terminate occupancy in the manner stipulated in the Room and Board License may result in additional charges accumulating for the period of time between termination of residency and the date of approval by the Director of Housing.

A resident who registers and occupies a room for two weeks or less receives a percentage refund of room and board charges based upon the number of weeks housed. A week is defined as beginning on Sunday and ending the following Saturday at midnight. A part week is counted as a whole week for refund purposes. **Students occupying a room after the Saturday following the second full week of classes are liable for room and board charges for the entire semester.**

Schedule of Other Fees and Charges

Combined Room and Board Rates 2009-11
Per Semester

Room	*Meal Plan*	*Basic*
Single	19/week (includes 100 pts)	$4,775
Single	14/week (includes 100 pts)	$4,655
Single	125/semester (includes 200 pts)	$4,710
Single	100/semester (includes 400 pts)	$4,735
Double	19/week (includes 100 pts)	$4,375
Double	14/week (includes 100 pts)	$4,255
Double	125/semester (includes 200 pts)	$4,310
Double	100/semester (includes 400 pts)	$4,335

	Full-time	***Part-time***
Parking Fee, ***plus sales tax*** (see section entitled "Parking Fees")	$55.00	$27.50
Alumni Fee — per semester	$10	$.85 cr. hr.
Diploma Cover Charge — payable when applying for diploma	$10	$10
Drop/Add Fee — paid per transaction	$20	$20
International Student Medical Insurance*	$994.75/yr.	$994.75/yr.
Domestic Student Medical Insurance	$130/sem.	Optional
ID Card Replacement Fee	$15	$15
Late Registration Fee	$40	$40
Orientation Fee — paid once during first semester		
Freshman	$150	$150
Transfer/Graduate	$50	$50
International	$200	
Late Payment Fee — charged to accts for payments received after assigned due date	$30	$30
Returned Item Charge — levied against maker for checks returned unpaid or charge payments declined by cardholder bank	$25	$25
Transcript Fee — per transcript	$5	$5
Diploma Replacement Fee — per replacement	$20	$20
Diploma Cover Replacement Fee — per replacement	$25	$25
HVCC Technology Fee — HVCC students only	$110	$8.50 cr. hr.
HVCC Parking Fee — HVCC students only	$86.40	$7.20 cr. hr.

All fees subject to change

Deposits

For full-time undergraduate students (freshmen and transfers) applying for fall admission, a $50 tuition deposit along with the Tuition Deposit Card are required by May 1. For students accepted after May 1, the deposit is required within 30 days of acceptance. A refund of the tuition deposit will be granted upon written request until May 1 or for students admitted after May 1 within 30 days of the date of deposit.

Full-time undergraduate students applying for spring admission, a $50 tuition deposit is required within 30 days of acceptance. A refund of the tuition deposit will be granted within 30 days of the date of deposit.

Part-time and EOP students are not required to submit a tuition deposit, but must return the Tuition Deposit Card.

No deposits will be refunded after classes begin. Upon registration, this amount is subtracted from tuition due. Part-time students do not pay an admission deposit.

Students who wish to reserve a room in the residence halls are required to pay a $150 housing deposit, due with their Tuition Deposit Card. Requests for housing deposit refunds must be made in writing to the Residential Life and Housing Office, and are subject to terms and conditions of the room and board license. A refund of the housing deposit will be granted until May 1, or for students admitted after May 1, within 30 days of the date of deposit. Only full-time students may reserve a dormitory room.

Medical Insurance

In accordance with State University policy, medical insurance is mandatory for all **full-time** students. The charge for medical insurance purchased by the University will be added to the student's account each semester unless he/she is able to provide SUNYIT with proof of insurance coverage and fill out a Medical Insurance Waiver Form prior to attendance. It is the student's responsibility to insure that the waiver form is on file, as the charge becomes final on the last day to waive. Waiver forms will then no longer be accepted and the student is responsible for the payment of the insurance fee. **Part-time students may purchase coverage if they so desire.** Waiver forms must be submitted on the Web **each semester prior to attendance.**

If you have Medical Insurance information with you when you web register:

1. Press the Medical Insurance Waiver link at the bottom of the Registration Page,
2. Complete the *Medical Insurance Waiver Form*,
3. Press *SUBMIT/Wait for message: "Your waiver has been successfully submitted."*
   The cost of Student Medical Insurance will be deducted from your bill after approval by Health Center Director.

If you have already registered but have not yet done your waiver on the web:

1. Go to SUNYIT's Home Page on the web: *www.sunyit.edu*,
2. Select *Campus Intranet* in the Quick Links menu,
3. Select *Enter Secure Area*,
4. Enter your user ID and PIN,
5. Press *LOG IN*,
7. *SUNYIT Information* Main Menu will appear,
8. Select *Personal Information Menu*,
9. Select *Health Insurance Waiver*,
10. Fully complete the waiver form,
11. Press *SUBMIT/Wait for message: "Your waiver has been successfully submitted."*
    The cost of Student Medical Insurance will be deducted from your bill after approval by Health Center Director.

Medical Insurance fee is not automatically refunded. When a student drops below full time, written request for refund will be accepted at the Business Office. After the last day to add for the semester, no further refunds of insurance will be allowed.

All international students (domestic students traveling abroad under an exchange program, or foreign students attending college in the U.S. on a student visa) **must purchase International Student Medical Insurance** regardless of whether they are full- or part-time. International students, who have been issued an I-20 from SUNYIT, must be covered the entire time they remain in the U.S., whether attending classes or remaining in the country during summer break. Exemption from participation in the plan may be granted only in very few and specific circumstances.

Since both the international and domestic insurance plans are obtained through prior arrangement with insurance agencies independent of the State University of New York, cost per year is variable based on experience rating for the program. Students will be charged the appropriate rate at the time they begin at-

tendance. Those graduating in December should contact the Health Center and Business Office in advance of registration. Current rates are as follows, but are subject to change annually:

Basic Medical Insurance ..... $260 per year* (full-time students only)

International Student Insurance ..... $994.75 per year* (both full- and part-time students)

**Subject to change*

Parking Fees

A parking fee must be paid by all students and employees (not exempt as a result of collective bargaining agreements) who park a vehicle on campus. That vehicle must be registered with University Police and **exhibit a valid parking decal**. Fees are established using SUNY Parking Model Costs and Charges, and are subject to New York State and local sales taxes (currently 8.75%). All regulations pertaining to the use of vehicles on campus are enforceable 24 hours a day throughout the year.

Parking is automatically assessed to all students registered for classes requiring on-campus attendance. If you will not be parking on campus, please complete a waiver. A valid decal can be obtained at the University Police Department. Parking fees for various categories are as follows (plus applicable sales taxes):

Time Period	*Full-time*	*Part-time*
Annual (full 12 month period)	130.00	75.00
Academic Year (fall/spring only)	110.00	55.00
Single Semester Only	55.00	27.50
Summer Semester Only	20.00	20.00

Parking fees are non-refundable. A full-time student is a student registered for 12 or more credit hours.

Provision for additional vehicles must be made with the University Police Department. Only one vehicle may be parked on SUNYIT property at any given time. Each vehicle must be registered and display a valid registration decal.

Students who have more than enough aid to cover their appropriate semester charges may authorize the payment of their parking fee against their incoming financial aid.

Billing Tuition Payment

A bill will be generated each semester based upon a student's registration. Students may either register for classes by phone or via the Internet at www.sunyit.edu if they are currently enrolled, matriculated students. New students will register at an orientation program. Charges for each semester must be paid by the deadline stated on the bill to avoid cancellation of registration. **All students who plan to attend must return a signed copy of their student invoice, with payment in full or acceptable payment arrangements by the payment deadline as confirmation of their attendance. Course registrations and room and board reservations will be deleted 10 days before the start of the semester for those students who have not returned their bill and/or made acceptable payment arrangements.** Acceptable payment arrangements include enrollment in the SUNY time payment plan, financial aid or proof of third party funding, such as VESID or private scholarships. Students can make payment by check or credit card via the web at www.sunyit.edu. Those students who have enough financial aid credits on the bill to result in a zero or credit balance can confirm their attendance online at www.sunyit.edu under confirm attendance on the campus intranet, in lieu of returning their billing statement.

Failure to return a confirmation copy with valid deferral or full payment by payment due date will result in the registration being deleted. The student will be required to re-register. A late registration fee will be charged when re-registration for the term occurs. This charge reflects the multiple processing of registration records for the same semester. Those students who register for classes after the billing due date are required to submit payment or valid deferral at the time of registration.

SUNY Institute of Technology is pleased to offer Time Payment Plan as an alternative for students who find it difficult to pay all charges by the payment due date. This plan is available for the Fall and Spring semesters in either two or three payment options.

FACTs Management Co. administers the time payment plan for SUNY Institute of Technology. Enrollment must be done online through your Banner Web account. For detailed enrollment instructions, please refer to the Bursar page on the sunyit.edu website. A $1.00 nonrefundable processing fee will be assessed for all full payment options. For use of the time payment option, a $35.00 enrollment fee will be assessed to all FACTs Management agreements.

Financial Aid Deferrals

Students who have financial aid that is already verified by the Financial Aid Office will **have these** Financial Aid Credits appear on their statement, treated as credits. However, should a student be found to be ineligible for any listed aid, he/she is responsible for any unpaid balance. **Students registered for less than 12 credit hours are not eligible for TAP awards**, unless the award is made under the Veteran's Tuition Assistance program.

If a student has a valid form of aid, not listed on the statement, it may be used as a credit if appropriate proof of award is included with your remittance. The following items are acceptable as proof: TAP Awards—enclose the school portion of the award certificate; Direct Student Loans—enclose a copy of the loan award notice; Pell, SEOG, Perkins Loans, or Nursing Loans—enclose a copy of the award letter from Financial Aid; Private Scholarships—enclose a copy of the scholarship award letter. Private scholarships must be made payable directly to SUNYIT.

If you are unsure of the status of a financial aid award, contact the Financial Aid Office at 315-792-7210. They may verify the amount of allowable deferral. **It is important to note that applying for aid does not automatically guarantee eligibility.**

Other Third Party Deferrals

Armed Forces Representatives

Present properly completed federal contract authorizations forms (DD1556; DD1227) at time of payment.

Employer Sponsorship

Third party payments are acceptable only if the employer, unconditionally, agrees to pay the college upon receipt of the billing statement. No stipulations regarding the student academic performance are allowable. **Submit a letter of authorization from your employer and payment of any fees/unauthorized balances to our office prior to the billing due date**. Employer Sponsorship letters should include the following information:

- Reimbursement will be made directly to SUNYIT.
- Reimbursement will not be dependent upon the student receiving a grade.
- Payment is due from the employer within 30 days of billing. Billing will occur when the student reached 100% liability—5th week of classes for full term. If payment is not received within 30 days of this billing date, late fees will be added to the student account.
- A signature from a company representative.
- Be submitted on official company letterhead.
- Have a specified reimbursement amount noted.

NYS Employees and UUP Personnel

NYS Employees and UUP Personnel must submit completed, approved waivers **on or before payment due date**. The student is responsible for payment of all tuition and fees at time of registration/payment unless the above are furnished. Subsequent authorization will entitle the student to a refund when vouchers are honored by the issuing campus.

State or Federally Sponsored (VESID, TRA, DVR, WIA, etc.)

It is the student's responsibility to ensure that the sponsoring agency has provided the Bursar's Office with the appropriate vouchers or authorizations required to obtain payment. Confirmation, in writing, of the amount and limitations of the award(s) must be furnished on or before payment due date. TRA sponsored students must have a valid confirmation number available at time of payment/registration.

The student is responsible for payment of any tuition and fees not confirmed by the sponsoring agency at time payment is due. Subsequent authorization will entitle the student to a refund for covered amounts when voucher is honored.

Veteran's Deferrals

If you are eligible for a veteran's deferral, the appropriate forms must be filled out each semester and on file at the college, on or before the billing due date. Note that you have a Veteran's Deferral and the amount on your semester billing statement. You will be rebilled as your tuition payments become due. Inquiries about eligibility for these deferrals should be addressed to the Registrar's Office at 315/792-7265.

FERPA

Family Educational Rights and Privacy Act of 1974

The Family Educational Rights and Privacy Act of 1974 prohibits the release of privileged information to anyone except authorized personnel. If a student wishes another individual such as parents or spouse to have access to privileged information regarding their account, they must complete the release form obtained from the Student Account's Office or online at www.sunyit.edu and return it to the Student Account's Office before any information will be released. It is necessary to complete this release on an annual basis. It can however, be revoked at anytime when written notification is provided to the appropriate office by the student. A new FERPA form is required each academic year.

Required Disclosures

Please take notice, if payment is not received for obligations due to SUNYIT, this agency is required to use other collection alternatives. Pursuant to Chapter 55 of the Laws of 1992, State agencies may refer past-due accounts to a private collection agency, the New York State Attorney General's Office, or the New York State Department of Taxation and Finance. In addition, State agencies are required to charge interest on outstanding debt at the current corporate underpayment rate set by the Commissioner of Taxation and Finance minus four percentage points, compounded daily, on accounts considered more than 30 days past due. Chapter 55 allows State agencies to charge a fee on dishonored checks or like instruments.

In addition, the New York State Attorney General's Office and SUNY Central Administration have reached an agreement requiring the addition of any interest and collection fees. Students are liable for interest, late fees, a collection fee of up to 22%, and other penalties on past due debt. Collection fees will be added to new past due debts transferred, from this campus, to the Attorney General or private collection agencies, effective January 1995.

These terms and rates may be modified, without prior notice, as required by legislative action or Board of Trustees requirements.

Financial Aid Information

Applying For Financial Aid

To be eligible for financial aid you must be matriculated into a degree program, be enrolled for at least six credit hours each semester for federal aid programs and twelve credit hours each semester for the Tuition Assistance Program (courses you have previously passed and are now repeating cannot be counted toward the required twelve hours), and be in good academic standing. Please note: only courses required for your degree program are considered in determining your enrollment status as it relates to financial aid eligibility. Student aid cannot be awarded for classes that do not count toward your degree.

In order for the Financial Aid Office to process aid for a student, the following steps must be completed.

1. Obtain a Personal Identification Number (PIN) from the U.S. Department of Education. If you do not already have a PIN, you can request one online at www.pin.ed.gov. Dependent students should also have a parent register for a PIN to be used as signatures when the FAFSA on the Web is submitted. If you have misplaced your original PIN you can visit the same web site for a replacement.

2. Complete and submit a Free Application for Federal Student Aid (FAFSA). You can do this on the Internet at www.fafsa.ed.gov. Students are encouraged to view a detailed listing of the application procedure by visiting SUNYIT's web site (www.sunyit.edu) - from the home page select "Prospective" Student; "Financial Aid" and "Graduate Aid" or "Undergraduate Aid." If you do not have access to the Internet you can obtain a paper FAFSA and detailed application instructions sheet by calling 1-800-4FEDAID. SUNY Institute of Technology's Federal Title IV School Code is 011678.

3. New York State residents must complete and submit the Tuition Assistance Program (TAP) on the Web application. Once you have submitted the FAFSA online, click on the highlighted link "New York State Residents" on the FAFSA Web confirmation page. You may also access this application at https://www.tapweb.org/totw/. Be sure SUNYIT's school code (undergraduate – 4975, graduate – 5695) is listed on the application.

The primary responsibility for meeting educational costs rests with the student and his/her family. Estimating a reasonable family contribution is accomplished by using a needs analysis formula approved by the U.S. Department of Education to review the family's financial situation.

SUNYIT gives priority in the awarding of financial aid to those students with the greatest net financial need. Net financial need is determined by subtracting the expected family contribution and the estimated Federal Pell Grant and Tuition Assistance Program awards from the student's estimated cost of attendance. The family contribution, determined from the information on the FAFSA, is made up of the expected parents' contribution (dependent students only), expected student's earnings, expected contribution from the student's assets, and any benefits (veterans, welfare, etc.) that the student may receive.

SUNYIT does not have a deadline for applying for financial aid, but we encourage our students to apply by April 15 each year. Applications are processed on a rolling basis starting in late February. Campus-based financial aid will be awarded until the funds are exhausted. It is important to note that these funds are limited and no guarantee can be made that they will be offered to all students.

A financial aid award letter will be sent to each student who has been accepted and has submitted all required financial aid documents.

The federal government chooses some applications to be verified. In those cases, the Financial Aid Office will request additional documents including a verification worksheet and signed copies of federal tax returns. These documents must be reviewed and necessary corrections made before financial aid is awarded.

If there has been a significant decrease in the student's (if independent) or parents' (if dependent) income from the prior year, a Special Condition form may be submitted to the Financial Aid Office along with supporting documentation. The Financial Aid Office may be able to use the current year's estimated income rather than the prior year's to determine eligibility for federal aid.

Students receiving financial aid can expect one-half of their award to be credited to their account each semester. Any balance due to the student after charges owed SUNYIT have been satisfied is refunded to the student as the funds arrive on campus. Federal College Work-Study students will be paid on a bi-weekly basis for the work accomplished during the previous pay period and therefore, these funds cannot be credited to the student's semester bill.

Federal Financial Aid Programs

Campus-Based Federal Aid Programs

Application Process: To apply for aid from any of the campus-based programs, the student simply follows the procedure described in the "Applying for Financial Aid" section of this catalog. Unlike the Federal Pell Grant Program, which provides funds to every eligible student, SUNYIT receives a limited amount of funding for the campus-based programs. When that money is gone, there are no more awards from that program for that year.

Federal Perkins Loan Program: A Federal Perkins Loan is a low-interest (5 percent) loan for undergraduate and graduate students with exceptional financial need, as determined by SUNYIT. The annual maximum that an undergraduate student may be awarded is $5,500, while a graduate student can receive up to $8,000 annually. The maximum aggregate loan amount is $27,500 for an undergraduate student and $60,000 for a graduate student, including loans borrowed as an undergraduate student. Repayment begins nine months after the student graduates or drops below half-time status.

Federal College Work Study Program: The Federal College Work Study Program provides jobs for undergraduate and graduate students with financial need. Students are paid by the hour and receive at least the current federal minimum wage. Jobs are located both on and off campus and students are paid every two weeks. Students generally work ten hours per week and set their work hours so they do not conflict with their class schedule.

Federal Supplemental Educational Opportunity Grant Program: A Federal Supplemental Educational Opportunity Grant (FSEOG) is an award to help undergraduates with exceptional financial need. Priority is given to Federal Pell Grant recipients. Because the funding for the FSEOG program is limited, there is no guarantee every eligible student will be able to receive a grant.

Federal Nursing Student Loan: Eligibility for the Federal Nursing Student Loan program is based on net financial need. Loans are available to students majoring in nursing and attending full-time. The maximum available per year is $4,000 with repayment at 5% interest beginning nine months after the student graduates or drops below half-time status.

Non-Campus Based Federal Aid

Federal Pell Grant Program: If financially eligible, undergraduate students who have not earned a bachelor's or first professional degree may qualify for a Federal Pell Grant. To be academically eligible, a student must be accepted into a degree program and be in good academic standing for financial aid eligibility. To determine if the student is financially eligible, the Department of Education uses a standard formula, passed into law by Congress, to evaluate the information reported on the FAFSA. The amount of the award will depend on the amount of money Congress has allocated to the program, the student's enrollment status, and whether or not the student attends SUNYIT for a full academic year.

Academic Competitiveness Grant: An Academic Competitiveness Grant provides up to $750 for the first year of undergraduate study and up to $1,300 for the second year of undergraduate study to students enrolled at least half time who are eligible for a Federal Pell Grant, and who had successfully completed a rigorous high school program, as determined by the state or local education agency and recognized by the Secretary of Education. Second year students must also have maintained a cumulative grade point average (GPA) of at least 3.0. The Academic Competitiveness Grant award is in addition to the student's Pell Grant award.

National Science and Mathematics Access to Retain Talent Grant: A National SMART Grant provides up to $4,000 for each of the third and fourth years of undergraduate study to full-time students who are U.S. citizens, eligible for a Federal Pell Grant, and majoring in physical, life, or computer sciences, mathematics, technology, or engineering or in a foreign language determined critical to national security. The student must also have maintained a cumulative grade point average (GPA) of at least 3.0. The National SMART Grant award is in addition to the student's Pell Grant award.

Federal Direct Subsidized Stafford/Ford Loans: These are low-interest loans made by the U.S. Department of Education, through SUNYIT, directly to the student. Interest, which is currently fixed at 6.0 percent, is paid by the government while the student is in school. The amount a student can borrow is based upon financial need (see Applying for Financial Aid) and cannot exceed $3,500 for freshmen, $4,500 for sophomores, $5,500 for juniors or seniors, and $8,500 for graduate students per academic year. Because you can't borrow more than your cost of attendance minus any expected family contribution and financial aid you're receiving, you may receive less than the maximum amounts. All Direct Loan borrowers may be charged an origination fee which goes to the government to help off-set the costs of the program. SUNYIT will use your loan to pay your charges and will give you any remaining money for living expenses. Repayment of the loan begins six months after you cease to be a half-time student and is made directly to the federal government.

Federal Direct Unsubsidized Stafford/Ford Loans: A borrower's unsubsidized loan amount is determined by calculating the difference between the borrower's cost of attendance for the period of enrollment and the amount of estimated financial assistance, including the amount of a subsidized loan for which the borrower qualifies. The maximum a student can apply for per academic year when combined with the Federal Direct Subsidized Loan is as follows: dependent undergraduates - $5,500 for freshmen, $6,500 for sophomores, $7,500 for juniors or seniors; independent undergraduates - $9,500 for freshmen, $10,500 for sophomores, $12,500 for juniors or seniors, and $20,500 for graduate students per academic year. Because you can't borrow more than your cost of attendance minus any financial aid you're receiving, you may receive less than the maximum amounts. Interest is currently fixed at 6.8 percent, must be paid or capitalized by the student from the date the loan is disbursed. Unsubsidized loans will be disbursed the same as the subsidized loans.

Federal Direct Parent Loans for Undergraduate Students (PLUS): PLUS loans are for parents of dependent students who want to borrow to help pay for their children's education. Upon credit approval, a parent can borrow an amount not to exceed the student's estimated cost of attendance minus any estimated financial assistance the student has been or will be awarded during the period of enrollment. Repayment of the loan begins within 60 days of the last disbursement of the funds unless a borrower contacts direct lending to arrange a deferment or forbearance.

Federal Direct Graduate PLUS Loan: Upon credit approval, Graduate students are eligible to borrow under the Federal Direct Graduate PLUS Loan Program up to their cost of attendance minus other estimated financial assistance. Applicants for these loans are required to complete the Free Application for Federal Student Aid (FAFSA) and must have applied for their annual loan maximum eligibility under the Federal Subsidized and Unsubsidized Stafford Loan Program before applying for a Graduate PLUS Loan. Interest is fixed at 7.9 percent and must be paid or capitalized by the student from the date the loan is disbursed. Repayment of the loan begins within 60 days of the last disbursement of the funds unless a borrower contacts direct lending to arrange a deferment or forbearance.

Average Loan Indebtedness: For May 2006 graduates who borrowed while attending SUNYIT, the average loan indebtedness was $9,126 for subsidized loan borrowers and $8,430 for unsubsidized loan borrowers. The average of all loans borrowed while enrolled at SUNYIT was $17,576 per borrower.

Loan Consolidation: If you borrow other federal student loans (i.e. Federal Stafford Loans through the Federal Family Education Loan Program) in addition to a Direct Loan, you may want to consider consolidating your loans to simplify repayment. By consolidating your loans, you will make only one monthly payment to cover all of your loans. For more information on the Direct Consolidation Loan, call 1-800-557-7392 or visit their site on the Internet at www.loanconsolidation.ed.gov. Borrowers wishing to consolidate education loans other than a Direct Loan should contact their lenders for consolidation information.

U.S. Bureau of Indian Affairs Aid to Native Americans: To be eligible, the applicant must: (1) be at least one-fourth American Indian, Eskimo or Aleut; (2) be an enrolled member of a tribe, band, or group recognized by the Bureau of Indian Affairs; (3) be enrolled in or accepted for enrollment in an approved college or university, pursuing at least a two-year degree, and (4) have financial need. Awards vary depending on need and availability of funds. Application forms may be obtained from the Bureau of Indian Affairs, Federal Building, Room 523, 100 South Clinton St., Syracuse, NY 13202.

Veterans Administration (VA) Educational Benefits: The Veterans Readjustment Act of 1966, and subsequent legislation, enables certain veterans, or sons or daughters of deceased or disabled veterans, to obtain financial assistance for a college education. Contact the local Veterans Administration Office for further information or call 1-800-635-6534.

New York State Financial Aid Programs

Unless otherwise indicated, information about these programs and other funding opportunities can be obtained from the New York State Higher Education Services Corporation, 99 Washington Ave., Albany, NY 12255. You may also call them at 1-888-NYS-HESC or visit their website at www.hesc.com.

Tuition Assistance Program (TAP): The Tuition Assistance Program (TAP) is an entitlement grant program for New York State residents attending postsecondary institutions in the state. Undergraduate students are eligible for up to four years (8 semesters) of assistance for full-time study or up to five years in certain programs. Graduate students may also receive up to four years of TAP for a combined undergraduate-graduate total of eight years. To be eligible, the student must: enroll for 12 credit hours per semester (6 credit hours during summer session) at a college or school in New York State; meet income requirements; be a New York State resident; be either a United States citizen or an eligible non-citizen; be matriculated in an approved program and be in good academic standing (good academic standing requirements are listed later in this section); be charged a tuition of $200 or more per year; and have no debt from a previously defaulted student loan or have established a satisfactory repayment plan. Awards vary according to tuition, type of institution attended, family net taxable income and the academic year in which the student receives first payment. The award cannot exceed tuition. Students must apply each academic year by completing a Free Application for Federal Student Aid and a Tuition Assistance Program application.

Part-Time Tuition Assistance Program (TAP): To be eligible for Part-Time TAP, students must be part-time, full-time freshmen in the 2006-2007 academic year or thereafter, have earned 12 credits or more in each of the two consecutive semesters, and maintain a "C" average. The basic eligibility is the same as the Tuition Assistance Program with the exception of enrollment status. Part-Time TAP requires students to be enrolled for at least 6 but less than 12 credit hours per semester. Students must apply each academic year by completing a Free Application for Federal Student Aid (FAFSA) and a Tuition Assistance Program application.

Aid for Part-Time Study (APTS): The Aid for Part-Time Study program provides awards of up to $1,000 per semester (or tuition, whichever is less) for New York State residents studying part-time in an undergraduate program at participating degree-granting schools in New York State. Unlike the TAP program, Aid for Part-Time Study is not an entitlement program. The college selects recipients based on NYS net taxable income and determines individual award amounts. The basic eligibility criteria is the same as the Tuition Assistance Program with the exception of enrollment status. APTS requires a student to be enrolled for at least three, but less than twelve credit hours per semester. Students must apply each academic year by completing an Aid for Part-Time Study application obtained in the Financial Aid Office.

Math and Science Teaching Incentive Scholarship: This program provides an annual award for students, either at the bachelor or master's degree level, who enter into a contract with HESC agreeing to teach full time for five years in the field of math or science in a middle or secondary school in New York. The annual award cannot exceed SUNY tuition. Awards will be made upon the successful completion of the academic year.

Veterans Tuition Award: This program provides financial assistance to help Vietnam, Persian Gulf, or Afghanistan veterans studying on either a full-time or part-time basis at an undergraduate or graduate degree-granting institution. For full-time study (12 credit hours), a recipient shall receive an award of up to the full cost of undergraduate tuition for New York state residents at the State University of New York, or actual tuition charged, whichever is less. For part-time study (3-12 credit hours), awards will be prorated by credit hour. If a Tuition Assistance Program (TAP) award is also received, the combined academic year award cannot exceed tuition. The basic eligibility is the same as the TAP and the student must: have served in Vietnam, Persian Gulf or Afghanistan War; have 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; have been discharged from the Armed Forces under other than dishonorable conditions; have applied for TAP if full-time student; and have applied for federal Pell grant if undergraduate student. Undergraduate students can receive a total of 4 years of payment for full-time or part-time study. Graduate students can receive a total of 3 years of payment for full-time or part-time study.

Air/Army National Guard and N.Y. Naval Militia Incentive Program: Matriculated undergraduate students who are members in good standing of the Army/Air National Guard or the N.Y. Naval Militia may be eligible for a tuition voucher equal to the tuition cost remaining after all other student aid, except loans, is applied against the undergraduate in-state tuition rate. More information can be obtained by contacting the unit commander.

Regents Awards for Children of Veterans: These awards are for children of veterans who are deceased, disabled, or missing in action as a result of service during World War I, World War II, Korean Conflict, Vietnam, Persian Gulf, or Afghanistan or who died as a result of injuries sustained in the line of duty. The award provides $450 per year for up to four years of full-time undergraduate study at a college or school in New York State.

World Trade Center Memorial Scholarship: This program provides financial aid to children, spouses, or financial dependents of deceased/disabled persons who have died, or who have become severely and permanently disabled, and survivors who were severely and permanently disabled during the September 11th attacks or rescue and recovery operations. This includes victims at the World Trade Center site, Pentagon or on flights 11, 77, 93, or 175.

Memorial Scholarships for Families of Deceased Police Officers, Firefighters, Volunteer Firefighters, Peace Officers, and Emergency Medical Service Workers: These awards are for children and spouses of police officers, firefighters, volunteer firefighters, peace officers, and emergency medical service workers who served in New York State and who died as a result of injuries sustained in the line of duty. The amount is based on tuition and non-tuition costs of attendance per year for up to four years of full-time undergraduate study.

New York State Aid to Native Americans: The applicant must be: (1) on an official tribal roll of a New York State tribe or the child of an enrolled member of a New York State tribe, and a resident of New York State; (2) enrolled in an approved New York State postsecondary program, and (3) maintaining good academic standing in accordance with the Commissioner's Regulations. Application forms may be obtained from the Native American Education Unit, New York State Education Department, Room 475EBA, Albany, NY 12234. Additional information can be obtained by contacting them at (518) 474-0537.

Scholarship for Academic Excellence: This academically competitive program provides scholarship assistance to outstanding New York State high school graduates. Students must (1) have graduated from a New York State high school; (2) study full-time and be matriculated in an undergraduate program in a New York State college; (3) be in good academic standing; (4) not be in default on a student loan guaranteed by HESC; (5) be a U.S. citizen or a qualifying non-citizen; and (6) be a New York State resident. Up to 2,000 scholarships of $1,500 are awarded to top scholars in the state, and up to 6,000 scholarships of $500 each are awarded to other outstanding graduates. The New York State Education Department will notify students who have been nominated by their high school to receive the scholarship.

Robert C. Byrd Honors Scholarship: This program provides a $1,500 annual award to outstanding high school seniors. The New York State Education Department selects recipients based on SAT or ACT scores and high school performance. Please see your high school guidance counselor for application information.

Educational Opportunity Program (EOP): The Educational Opportunity Program provides assistance to New York State residents who are academically and financially disadvantaged, according to state guidelines. Tutoring, personal counseling, career planning and financial assistance are available for all enrolled students. EOP offers higher education opportunities to freshmen and transfer applicants. Freshmen candidates do not meet normally applied admissions criteria, but must have the potential for post-secondary academic success. Transfer candidates must have previously been enrolled in EOP, the Higher Educational Opportunity Program (HEOP), the Search for Education, Elevation and Knowledge Program (SEEK), the College Discovery Program, or a similar academic and financial support program.

Freshman applicants interested in applying for EOP consideration must do so on the SUNY application for undergraduate admission. For transfer candidates, admissions criteria and procedures are the same as other students. Subsequently, freshmen and transfer applicants must submit supplemental materials supplied by the EOP Office to determine their eligibility. Questions regarding EOP can be directed to the EOP Office by calling (315) 792-7805.

Collegiate Science and Technology Entry Program (CSTEP): SUNYIT offers an academic and career preparation program for promising Black, Hispanic, Native American Indian, Alaskan Native and economically disadvantaged students enrolled in mathematics, science, technology, or health-related majors, and to those who enter fields in which they may seek professional licensure. The Collegiate Science and Technology Entry Program is funded by a grant from the New York State Education Department. CSTEP participants must be full-time matriculated students in good academic standing, and are required to participate in program offerings such as tutoring, internships/job shadowing, career counseling and information about attending graduate school. Additionally, workshops are offered to enhance career awareness—including resume writing, effective interviewing and networking skills. Further information can be obtained by contacting the CSTEP Office at (315) 792-7805.

Vocational Rehabilitation Program: Eligibility for vocational rehabilitation services is based upon: (1) the presence of a physical or mental disability which, for the individual, constitutes or results in a substantial handicap to employment; and (2) the reasonable expectation that vocational rehabilitation services may benefit the individual in terms of employability. Further information is available from the nearest NYS Office of Vocational and Educational Services for Individuals with Disabilities (VESID).

Regents Professional Opportunity Scholarships: Students pursing a career in the following professions leading to licensure by the State Education Department, including but not limited to: Certified Public Accountancy, Professional Engineering, Psychology, Registered Nurse, Social Work may be eligible for $1,000 to $5000 per year for up to 4 years of study. Scholarships are awarded to full-time undergraduate or graduate students, depending on the program. The basic eligibility is the same as the Tuition Assistance Program. Selection is based on those who are economically disadvantaged and who are members of a minority group that is historically under-represented in the chosen profession; who are members of a minority group historically under-represented in the chosen profession; and enrolled in or graduated from the following programs: SEEK, College Discovery, EOP or HEOP. No award can exceed the student's cost of attendance. Upon completion of study, the student must work as a licensed professional for 1 year for each annual payment received. For more information and to apply contact: NYS Education Department, Bureau of HEOP/VATEA/Scholarships, Education Building Addition, Room 1071, Albany, NY 12234; phone: (518) 486-1319.

Flight 587 Memorial Scholarship: This scholarship provides financial aid to children, spouses and financial dependents of individuals killed as a direct result of American Airlines Flight 587's crash in the Belle Harbor neighborhood of Queens, NY on the morning of November 12, 2001. The basic eligibility is the same as the Tuition Assistance Program with the exception of residency. The award amount is based on tuition and non-tuition costs of attendance per year for up to 4 years of full-time undergraduate study. The total of all aid received cannot exceed the student's cost of attendance.

Flight 3407 Memorial Scholarship: This scholarship provides financial aid to children, spouses and financial dependents of individuals killed as a direct result of the crash of Continental Airlines Flight 3407 in Clarence, New York on February 12, 2009. This program will help families who lost loved

ones cover the cost of attending college in New York State. The basic eligibility is the same as the Tuition Assistance Program with the exception of residency. The award amount is based on tuition and non-tuition costs of attendance per year for up to 4 years of full-time undergraduate study. The total of all aid received cannot exceed the student's cost of attendance.

Volunteer Recruitment Service Scholarship: This scholarship provides volunteer fire and volunteer ambulance personnel with payments equal to the amount of tuition, reduced by any tuition-based grant. The total award cannot exceed the amount of SUNY tuition. Eligible students must: have been New York State residents for at least 1 year; be enrolled in an approved undergraduate degree program in NYS; have a course load of at least six credits per term; if 23 years of age or older, have less than six months of volunteer service at time of initial award; if under 23 years of age, no minimum or maximum time of volunteer service is required at time of initial award; not possess a baccalaureate degree or higher; have a high school diploma or equivalent; have applied for state and federal aid; attend a college/institution within 50 miles of the volunteer organization, or if no college is available within the 50-mile limit, the nearest college/institution.

Military Service Recognition Scholarship (MSRS): This scholarship provides financial aid to children, spouses, and financial dependents of members of the armed forces of the US or state organized militia who, at any time on or after August 2, 1990, while NYS residents, died or became severely and permanently disabled while engaged in hostilities or training for hostilities. The basic eligibility is the same as the Tuition Assistance Program. The award amount is based on tuition and non-tuition costs of attendance per year for up to 4 years of full-time undergraduate study. The total of all aid received cannot exceed the student's cost of attendance.

International Student Financial Aid

Information on financial aid for international students can be found at the following internet sites: www.edupass.com; www.iie.org; www.isoa.org; www.iefa.org; and www.iefc.com.

Scholarships

The philosophy of SUNYIT is to assist students attending the college by providing supplemental financial resources based on academic performance, community and/or college service and/or financial need.

Application Process

Generally, scholarship candidates are selected at the time the student is accepted to SUNYIT. The Admissions Office will notify students if they have been awarded a scholarship.

Freshmen: Scholarship criteria include academic achievement as well as supplemental information such as an applicant's essay, letters of reference, and extracurricular activities. Scholarship candidates will be selected from the top ranks of admitted freshmen.

Transfer Students: Using the transfer grade point average as an indicator of academic excellence (a minimum of 3.25 is required for consideration), as well as other supplemental information students' applications for admission are screened to determine if they meet the specific criteria for any available scholarship. There is no separate application. Students wishing to be considered should complete the college's admissions process as early as possible since scholarships are limited.

SUNYIT Scholarships

Named Scholarships

Alumni Association Student Scholarship
This scholarship is for a full time student with preference for alumni legacies.

Patricia Arvantides Scholarship
This scholarship is for a student majoring in Health Information Management.

Joseph M. Asselta Trust Scholarship
This scholarship is open to students in all majors.

The Robert S. Best Memorial Scholarship
This scholarship is for a non-traditional student.

The Jim G. Brock, Sr. & Polly C. Brock Liberal Arts Scholarship
This scholarship is for a full-time student pursuing a B.A.degree and who have minimum GPA of 2.5.

Brodock Press Scholarship
This scholarship is for a student majoring in any Engineering Technology field.

James A. Burns, Jr. Memorial Scholarship
This scholarship is for a returning senior majoring in Telecommunications.

Dr. Peter J. Cayan Scholarship
This scholarship is open to students in all majors.

Ruddy Paul Cayan Memorial Scholarship
This scholarship is for a student enrolled in the School of Nursing.

CIGNA Telecommunications Scholarship
This scholarship is for a full-time student majoring in Telecommunications.

Class of 1982 Service Award Scholarship
This scholarship is for a senior who is active in Student Government.

Class of 1983 Award Scholarship
This scholarship is open to students in all majors.

Dr. Ellen P. Coher - Nursing Scholarship
This scholarship is for a student enrolled in the School of Nursing.

College Association Scholarship
This scholarship is open to students in all majors.

Community Foundation of Herkimer and Oneida Counties Credit Bureau of Utica Fund Scholarship
This scholarship is for a Utica area student enrolled in the School of Business.

CONTEL Scholarship
This scholarship is for a student majoring in Telecommunications.

Michael Paul Dennison Memorial Scholarship
This scholarship is open to students in all areas of study.

Peter A. Donato Jr. Scholarship
This scholarship is open to students in all majors.

Senator James H. Donovan Scholarship
This scholarship is for students from Herkimer, Lewis, or Oneida Counties.

John A. Falcone Scholarship
This scholarship is open to students in all majors.

Faxton Hospital Alumni Association Scholarship
This scholarship is for an entering full or part-time junior who is pursuing a B.S. in Nursing from Oneida or Herkimer counties. A minimum 2.5 GPA is required.

General Electric Scholarship
This student is for a woman, Vietnam veteran, or minority student majoring in the technologies; including Computer Science and Telecommunications.

Globe Mill Scholarship
This scholarship is open to students in all majors.

Howard W. Hart Memorial - Kiwanis Club of Utica Scholarship
This scholarship is a merit based award for a student from the Utica area.

Health Services Management Scholarship
This scholarship is for a full-time student in the Health Services Program.

John and Katherine Hutchinson Memorial Scholarship
This scholarship is open to students in all majors.

John F. Kaminsky Memorial Scholarship
This scholarship is open to a junior or senior with preference given to Business Administration or Public management majors. A minimum GPA of 3.0 is required.

Charles T. Lanigan Scholarship
This scholarship is open to students in all majors.

Lillian W. and David J. Leffert Scholarship
This scholarship is open to students in all majors.

Dr. Robert D. Leidig Memorial Scholarship
This scholarship is for a student enrolled in the School of Management.

Laura J. Link Memorial Scholarship
This scholarship is for a full time entering Junior who is pursuing a B.S. degree with preference given to Electrical Engineering Technology majors who demonstrate financial need. A minimum 3.0 GPA is required.

M&T Bank/Partners Trust Bank Charitable Fund of the Community Foundation of Herkimer and Oneida Counties for SUNYIT Presidential Scholarships in Honor of Peter A. Spina Scholarship
Full-time transfer students from Oneida and Herkimer counties are eligible.

Albert Mario - School of Business Scholarship
This scholarship is for a student approved by the School of Business.

Albert & Rita Mario Scholarship
This scholarship is for a student enrolled in the School of Business.

Max, DeTraglia, Max & Sullivan MD, PC, Fund Scholarship
This scholarship is open to students in all majors.

Dr. Theodore C. & Mrs. Melva S. Max Scholarship
This scholarship is open to students in all majors.

Edward Mele - The Mele Foundation Scholarship
This scholarship is for a student with a minimum 3.0 GPA.

Robbin Mele Scholarship
This scholarship is open to students in all majors.

Dr. Brij Mullick Scholarship
This scholarship is reserved for a student majoring in Psychology with preference for freshmen.

New York State Telephone Association Scholarship
This scholarship is for a student majoring in Telecommunication with preference given to children of NYS telephone company employees.

Nortel Scholarship
This scholarship is for a student majoring in Telecommunications.

NYNEX Scholarship
This scholarship is for an honors student majoring in Telecommunications.

Nursing Administration Scholarship
This scholarship is for a full or part time student pursuing a M.S. in Nursing Administration who demonstrates financial need and has a minimum 3.67 GPA.

Oneida County Voiture 92 - Horace Moore Memorial Scholarship
This scholarship is for a full time student from Oneida County pursuing a M.S for Adult or Family Nurse Practitioner and demonstrates financial need. A minimum 3.0 GPA is required.

George F. Pitman Scholarship
This scholarship is for a student enrolled in the School of Business.

Mary M. Planow Memorial Scholarship
This scholarship is open to students in all majors.

Dr. Brij Mullick Psi Chi Honor Society Scholarship
This scholarship is for full-time students majoring in Psychology with preference for PSI CHI members. Preference is given to a junior or senior transfer student who demonstrating financial need.

Racal-Datacom Award for Excellence Scholarship
This scholarship is for a returning senior majoring in Telecommunications demonstrating outstanding academic achievement and financial need with preference given to minority students or women who have no other scholarships.

Florence Roemer-Bevan Memorial Scholarship
This scholarship is for students from Oneida County.

Kenneth Roemer Memorial Scholarship
This scholarship is for students from Oneida County.

Dr. Spencer J. Roemer Scholarship
This scholarship is for students from the greater Utica/Rome area.

Norman Saltzburg Memorial Scholarship
This scholarship is for a student who demonstrates financial need.

Rose D. & Harry B. Saltzburg Scholarship
This scholarship is for a student enrolled In the School of Nursing.

Victor C. Salvo Memorial Scholarship
This scholarship is for an entering student with preference given to students who major Electrical Engineering Technology, Computer Engineering Technology or other engineering technology. A minimum 3.0 GPA is required.

Robert and Inez Scotti Scholarship Fund
This scholarship is open to a full-time entering freshman pursuing a B.S. in Health Services Management or Accounting.

Arnold Simson Memorial Scholarship Fund Scholarship
This scholarship is open to students in all majors.

Milton L. Smith scholarship
This scholarship is open to students in all majors.

Stetson-Harza Scholarship
This scholarship is open to students in all majors.

SUNYIT Foundation Scholarship
This scholarship is open to students in all majors.

Telecommunications Department Scholarship
This scholarships is for a student majoring in Telecommunications.

TIE Communications Scholarship
This scholarship is for a student majoring in Telecommunications.

WSTA, Partners in Information and Network Technology Scholarship
This scholarship is for an undergraduate or graduate student majoring in Telecommunications. A minimum 3.0 GPA is required.

Women's Christian Association of Utica Scholarship
This is a scholarship for women with a preference for students from Oneida County.

General Scholarships

Academic Merit Scholarship
These scholarships are awarded to students who demonstrate academic achievement. Supplemental information such as an applicant's essay, letters of reference, and extracurricular activities is considered. Candidates for these scholarships will be selected from the top ranks of admitted freshmen.

SUNY Empire State Diversity Honors Annual Scholarship
This scholarship is for a U.S. citizen or permanent resident and NYS resident who will make a contribution to the diversity of the student body primarily by overcoming a disadvantage or other impediment to success in higher education.

Presidential and Deans Annual Scholarship
These merit scholarships are awarded to incoming transfer students.

The President's Opportunity Fund for Student Success
Established in 2008, this fund supports returning students who have demonstrated academic aptitude and performance and/or unmet financial need. The President's Opportunity Fund Scholarship is a one-year, non-renewable award. The scholarships are awarded on an annual basis in the fall semester; award amounts may vary.

Various annual scholarships may be available based on funding from various individuals, organizations, or corporations.

Additional Sources of Aid:

Several source books list scholarships and fellowships awarded by private organizations. Please check your library for additional information.

You may also access scholarship information online at: **http://www.finaid.org/**.

Scholarship Renewal Requirements for Four-Year Students *(Revised May 2004)*

- Freshmen entering SUNYIT on a merit scholarship are required to maintain a 3.0 cumulative GPA and be enrolled full-time through their first two years of study (first four semesters).
- Renewal review will occur after the first year is completed, and subsequently on a semester basis. Students will be notified of their scholarship standing after their first semester.
- Starting the junior year (completion of fifth semester), students are required to achieve either a 3.25 cumulative GPA or 3.25 semester GPA as a minimum and be enrolled full-time.
- Renewal review will continue to occur after each semester (fifth, sixth and seventh).
- Students who do not achieve the minimum GPA requirements stated above will have the opportunity to appeal their loss of scholarship to the Scholarship Appeals Committee through the Financial Aid Office.

Scholarship Renewal Requirements for Transfer Students

- Transfer students entering SUNYIT on a merit scholarship are required to maintain a 3.25 cumulative GPA and be enrolled full-time.
- Renewal review will occur after the first year at SUNYIT is completed and subsequently on a semester basis.
- Students who do not achieve the minimum GPA requirement stated above will have the opportunity to appeal their loss of scholarship to the Scholarship Appeals Committee through the Financial Aid Office.

All scholarship recipients must maintain full-time status throughout the entire period of enrollment. Scholarship recipients who drop to part-time status (11 credit hours or less) or withdraw from classes completely during a semester in which they are receiving the scholarship will have their scholarship cancelled for that semester and for future semesters. Students who withdraw for extraordinary circumstances will have the opportunity to appeal their loss of scholarship to the Scholarship Appeals Committee through the Financial Aid Office.

Miscellaneous Programs

Employer Deferrals: Students who will be reimbursed by their employer for tuition costs may be eligible to defer payment of their tuition until the end of the semester. Contact the Bursar's Office or see SUNYITs website.

Shirley Wurz Loan Fund: SUNYIT has established the Shirley Wurz Loan Fund to assist students in meeting unanticipated financial needs. Through this fund, a student can borrow up to $75 for 30 days with no interest or service charge. If the loan is not repaid on time, there is a $2.00 administrative charge assessed for each 30 day period or portion thereof until

the loan is repaid. All funds must be repaid by the end of the semester during which they were borrowed. Loans will not be made during the last two weeks of the semester. To be eligible, a student must be enrolled at least half-time and working toward a degree. A student will not be able to borrow if he/she already has a loan outstanding, has continually repaid loans after the due date, owes an outstanding balance to SUNYIT or if classes are not in session. Applications can be obtained from the Financial Aid Office.

Class of 1983 Loan Fund: The Class of 1983 established a loan fund to assist students by providing short-term loans (up to $150) secured by undisbursed financial aid. To be eligible, a student must have authorized federal and/or state aid from which the student is entitled to a refund. A student may take out only one Class of 1983 loan a semester and loans cannot be issued against undisbursed Federal Pell Grants or future disbursements of student loans. Applications for a Class of 1983 loan can be obtained from the Financial Aid Office.

Book Credit: Students who have financial aid which exceeds their bill for that semester and have not received a refund check may be eligible for book credit which can be used to purchase textbooks and supplies at the campus bookstore. Book credit will not be issued against estimated financial aid or for students who have postponed the payment of their semester bill by signing a promissory note. Book voucher requests can be requested through your BannerWeb account.

Financial Aid for Courses Taken at Another College

Financial aid may be processed under a Consortium Agreement for students who are taking courses at another college provided the courses are applicable to the student's program of study at SUNYIT and are not offered by SUNYIT during the semester being taken. For more information, please contact the Financial Aid Office.

Estimated Costs for the Academic Year

	Commuter	*Off-Campus*	*On-Campus*
Tuition	$4,970	$4,970	$4,970
Fees	1,085	1,085	1,085
Books & Supplies	1,000	1,000	1,000
Room	1,650	5,226	6,200
Board	1,650	4,050	3,350
Travel	1,326	1,326	1,052
Personal Expenses	900	900	900
Total Budget	$12,581	$18,557	$18,557

Tuition for out-of-state residents is $12,870. In-state graduate students should substitute $7,880 (out-of-state use $13,250) for the tuition costs. In-state graduate students in the MBA program should substitute $8,110 (out-of-state $13,760) for the tuition costs.

The above budgets represent average expenses. Generally, a student who is careful about his/her expenses can complete the year for less. Living expenses are based upon the assumption that the student will be sharing an apartment, and the associated expenses, with another student.

Tuition, fees, and other charges are estimated at the time of printing and are subject to change without prior notice at the discretion of the college administration and the State University of New York.

Repayment of Financial Aid

Students who drop from full- to part-time or who withdraw from SUNYIT during a semester may be required to repay all or a portion of the financial aid awarded for that term. The amount of such repayment, if any, is dependent upon the amount of aid actually given to the student and the number of days the student actually attended classes. The calculation of any repayment will be made by the financial aid counselors subsequent to the official dropping of a class or withdrawal from SUNYIT.

Students' Rights and Responsibilities

You have the right to ask a school:

1. The names of its accrediting and licensing organizations.
2. About its programs; its instructional, laboratory, and other physical facilities; and its faculty.
3. What the cost of attending is, and what its policy is on refunds to students who drop out.
4. What financial assistance is available, including information on all federal, state, local, private, and institutional financial aid programs.
5. What procedures and deadlines are for submitting applications for each available financial aid program.
6. What criteria it uses to select financial aid recipients.
7. How it determines your financial need. This process includes how costs for tuition and fees, room and board, travel, books and supplies, and personal and miscellaneous expenses are considered in your cost of education. It also includes the resources considered in calculating your need.
8. How much of your financial need, as determined by the institution, has been met.
9. How and when you will be paid.
10. To explain each type and amount of assistance in your financial aid package.
11. What the interest rate is on any student loan that you have, the total amount you must repay, the length of time you have to repay, when you must start repaying, and what cancellation or deferment provisions apply.
12. If you are offered a Federal College Work Study job—what kind of job it is, what hours you must work, what your duties will be, what the rate of pay will be and how and when you will be paid.
13. To reconsider your aid package if you believe a mistake has been made, or if your enrollment or financial circumstances have changed.
14. How the college determines whether you are making satisfactory progress, and what happens if you are not.
15. What special facilities and services are available to the handicapped.

It is your responsibility to:

1. Review and consider all information about a school's program before you enroll.
2. Pay special attention to your application for student financial aid, complete it accurately, and submit it on time to the right place. Errors can delay or prevent your receiving aid.
3. Know and comply with all deadlines for applying or reapplying for aid.
4. Provide all additional documentation, verification, corrections, and/or new information requested by either the Financial Aid Office or the agency to which you submitted your application.
5. Read, understand, and keep copies of all forms you are asked to sign.
6. Repay any student loans you have. When you sign a promissory note, you are agreeing to repay your loan.

7. Notify your school of a change in your name, address, or attendance status. If you have a loan, you must also notify your lender of these changes.
8. Satisfactorily perform the work agreed upon in a Federal College Work Study job.
9. Understand your college's refund policy.
10. Maintain good academic standing to retain your eligibility for financial aid.

Academic Requirements for Financial Aid Eligibility for Undergraduate Students

Federal and state regulations require that institutions of higher education establish minimum standards of "good academic standing" for students to be eligible for financial aid. These standards are applied to a student's entire academic history at SUNYIT, including periods when financial aid was not received. Failure to meet the academic requirements for financial aid eligibility does not affect the student's academic standing at SUNYIT.

The Federal and State regulations governing the financial aid programs require students to meet certain academic requirements in order to receive financial aid. To be academically eligible for financial aid, you must be matriculated (accepted into a degree program), be enrolled for at least 6 credit hours each semester for federal aid programs and 12 credit hours each semester (6 credit hours during the summer term) for the Tuition Assistance Program (courses you have previously passed and are now repeating cannot be counted toward the required hours), and be in good academic standing.

Requirements for Federal Student Aid Programs

A. Good academic standing is determined by measuring the student's academic performance at SUNYIT and consists of three components. In order to remain academically eligible for the federal aid programs, the student must meet the following requirements:
   1. Maximum Time Frame: students must meet all degree requirements within 150% of the credit hours needed to earn the degree; and
   2. Qualitative Measure: at the close of each spring semester students must have a cumulative grade point average of 2.0 or greater. Students must also maintain a cumulative grade point average greater than that which would result in academic dismissal (this information is listed in this catalog in the Undergraduate Standing section of the Academic Requirements and Policies chapter); and
   3. Quantitative Measure: students must pass at least 66% of all credit hours attempted toward their degree (the 66% measurement will be reviewed at the close of each spring semester).

All requirements and procedures which follow apply to full-time and part-time students.

B. Review Policies:
   1. At the close of each spring semester, the cumulative GPA and number of credits earned by each student are reviewed for compliance with the criteria for good academic standing. Students not receiving financial aid are subject to the same criteria and can be placed on financial aid suspension for future consideration.
   2. The following are considered credits passed:
      a. "A" through "D" grades;
      b. "S" passing with credit;
      c. courses repeated for credit, subject to the above grades.
   3. The following are not considered credits passed:
      a. "F" grades;
      b. "W" withdrawal;
      c. any courses audited with no credit;
      d. "I" incomplete;
      e. "IP" in progress.

C. Notification: Whenever possible the Financial Aid Office notifies by letter any student who does not maintain satisfactory academic progress that he/she is being placed on financial aid suspension.

D. Financial Aid Suspension: A student who fails to meet any of the above requirements is placed on financial aid suspension for federal aid until the requirement has been met. Also, any student who withdraws from SUNYIT, does not pass any courses (Incompletes are not considered passing grades) or is academically dismissed may lose his/her eligibility for aid, be placed on a Financial Aid probationary status, and/or would be required to see Financial Aid for counseling. Financial aid suspension results in the termination of financial aid from all federal financial aid programs including loans. Students do not have to receive a warning before action is taken to deny financial aid.

E. Appeal of Financial Aid Suspension

   An otherwise serious and successful student may request a waiver of the Good Academic Standing Requirements through the following procedure:
   1. The student submits a Request for a Waiver form (can be obtained from the Financial Aid office) to the Director of Financial Aid or his/her designee. The request should include:
      a. reasons why he/she did not achieve the minimum academic requirements,
      b. reasons why his/her aid should not be terminated, and
      c. documentation which would support his/her reason for failing to maintain satisfactory academic progress (i.e., statement from doctor if reason given was medically related).
   2. The Director of Financial Aid or his/her designee reviews the appeal and determines whether the granting of a waiver is warranted. The student is then advised of the decision.
   3. Students whose appeals are approved will be placed on Financial Aid probation. Students who fail to meet the terms of their probationary period will be denied aid until they regain their eligibility.

F. Conditions of Reinstatement:
   1. A student's eligibility for federal financial aid will be reinstated for subsequent semester once the above "Requirements for Federal Student Aid Programs" have been met.
   2. Students who are academically dismissed and who wish to return to SUNYIT must submit an appeal to the Registrar's Office. Those who are readmitted will need to apply for a Financial Aid Waiver if they do not otherwise meet the academic progress requirements. The Undergraduate Standing section of the Academic Requirements and

Policies chapter in this catalog contains information on academic reinstatement.

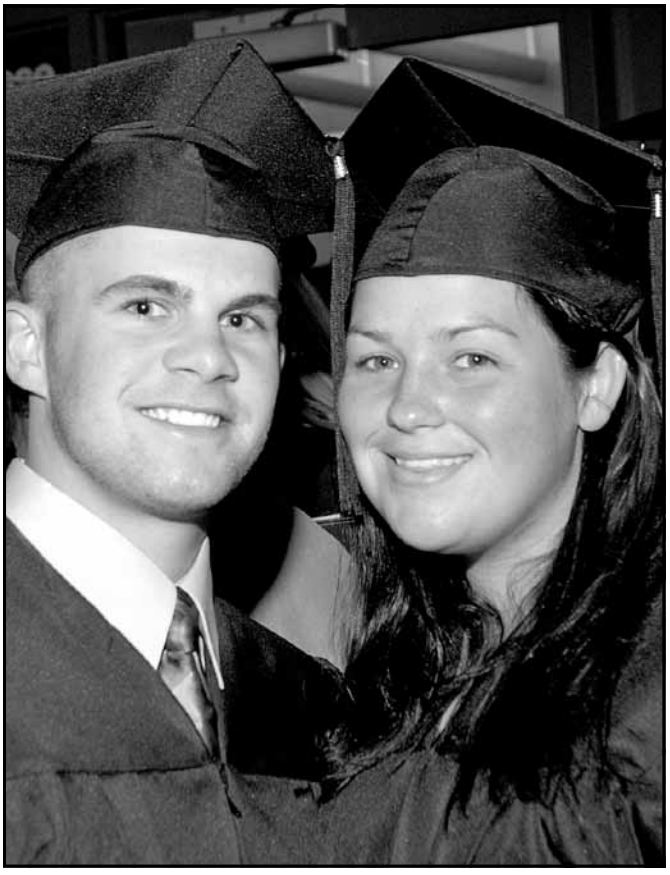
3. A grade change may result in the reinstatement of a student's eligibility. However, it is the responsibility of the student to notify the Financial Aid Office of any grade changes.

Requirements for New York State Financial Aid Programs

In addition to the previously stated academic requirements, a student who has been determined eligible for an award from a New York State aid program must meet the requirements listed on the charts below:

For students who began undergraduate study prior to 2006-2007, the following chart applies:

In order for you to receive this TAP payment:	*You must have completed* this number of hours:*	*You must have a cumulative grade point average of:*	*You must have completed** this many credit hours during your last semester:*
1st	0	0.00	0
2nd	3	0.50	6
3rd	9	0.75	6
4th	18	1.20	9
5th	30	2.00	9
6th	45	2.00	12
7th	60	2.00	12
8th	75	2.00	12
9th	90	2.00	12
10th	105	2.00	12



For First-time undergraduate students beginning with academic year 2006-2007 and thereafter, the following chart applies:

In order for you to receive this TAP payment:	*You must have completed* this number of hours:*	*You must have a cumulative grade point average of:*	*You must have completed** this many credit hours during your last semester:*
1st	0	0	0
2nd	3	1.1	6
3rd	9	1.2	6
4th	21	1.3	9
5th	33	2.0	9
6th	45	2.0	12
7th	60	2.0	12
8th	75	2.0	12
9th	90	2.0	12
10th	105	2.0	12

* *Includes those hours you have transferred to SUNYIT.*

** *Complete is defined as receiving grades of A+, A, A-, B+, B, B-, C+ C, C-, D+, D, F, S, U, or I.*

If you do not meet the above requirements, you will not be eligible for the Tuition Assistance Program, Aid for Part-Time Study, or other New York State aid programs.

If you received credit for a TAP, APTS, or other New York State aid award on your bill, and subsequent verification of your academic eligibility reveals that you did not meet the requirements, we are required to cancel your award and you will be required to pay any balance owed SUNYIT.

A student can regain eligibility only by being granted a one-time waiver if extraordinary circumstances prevented the student from meeting the criteria, by making up deficiencies without receiving TAP, APTS, or other N.Y. State aid program awards, or by being readmitted to SUNYIT after an absence of at least 12 months (this provision does not re-establish eligibility for a student who fails to meet the 2.0 cumulative grade point average requirement).

Additional information on satisfactory academic progress requirements can be obtained by contacting the Financial Aid Office.

The information contained in the financial aid section of the catalog is correct at the time of printing. Changes in policies, requirements, and regulations may occur at any time.

Child Care Subsidy Program

SUNYIT has a child care subsidy program for student parents. The goal of this program is to provide support to low-income student parents and allow them the opportunity to obtain a SUNYIT degree. This program provides child care subsidies for income-eligible student parents that demonstrate the ability to successfully complete the course of study and maintain satisfactory progress.

Funds are allocated on a first come, first serve basis. Apply for child care subsidy by contacting the Office of Student Accounts at (315) 792-7412.

Academic Requirements and Policies

Degrees

The Board of Regents and the New York State Education Department have authorized the State University of New York Institute of Technology to confer the following undergraduate degrees: Bachelor of Professional Studies, Bachelor of Science, Bachelor of Arts, and Bachelor of Business Administration.

SUNYIT offers Master of Science degree programs in accountancy, adult nurse practitioner, advanced technology, applied sociology, computer and information science, family nurse practitioner, gerontological nurse practitioner, health services administration, information design and technology, nursing administration, nursing education and telecommunications. SUNYIT also offers Master of Business Administration degree programs in health services management and technology management. Advanced certificates are offered in adult nurse practitioner, family nurse practitioner, gerontological nurse practitioner and nursing education.

Accreditation

The State University of New York Institute of Technology is accredited by the Board of Regents of the State of New York. Its academic programs are registered by the State Education Department.

SUNY Institute of Technology is accredited by the Middle States Association of Colleges and Schools. Its educational programs in nursing and health information management are accredited by the Commission on Collegiate Nursing Education (CCNE), and the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

The following programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET): civil engineering technology, electrical engineering technology, industrial engineering technology, mechanical engineering technology, and computer engineering technology.

The Association to Advance Collegiate Schools of Business (AACSB) accredits the State University of New York Institute of Technology School of Business undergraduate degree programs in accounting, business, finance, and health services management and graduate programs: MBA in health services management, MBA in technology management, M.S. in accountancy and M.S. in health services administration.

Undergraduate Grading System

The level of a student's scholarship is determined by the following system of quality points per semester hour of credit:

Grades	*Quality Points Per Credit Hour*
A +	4.00
A Excellent	4.00
A-	3.67
B +	3.33
B Good	3.00
B-	2.67
C +	2.33
C Satisfactory	2.00
C-	1.67
D +	1.33
D *Poor*	1.00
F Failure (no earned credit)	0.00
W [1] Withdrew	
I [2] Incomplete	
IP In Progress Passing [3]	
S [4] Average or Above	
U [5] Unacceptable	
EX Examination (Refer to Test-out Policy Below)	

The grade point average (GPA) is determined by dividing the total number of quality points by the total number of semester hours for which a student has been graded ("A" through "F"). If a student has retaken a course, only the course with the higher grade is used in computing the cumulative GPA.

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1. *Withdrew from a course subsequent to the add/drop period and prior to the last class meeting at the end of the tenth week of classes.*

2. *The Incomplete Grade (I): A grade assigned at the discretion of the instructor when the student has failed to complete the course due to circumstances beyond the student's control. The incomplete must be removed by mid-semester of the following semester.* ***An incomplete that is not removed within this period is recorded as an "F." NOTE: Students cannot re-register for a course in which they are currently registered and have an incomplete grade pending.***

3. *In Progress Passing (IP): is assigned at the discretion of the instructor when the student is making satisfactory progress in course requirements that one ordinarily would be unable to complete by the end of a semester: i.e.; research, practicums, internships. Students have until the end of the following term to complete the required work.* ***[NOTE: An IP grade that is not changed by the end of the following term is recorded as an "F".]***

4-5. *"S" and "U" grades apply only to those courses that have been approved as S/U grade courses. Grades "A" through "F" may not be awarded in such courses. The "S" grade signifies that the requirements of the course have been successfully completed and academic credit has been earned. The "U" grade indicates that the requirements of the course have not been successfully completed and no academic credit has been earned. S/U graded courses are indicated as such in the course descriptions. "S" and "U" grades are not included in calculating the student's GPA,* ***and, if an "I" were to be given and not removed, the "I" reverts to a "U."***

Final Grade Reports

Students should carefully review their final grade reports that are available on the campus web at the conclusion of each semester. Errors should be immediately reported to the Registrar's Office. Students have one year from the end of any semester in which to request, in writing, a correction to their academic record, and must provide appropriate documentation to support the request.

Certifying Official

The Registrar is designated as SUNYIT's certifying official and performs the following certification functions: Veterans Educational Benefit Certification, verification of enrollment (i.e., insurance, employment, enrollment certification for NYS Higher Education, loan servicing centers and banks, etc.), and certification/verification of graduation.

Undergraduate Honors

Eligibility for the academic honor lists is based upon full-time (12 or more credit hours) matriculated student status in courses that are graded "A" through "F." One or more incomplete (I) grades renders a student ineligible for academic honors.

1. *President's List.* A semester GPA of 3.60 or more qualifies a student for that semester's President's List.
2. *Dean's List.* A semester GPA of 3.20 or more, and less than 3.60 qualifies a student for that semester's Dean's List.

Graduation Honors

SUNYIT confers honors in recognition of excellence. This concept, by its nature, involves an overall academic performance which is unusual; noteworthy; extraordinary. Consequently, the students thus designated are normally expected to be few.

Accordingly, honors will be conferred according to the following pattern:

In each school of SUNYIT, generally not more than 15% of the graduating students shall be awarded graduation honors.

Exceptions to Academic Policies

Students seeking an exception to an academic policy may do so by filing a petition form with the dean of their academic school.

Test-Out Policy

As a matter of policy, SUNYIT allows students to establish credit for coursework on the basis of activities other than normal class attendance. Each academic school establishes its own policy for testing out, observing the following guidelines:

a. The basis for establishing credit must be explicitly formulated and approved in advance by the divisional faculty, the dean, and the Provost. A copy must be on file in the Registrar's Office.
b. Credit established under this policy must be used to satisfy degree requirements and must not extend the total number of credit hours required for graduation.
c. No more than 12 credit hours can be established under this policy.
d. A grade of EX will be assigned for each course to students establishing credit under this policy. EX grades are not counted when calculating the student's GPA.
e. Regular tuition will be charged for each course requirement satisfied under this policy.
f. Credits earned through this procedure may not be applied toward the 30 semester hour residence requirement.
g. A student may have the opportunity to test-out of a particular course only once.

Students wishing to test-out must contact the school department offering the specific course to determine if a test is available and, if so, must register for the course no later than the last day to add a course for a term. The test must be administered no later than the beginning of the term so that the student may change their class schedule, depending on the results of the test, during the add/drop period. Students who pass the test must remain registered in the class to receive credit for the course. Students who do not pass may choose to remain registered and complete the course in the normal manner or may choose other course options.

Policy for "F" Grades After Re-matriculation

A student re-matriculating at SUNYIT after an absence of seven years may petition the Academic Affairs Committee to have a maximum of twelve credits of "F" course grades that were received at the Institute prior to re-matriculation, be removed from the calculation of their cumulative grade point average (GPA). All "F" grades in courses taken at SUNYIT will still continue to be listed on the student's transcript.

In order to petition for the removal of course "F" grades, the student must have completed twelve credits of course work after the re-matriculation and the cumulative GPA for these twelve credits must be 2.5 or higher.

Courses that are currently offered at SUNYIT at the time of petitioning that may not be included are:

- General education courses or course substitutes (as determined by the appropriate School).
- Courses or course substitutes (as determined by the appropriate School) that are required by both the previous as well as the new or current degree program.

The Academic Affairs Committee's decision on the student's petition will be based primarily, but not solely, upon whether the student was able to demonstrate via the petition that an unrealistically heavy burden would be placed upon them by requiring them to retake the courses listed in the petition.

Policy for "F" Grades for Courses No Longer Available at SUNYIT

If a student has an "F" grade in a course and the course is no longer available at SUNYIT, the student may petition the School previously offering the course to:

1. Have the appropriate faculty within the School determine if there is presently a comparable course available for the student to take at SUNYIT.
   a. If such a course is available, the student may take the new course as a substitution and have the new grade computed in his/her GPA.
   b. The old course grade will remain on the student's transcript and the "F" grades will be removed from the GPA calculation.
2. If there is no comparable course available for the student to take at SUNYIT.
   a. The student may petition the Academic Affairs Committee to have the "F" grade removed from their GPA calculation.
   b. The old course grade will remain on the student's transcript.

Upper Division Credit Requirement

Students must accrue a minimum of 30 upper division credits (courses numbered 300 or above at SUNYIT) of which at least 12 credits in residence must be in the major.

Undergraduate Standing

The following definitions and regulations apply to undergraduate standing:

1. *Matriculated Student:* Any student who has followed the standard SUNY admission policies for entrance to SUNYIT and is formally enrolled in an established program leading to a degree at SUNYIT. A student who discontinues enrollment for more than one year will lose status as a matriculated student and must apply for readmission.
2. *Full-Time Matriculated Student:* Any matriculated student who has enrolled in a minimum of twelve (12) credit hours of coursework during a semester.
3. *Part-Time Matriculated Student:* Any matriculated student who has enrolled in less than twelve (12) credit hours of coursework during a semester.
4. *Academic Overload:* Any student registering for more than 16 semester credit hours (18 credits for majors in the School of Information Systems and Engineering Technology) in any semester must have the written approval of the appropriate school dean, or his designated representative.
5. *Class Standing:* A matriculated student's class standing is determined as follows:
   Freshman – 0 to 29 earned credit hours of coursework.
   Sophomore – 30 to 59 earned credit hours of coursework.
   Junior – 60 to 89 earned credit hours of coursework.
   Senior – 90 or more earned credit hours of coursework.
6. *Academic Good Standing:* A student is considered in good standing unless expelled, suspended, or academically dismissed from SUNYIT and not re-admitted.
7. *Academic Warning:* At the completion of each semester, each student's academic record is routinely reviewed, and if the cumulative grade point average is below 2.00, the student is place on academic warning for the following semester.
8. *Academic Dismissal:* At the completion of each semester, the academic record of each student on academic warning will be reviewed for academic dismissal reasons. If the semester grade point average of a student on academic warning is below a 2.00, the student will be academically dismissed. No student will be academically dismissed without first being on academic warning.
9. *Readmission Following Academic Dismissal:* Students dismissed for academic deficiencies who wish to apply for readmission to SUNYIT must submit their written application to the Academic Dismissal Readmissions Committee. The committee will evaluate the application and make a determination as to readmission. The committee may delay readmission until one full semester has elapsed and will generally do so if a student is applying for readmission a second time. A student granted readmission to SUNYIT will be placed on academic warning. Establishing matriculation in a degree program is governed by the regulations for matriculation in that program at the time of readmission.
10. *Voluntary Withdrawal:* To retain good academic standing, students who withdraw voluntarily must officially withdraw through the Registrar's Office. Students who do not officially withdraw may receive failing grades in any courses not completed. The student who withdraws voluntarily without being granted a leave of absence loses matriculation status. Should the student desire to return at a later time, the student must file a Petition for Readmission form with the Admissions Office and be approved for readmission. (Graduation requirements in effect at the time of re-entry will apply.)
11. *Leave of Absence:* Leave of absence for a specified period of time may be granted to a student who is not subject to academic dismissal. The student applying for leave of absence must give a definite date for re-registration at this college of no longer than one academic year from the date of leaving SUNYIT. A student not returning for re-registration within the specified time will be classified as officially withdrawn from SUNYIT. Application for leave of absence must be made to the dean of the academic school in which the student is enrolled.
12. *Continuous Matriculation:* Degree requirements existing at the time of initial matriculation remain in force only if the student maintains continuous matriculation. A student who discontinues enrollment for more than one year without being granted an official leave of absence must apply for readmission. Degree requirements are determined by the catalog under which the student is readmitted. Readmission requirements may vary from program to program. In either case, course prerequisites listed in the catalog are subject to change.

Code of Academic Conduct

Refer to the current Student Handbook for SUNYIT's Code of Academic Conduct.

Undergraduate Course Requirements

1. *Class Attendance.* Each student is expected to attend class regularly in order to achieve the maximum benefit from educational activities. The student is responsible for all classwork missed, regardless of the reasons for absence. Each instructor sets the standards of performance to be met by each student for each course in keeping with the standards and policies of SUNY and the college, school, or department. Expected performance is defined at the beginning of the course. The student's performance in relation to the established standards shall determine the student's grade in a course.
2. *Time Requirement for Courses.* It is the policy of SUNYIT for all courses offered to conform to the New York State Education Regulations requiring at least 15 hours of instruction* and at least 30 hours of supplementary assignments for each semester credit hour awarded in lecture/discussion courses. For example, a four credit course requires at least four hours of instruction plus supplementary assignments requiring at least eight additional hours each week for the 15-week semester. Courses involving laboratories, independent studies, tutorials, or practicum experiences are required to have some combination of instruction, laboratory work, and/or supplementary assignments equaling at least 45 hours for each credit awarded.
3. *Repeating Courses.* A student may repeat any course in which he or she has received a grade of "F." Since no credit is earned for a course in which a grade of "F" has been received, the student must make up the credit deficiency. If a failed course is specifically required for the student's academic program, the student must repeat the course. A student may repeat any course in which he or she has received a "D" or better with the approval of the advisor, instructor, and chairperson of the department or dean of the school offering the course. While the student receives credit for only one course attempt toward completion of the degree or program, both grades remain on his or her record; only the higher grade is used in computing the student's cumulative GPA.
4. *Waiver of Courses.* The academic school dean may allow substitutions for a particular credit course required in a program or curriculum. The student's advisor must formally recommend the substitution as part of the petition for waiver.
5. *Independent Study.* Independent study projects are designed to provide matriculated students with the opportunity for a learning experience in a specific area of knowledge not provided by regular courses at SUNYIT. They are not to be used in lieu of courses listed in the general catalog, nor are they to be considered guaranteed offerings; they are available to the student as facilities, faculty, time, and interest permit. Within these guidelines each academic school defines its concept of independent study.

   Responsibility for planning, conducting, and reporting on an independent study project rests with the student. However, students are to seek the assistance of a faculty member in developing proposals. The student must submit a proposal to the faculty member specifying educational goals, proposed methods of evaluation, duration of the project, and the number of credit hours. The completed proposal is reviewed by the dean of the subject area. *Registration for independent study can only occur after the proposal has been approved by that dean.* Independent study courses cannot be added after the normal add date for the semester. A copy of the proposal must be filed with the registrar when registering for the course. At the end of the study period, the faculty member will receive documentation of the results, assign an appropriate grade, and forward the grade with an abstract to the registrar. No more than eight (8) credit hours toward the undergraduate degree may be taken as independent study at SUNYIT.
6. *Auditing Courses.* Students must complete a Course Audit Registration Form for a course to be taken for audit. The form must be signed by the instructor of the course and the dean of the academic school within which the course is offered. Students taking courses for audit may submit Course Audit form beginning the first day of classes but no later than the last day to add classes. Tuition and fees are not charged for audited courses and there will be no notation of these courses on the SUNYIT transcript. NOTE: online and hybrid courses cannot be audited.
7. *Adding or Dropping a Course.* A student may add or drop a course, without academic record, by completing the appropriate forms available in the Registrar's Office and obtaining the required approvals (refer to the comprehensive academic calendar for appropriate dates). During the third through ninth week of the semester, any student dropping a course receives a "W" grade. After the ninth week of class, a letter grade A-F is assigned.
8. *Section Changes.* Change of section is accomplished by the use of an add/drop form.
9. *Students Unable to Register or Attend Classes on Certain Days Because of Religious Beliefs.* The SUNY policy on attendance in class states: No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that the student is unable, because of religious beliefs, to register or attend classes or to participate in any examination, study, or work requirements on a particular day or days.

   Any student in an institution of higher education who is unable, because of religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

   It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of religious beliefs, an equivalent opportunity to make up any examination, study, or work requirements which the student may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to said student such equivalent opportunity.

** Inclusive of examinations. An hour of instruction equates to 50 minutes of actual class time.*

If registration, classes, examinations, study, or work requirements or opportunity to register are held on Friday after four o'clock post meridian, or on Saturday, similar, or make-up classes, examinations, study, or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements held on other days.

In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to students because of their availing themselves of the provisions of this section.

Any student who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of the student's rights under this section.

Physical Education/Recreation

All SUNYIT bachelor's degree programs will allow a maximum of four credit hours (transfer and institutional) for courses in the areas of Physical Education and/or Recreation. These credit hours may only be applied as Open Electives towards completion of degree requirements. Individual academic programs may include additional restrictions.

Residency Requirements

SUNYIT maintains a minimum residency requirement of 30 semester hours, of which a minimum of 12 semester hours must be in the major. Consult your program description for any additional specific residency requirements.

Transcript Request Policy

SUNYIT transcript requests must be made in writing with the student's signature. Telephone requests cannot be legally honored. There is a $5.00 processing charge for each copy of a transcript requested. All financial obligations to SUNYIT must be cleared prior to the issuance of a transcript.

Transfer of Credit

It is the policy of SUNYIT to accept only those transfer credits that are applicable to the student's degree requirements, i.e., - a 64 semester hour transfer of credit into a baccalaureate program requiring 124 hours indicates that the student will need to complete an additional 60 hours to finish the bachelor's degree. A minimum 2.0 cumulative grade point average must be maintained for all credit transferred. Courses for which transfer credit is allowed may not be repeated for credit at SUNYIT. Total transfer of credits may not exceed 94 semester hours (141 quarter hours). SUNYIT accepts transfer **credit** only. Transfer course grades and quality points earned at the transfer institution are not reflected in a student's grade point average.

A. Transfer of Credits Taken Prior to Matriculation

Students may transfer all applicable earned credit not to exceed 64 semester hours. Additional credit beyond 64 semester hours may be accepted from primarily four-year institutions if it is applicable to the student's degree program. Under no circumstances may the student transfer more than 76 credits of lower division coursework.

B. Transfer of Credits Taken After Matriculation

Matriculated students who wish to take coursework at another college and receive additional transfer credit must receive prior approval by filing an academic petition in accord with the procedures of their academic department. Approval of transfer credit will be based on the applicability of the course towards the student's degree requirements, and successful completion of the course with a grade of "C" or better. Ordinarily, these courses shall be taken from four-year colleges, but under no circumstances may the student transfer more than 76 credits of lower division coursework. It is the student's responsibility to have an official transcript forwarded to the Registrar's Office for evaluation upon completion of the course.

C. Credit by External Examination

Credit is allowed for other types of educational experience when applicable to the student's degree requirements according to the following guidelines:

1. College Proficiency Examination Program (CPEP). Administered by the New York State Education Department, CPEP offers examinations in the arts and sciences, nursing, health, and teacher education.
2. College Level Examination Program (CLEP). The College Entrance Examination Board offers a national credit-by-examination program that includes general examinations in the humanities, social sciences, mathematics, natural sciences, English, composition, introductory accounting, and computer and data processing.
3. United States Armed Forces Institute (USAF/DANTES). The USAFI offers credit-by-examination in a variety of academic areas including the humanities, social sciences, and business administration.
4. Regents External Degree (RED). The Board of Regents of the University of the State of New York offers various programs in which students can demonstrate successful subject area competencies by examination.

D. Advanced Placement Credit

Administered by the College Entrance Examination Board, Advanced Placement (AP) credit may be awarded for courses taken in high school dependent upon the scores achieved. Certain academic programs may not accept AP credit for specific requirements. Students should check with the program faculty to determine how AP credit will be applied in that program. Students should send an official copy of their scores directly to the Admissions Office. AP credit cannot be used to fulfill SUNYIT's requirement for the satisfactory completion of one upper-division writing course. In addition, AP credits in biology, chemistry, environmental science or physics will only fulfill the SUNYIT's requirement for the satisfactory completion of one laboratory course in the physical sciences when a score of 4 or 5 has been achieved on any of the four AP examinations. Below is a listing of AP examinations and acceptable scores:

AP Exam	Score	Credits Granted	Gen. Ed. Category	SUNYIT course which cannot be taken for credit if AP credit granted
Art History	3, 4, 5	4cr	Humanities	NA
Biology	3	6cr	Natural Science (non-lab)	BIO 101
	4, 5	8cr	Natural Science (lab)	BIO 101
Calculus (AB)	3	4cr	Mathematics	MAT 121, MAT 112
(AB)	4, 5	4cr	Mathematics	MAT 151
(BC)	3	4cr	Mathematics	MAT 121, MAT 151
(BC)	4,5	8cr	Mathematics	MAT 121, MAT 151, MAT 122, MAT 152
Chemistry	3	6cr	Natural Science (non-lab)	CHE 110
Chemistry	4, 5	8cr	Natural Science (lab)	CHE 110
Computer Science (A)	3, 4, 5	4cr	NA	CS 108
(AB)	3	4cr	NA	CS 108
(AB)	4, 5	8cr	NA	CS 108 and CS 240
Economics (Micro)	3, 4, 5	4cr	Social Sciences	ECO 110
Economics (Macro)	3, 4, 5	4cr	Social Sciences	ECO 112
ENG.(Lang.&Comp.)	3, 4, 5	4cr	Humanities	ENG 101
ENG.(Lit.&Comp.)	3, 4, 5	4cr	Humanities	NA
Environmental Sci.	3	3cr	Natural Science (non-lab)	BIO 105
	4, 5	4cr	Natural Science (lab)	BIO 105
European History	3, 4, 5	4cr	Western Civilization	HIS 360
French (Language)	3, 4, 5	4cr	Foreign Language	NA
French (Lit)	3, 4, 5	4cr	Foreign Language	NA
German	3, 4, 5	4cr	Foreign Language	NA
Govt&Politics (Comp)	3, 4, 5	4cr	Social Sciences	POS 330
(US)	3, 4, 5	4cr	Social Sciences	POS 110
Human Geography	3, 4, 5	4cr	Social Sciences	NA
Latin (Literature)	3, 4, 5	4cr	Foreign Language	NA
(Virgil)	3, 4, 5	4cr	Foreign Language	NA
Music Theory	3, 4, 5	4cr	Arts	MUS 300
Physics (B)	3	6cr	Natural Science (non-lab)	PHY101 and PHY102 (*)
	4, 5	8cr	Natural Science (lab)	PHY101 and PHY102 (*)
(C-Elect&Mag)	3	3cr	Natural Science (non-lab)	PHY 102, PHY 202
	4, 5	4cr	Natural Science (lab)	PHY 102, PHY 202
(C-Mechanics)	3	3cr	Natural Science (non-lab)	PHY 101, PHY 201
	4, 5	4cr	Natural Science (lab)	PHY 101, PHY 201
Psychology	3, 4, 5	3cr	Social Sciences	PSY 100
Spanish (Language)	3, 4, 5	4cr	Foreign Language	SPA 101
(Literature)	3, 4, 5	4cr	Foreign Language	SPA 101
Statistics	3, 4, 5	4cr	NA	STA 100
Studio Art (Drawing)	3, 4, 5	4cr	Arts	ART 335 and ART 330
(2-D Design)	3, 4, 5	4cr	Arts	NA
(3-D Design)	3, 4, 5	4cr	Arts	NA
U.S. History	3, 4, 5	4cr	American History	HIS 101 and HIS 102
World History	3, 4, 5	4cr	Other World Civilizations	HIS 370

Explanations:
1. NA - SUNYIT does not have an equivalent course.
The AP credit is given, but it does not preclude student from taking any SUNYIT course.

2. (*) If credit is received for PHY 101 and/or PHY 102 then PHY 201 and/or PHY 202 cannot be taken for additional credit. (see PHY 201 and PHY 202 in the catalog).

E. Effect of Transfer Credits

Credits awarded under the above regulations have no effect upon the computation of the student's grade point average.

Requirements for Graduation

1. Students with 124/128 credits accumulated and/or in progress must submit an *application to graduate* form to the Registrar's Office by the *preceding* November 1 for May graduation, by April 1 for August graduation, or by June 1 for December graduation. The list of potential graduates is forwarded to each academic school and advisors and the registrar review each student file to determine if all requirements have been met. Students completing coursework off-campus should contact the Registrar's Office for specific deadline dates. All students have approximately three weeks from the formal date of graduation to submit any paperwork required to clear them for graduation (specific deadline dates are posted each semester by the Registrar's Office). Students not meeting this deadline will be notified in writing that they have not graduated.
2. While each student is assigned a faculty advisor and is given an opportunity to obtain additional counseling on personal and collegiate matters, final responsibility rests with the student to assure that all degree program requirements are satisfied for graduation.
3. **Satisfactory completion of 124 credits (128 in specified programs) with a minimum cumulative GPA of 2.00 for all coursework taken at SUNYIT is required for graduation. Additionally, students must meet all specific program requirements and must maintain a 2.00 GPA in all courses in the major, as identified by their department, for graduation.**
4. There is a $10.00 diploma cover fee which must be paid prior to graduation. All financial obligations must be cleared before the diploma is released.

Graduation with Incomplete Grades

A student who has met all graduation requirements but who has an outstanding Incomplete grade can elect to graduate with the outstanding Incomplete grade. Students who elect to graduate in this manner may not change the Incomplete grade at a later time to another letter grade. Graduation honors will be set at the time of graduation and will not change. Students may also elect to delay their graduation to the next semester so that the Incomplete grade can be changed and the new grade may be calculated in the cumulative grade point average.

Dual Baccalaureate Degrees

1. A student possessing a baccalaureate degree from another institution may earn a second baccalaureate degree* from SUNYIT by completing the specific degree requirements and the residency requirement. A student may satisfy both requirements simultaneously.
2. A student may earn two baccalaureate degrees* from SUNYIT. The student must satisfy all degree requirements for each program. A student wishing to complete more than one baccalaureate degree may transfer a different set of courses for each degree but in no case is a student allowed to transfer more than 94 credit hours for each degree. A student must complete at least an additional 30 resident credit hours beyond the requirements for the first degree for each additional degree earned.

** The New York State Education Department requires that: "The conferral of two baccalaureate or associate degrees should be reserved as a means of recognizing that a candidate has competencies in two essentially different areas. For example, if a person obtains a Bachelor of Arts in History, it would be entirely appropriate to confer on the student a Bachelor of Business Administration or a Bachelor of Fine Arts, for those degrees represent professional preparation discrete from the learning identified for the Bachelor of Arts. However, it would not be appropriate to confer two Bachelor of Arts for double majors, say in English and psychology, since multiple academic majors may be properly identified on the transcript. Nor would it be logical to award a Bachelor of Arts for a completed major in English and a Bachelor of Science for a concentration in chemistry. If the liberal arts content is sufficient, one degree for both fields would be appropriate, for at this time the distinction between a Bachelor of Arts and a Bachelor of Science in many instances is at best thin, if not completely lost." Memorandum to Chief Executive Officers of Higher Institutions No. 4, September 10, 1971.*

Academic Minors

Matriculated students at SUNYIT can obtain an academic minor in an area of study that is different from the area of the major and that has been approved by the Curriculum Committee and the Provost. Approved minors are described in the catalog. Application for an academic minor must be made through the department offering the minor. Specific courses must be identified in consultation with a faculty member in the minor. A statement of successful completion of the minor will appear on the student's transcript at the time of graduation.

The following additional criteria must be satisfied for approval of the minor:

1. The minor must consist of a minimum of 17 credit hours.
2. The minor must be in a different discipline from the student's major. "Different discipline" signifies a discipline other than the discipline comprising the majority of the courses in the student's academic major.
3. At least eight credit hours must consist of advanced level courses. "Advanced level" signifies courses beyond the entry-level sequence in the discipline; these courses normally carry prerequisites.
4. At least eight credit hours must be taken at SUNYIT.
5. At least eight credit hours must not be required courses in the major.
6. A student must maintain a minimum cumulative grade point average of 2.0 (average of "C") in the minor.

Second Major

By petition approved by both major departments and the Registrar's Office, a matriculated student may complete the requirements for a second major at SUNYIT. The student continues as a matriculated student within the primary academic field; upon graduation the student must provide the dean or chairperson of the second major with documentation that the requirements of the second major curriculum have been fulfilled. The second major is then listed on the student's official transcript. Only majors are so recorded, not options.

Regional Educational Consortium

SUNYIT is a member of a regional educational consortium that includes Empire State College (Utica location only), Herkimer County Community College, Hamilton College, Mohawk Valley Community College, SUNY College of Technology at Morrisville, and Utica College. Full-time matriculated students at any of the consortium partners are able to enroll in one course of up to four credits of eligible coursework per semester (fall and spring only) at partner campuses without incurring additional tuition charges.

Eligible courses must be applicable to the student's degree program and approved by the student's academic advisor, then certified by the Registrar. Courses are ineligible if SUNYIT offers the same or equivalent course during the same semester. Registration in eligible courses is provided by the host campus on a space-available basis, determined by the host campus on or about the first day of classes.

When enrolled in a course at another campus, students are reminded that the course will follow the calendar and all academic and student conduct regulations of the host campus. While there is no additional tuition charge for courses taken under this program, students will be charged by the host campus for any fees (e.g., parking, technology, computer, student activity, etc.) normally assessed upon part-time students. In addition, SUNYIT may impose an administrative fee.

Full details on this program, which may be modified from time to time, are available in the Office of the Registrar.

Undergraduate Students Registering for Graduate Courses

Matriculated Undergraduate Students in accelerated BS/MS programs see program requirements.

For Graduate Credit

Undergraduate students looking to register for graduate course to earn graduate credit must complete a Petition for Graduate Courses. This is for students who are enrolled in their final semester needing less than full-time credits hours to graduate. A minimum cumulative GPA pf 3.2 in the degree and a 3.0 for all coursework at SUNYIT is required. Granting graduate credit is contingent upon successful completion of all concurrent undergraduate degree requirements. A maximum of 6 credits is allowed.

For Undergraduate Credit

Undergraduate students looking to register for a graduate course to earn undergraduate credit must complete a Petition for Graduate Courses. This is for students who have completed the equivalent of one full-time semester at SUNYIT. A minimum GPA of 3.2 for all coursework at SUNYIT is required. A maximum of 6 credits is allowed. Note: the course or courses will appear on the student's undergraduate transcript and may not be used for graduate credit at a later date.

Lab Science Requirement

Each undergraduate student must successfully complete a laboratory science course of 3(or more) credits in order to complete their program of study at the Institute. This laboratory science course must be taken in addition to the natural sciences course required by the SUNY General Education policy.

Foreign Language Requirement

Credit for the SUNYIT General Education Foreign Language Requirement may be issued to students who have done one of the following:

1. Satisfactorily completed a one-semester FL course at SUNYIT;
2. Satisfactorily completed and transferred a college-level FL course from another institution (upon receipt of official transcript);
3. Earned a score of 3 or higher on FL AP exam (upon receipt of official transcript);
4. Earned a satisfactory score on an approved FL test via the normal Test-Out Policy.

The SUNYIT General Education Foreign Language Requirement may be waived for students who have done one of the following:

1. Earned a score of 85 or higher on a NYS FL Regents exam (upon receipt of official high school transcript);
2. Received a diploma or degree from a secondary or higher educational institution in which the language of instruction was other than English;
3. Documented successful completion of four years of schooling in an educational institution where the language of instruction was other than English;
4. Earned a passing grade on the NYU Foreign Language Proficiency test;
5. Earned a score of 530+ on SAT II in a foreign language;
6. Received a minimum of a "B" grade or 85 in fourth year of a foreign language;
7. Earned a satisfactory score on a Native American Language proficiency exam (pending identification of appropriate testing instruments and scores).

An official copy of a transcript (and approved translation if in a language other than English) demonstrating eligibility for this waiver must be submitted to the dean along with a completed petition requesting the waiver. Students will not receive any academic credit for this waiver and there will be no reduction in the student's SUNY General Education credit requirements for graduation.

Writing Requirement

Based upon the recommendation of the President's Blue Ribbon Panel on Basic Skills (1984), SUNYIT adopted the following writing requirement:

Each student must successfully complete ENG 101, "English Composition" and at least ONE upper division writing course (e.g., COM 240, COM 306, COM 307, COM 308, COM 311, COM 350, COM 353, COM 400) to ensure a professional level of writing competency.

SUNYIT also established the Writing Faculty Committee to oversee the implementation of this requirement and to create an appropriate test-out procedure for those students interested in challenging the required writing courses for credit. Each semester the current registration booklet identifies the courses that meet the writing requirement and provides the procedure for challenging a course through the test-out.

Freshman General Education Core

SUNYIT offers freshmen the opportunity to complete a significant portion of the general education requirements via a core sequence of coursework that integrates four general education requirements into three courses. The three courses are IDS 101, "Perspectives on Knowledge," IDS 102, "Art and Culture," and IDS 103, "Science, Technology, and Human Values." Students who complete all three core courses will have satisfied four general education areas: Western Civilization, Other World Civilizations, Humanities, and Fine Arts. The three core courses do not need to be taken in sequence, and students who complete only one or two of the core courses should meet with a general education advisor to determine the general education credit they have earned.

General Education

SUNYIT is dedicated to the idea that a baccalaureate degree should not only prepare students to enter the work force, but also to take part fully in today's society. SUNYIT strongly believes that its graduates should be aware of life's complex nature in the 21st century. They should have sufficient understanding of the present major issues and problems, so they may make informed choices in politics, in professional pursuits, and in personal endeavors.

To help achieve this, SUNYIT encourages its students to create three major areas of thinking within themselves. The first is an appreciation of the scientific method and the scope of scientific achievement. The second is a familiarity with the diverse traditions, institutions, and cultural expressions of our modern world. The third is an understanding of each person as an emotional, rational, and creative being.

Since our age is marked by rapid change and specialization, SUNYIT recognizes the compelling need of its students to think so they can easily see the connections that do exist among the apparently diverse actions of the people and world around us.

Each program of study at SUNYIT has adapted its curriculum to help students achieve this type of comprehensive education.

SUNY General Education Categories

The following list of SUNY Institute of Technology arts & sciences courses fulfill general education requirements as noted below.

Mathematics
MAT 111 College Mathematics
MAT 112 Elements of Calculus
MAT 115 Finite Mathematics for Computer Science
MAT 120 Precalculus
MAT 121 Calculus for Engineering Technology I
MAT 122 Calculus for Engineering Technology II
MAT 151 Calculus I
MAT 152 Calculus II
MAT 225 Applied Statistical Analysis
MAT 413 Discrete Mathematics for Computer Science
STA 100 Statistical Methods

Natural Sciences
AST 222 Astronomy
BIO 101 Introduction to Biology
BIO 105 Introduction to Ecology
BIO 110 Anatomy & Physiology I
BIO 111 Anatomy & Physiology II
BIO 122 Insects & Society
BIO 130 Plant Biology
BIO 150 Introduction to Genetics
BIO 215 Anatomy & Physiology I
BIO 216 Anatomy & Physiology II
BIO 222 Nutrition and Health
BIO 224 Biology of Aging
BIO 225 Biology of the Sexes
BIO 310 Evolution
CHE 110 Essentials of Chemistry
ENV 115 Introduction to Physical Geology
ENV 210 Weather and Climate
PHY 101 General Physics I
PHY 102 General Physics II
PHY 201 Calculus Based Physics I

Social Sciences
ANT 301 General Anthropology
ANT 302 Biological Anthropology: Contemporary Issues
ANT 303 Cultural Diversity
ANT 310 Introduction to Cultural Anthropology
COM 262 Online Politics
ECO 110 Microeconomics
ECO 330 Economics of Aging
POS 110 American Public Policy
POS 252 The Politics of Life and Death
POS 262 Online Politics
POS 321 State and Local Government
POS 330 World Politics
POS 340 Elections and Political Behavior
POS 341 American Politics and Communication Technology
POS 342 Constitutional Law
PSY 100 Principles of Psychology
SOC 100 Introduction to Sociology
SOC 110 Social Problems
STS 360 Science, Technology, and Politics

American History
For all Students
HIS 101 American History: Colonies to Reconstruction
HIS 102 American History: Reconstruction to the Present
HIS 330 American Women's History
IDS 104 Technology in America
For Students Scoring Above 84 on NYS Regents in American History:
HIS 308 Latinos in American History

Western Civilization
GEN 400 Prominent Themes in Western Civilization Since the Renaissance
GEN 401 Contemporary World Views
HIS 150 History of Modern Europe
HIS 306 History of Science and Technology
HIS 317 Topics in Black History
HIS 360 Environmental History
HIS 370 Western Civilization and the World
HUM 220 Introduction to Social Political Thought

Other World Civilizations
ENG 211 Art & Cultural Revolution
HIS 306 History of Science and Technology
HIS 340 Latin American Civilizations
HIS 370 Western Civilization and the World
HIS 375 Gender Issues in World History
PHI 130 World Religions

Humanities**
ART 350 History of American Art
COM 315 Theater and Communication
COM 316 Media and Communication
ENG 110 Introduction to Literature
ENG 211 Art & Cultural Revolution
ENG 310 Topics in American Literature
ENG 311 Topics in World Literature
ENG 312 Studies in the Short Story
ENG 320 Recent American Poetry
ENG 331 Black Voices
ENG 350 Dramatic Literature
ENG 360 Reading the Film
ENG 361 Film Direction: Alfred Hitchcock
ENG 362 Aging in Literature and Film
ENG 375 The Novel
GEN 204 Understanding Human Nature
HIS 150 History of Modern Europe
HIS 306 History of Science and Technology
HIS 307 History of Science and Technology Since Newton
HIS 317 Topics in Black History
HUM 110 Humanities and Postmodern World
PHI 350 Technology and Ethics
STS 301 Monsters, Robots, Cyborgs
*** Courses listed under the Humanities requirement can ONLY be used to fulfill the Humanities requirement and cannot be double counted.*
**IDS 101 Perspectives on Knowledge*
**IDS 102 Nature and Culture*
**IDS 103 Science, Technology, and Human Values*
**See description of the Freshman General Education Core.*

The Arts
ART 120 Studio Art: Visual and/or Performing
ART 135 Drawing
ART 140 Painting-Technique and Style
ART 210 Principles of Two Dimensional Design
ART 341 Painting II-Technique and Style
ART 350 History of American Art
COM 212 Digital Photography and Imaging
COM 315 Theater and Communication
ENG 205 Creative Writing
MUS 300 Music Appreciation
MUS 301 SUNY Jazz
MUS 302 Choral Performance
THR 120 Studio Art: Visual and/or Performing
THR 300 Theater Production

Foreign Language
CHI 101 Elementary Chinese
FRE 101 Elementary French
SPA 101 Elementary Spanish
SPA 102 Intermediate Spanish

Basic Communication
COM 306 Report Writing and Technical Communication
COM 308 Analytical and Research Writing
ENG 101 Freshman Composition
ENG 105 Critical Reading & Writing

Accounting

The School of Business is accredited by AACSB International and committed to continuous quality improvement for all our programs.

EARNED EXCELLENCE

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THE BEST BUSINESS SCHOOLS IN THE WORLD

The B.S. degree program with a major in accounting is for students interested in becoming certified public accountants or specializing in the accounting industry. Certified public accountants are licensed professionals, and serve in a variety of roles and organizations. Most CPAs are employed by accounting firms, or are self-employed, providing auditing and tax services to a wide variety of clients. Many CPAs are employed by government, particularly in state and federal tax departments. Private corporations also employ CPAs for various accounting functions.

The degree program is designed to prepare students for the CPA examination, and is registered by the State Education Department as a CPA preparation program. Degree requirements are rigorous, allowing less flexibility in the transfer and selection of courses than in some of the other degree programs at SUNYIT.

Although this degree program is designed to articulate with lower division programs, many students find that they need coursework beyond the normal four semesters to fulfill the degree requirements. This would likely apply for transfer to any registered accounting program. Careful advance planning based upon the following degree requirements can minimize the total time needed to complete CPA educational requirements.

B.S. Accounting Program Degree Requirements

The degree outline presented is a four-year plan, where approximately half of the listed requirements can be met at the lower division by transfer. Although some courses are listed by their SUNYIT numbers, they are often fulfilled with transfer credits. The general requirements of the program are as follows:

a) a total of 124 semester hours with a maximum 64 semester hours transfered from two-year institutions,

b) a minimum of 62 semester hours (50% of degree requirements) in the arts and sciences,

c) a minimum of 24 semester hours of accounting with at least 12 semester hours of accounting to be completed at SUNYIT,

d) Auditing—ACC 450; Advanced Accounting Problems—ACC 475, Taxes—ACC 310 or ACC 311, and Intermediate Accounting 2—ACC 386 must be completed at the upper division,

e) a minimum of C (2.00) in all accounting courses in the degree program, both transfer and at SUNYIT and a minimum of C (2.00) in all business core courses at SUNYIT, requirements and electives,

f) a minimum of 60 semester hours in business and accounting courses, and

g) general education requirements as outlined for SUNYIT.

Course Requirements†

Arts and Science	
Microeconomics (3 cr. minimum)	1 course
Macroeconomics (3 cr. minimum)	1 course
Basic Communication (3 cr. minimum)	1 course
Statistics (3 cr. minimum)	1 course
Mathematics (3 cr. minimum)	1 course
Computer Science (3 cr. minimum)	1 course
Lab Science (3 cr. minimum)	1 course
Natural Science (3 cr. minimum)	1 course
Art	1 course
Foreign Language	1 course
American History	1 course
Western Civilization	1 course
Other World Civilization	1 course
Humanities	1 course
Behavorial Science	1 course
Arts/Science Electives (remainder of credits)	
Total Arts/Science	**62**
Business	
Financial Principles (3 cr. minimum)	1 course
Finance II (3 cr. minimum)	1 course
Business Law I (3 cr. minimum)	1 course
Business Law II (3 cr. minimum)	1 course
Marketing Principles (3 cr. minimum)	1 course
Human Resource Management (3 cr. minimum)	1 course
Management Science (3 cr. minimum)	1 course
Issues in Business & Society (3 cr. minimum)	1 course
Management Policy (3 cr. minimum)	1 course
Business Electives (remainder of credits)	
Total Business	**36**
Accounting	
Financial Accounting (3 cr. minimum)	1 course
Intermediate Accounting I (3 cr. minimum)	1 course
Intermediate Accounting II (3 cr. minimum)*	1 course
Tax*	1 course
Auditing*	1 course
Cost Accounting	1 course
Advanced Accounting*	1 course
Accounting Elective (remainder of credits)	
Total Accounting	**24**
Unrestricted Electives (remainder of credits)	
Total	**Minimum 124**

** Course must be taken at the upper division level.*

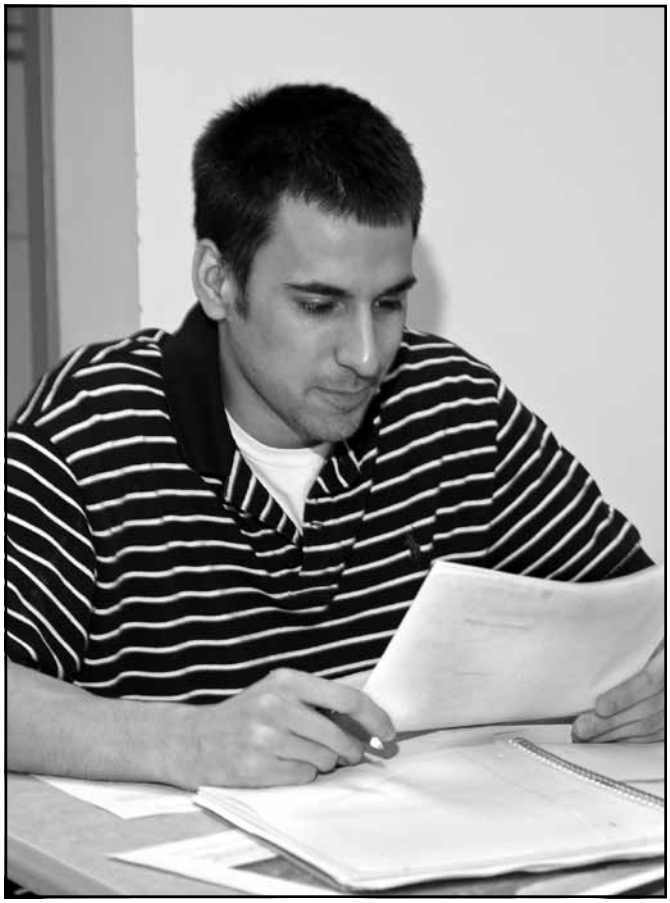
† *The Office of Professions at New York State Education Department may change the New York State CPA Education requirement. The course requirements for the B.S. degree program with a major in accounting reflect the changes from NYSED. For current regulations and up-to-date CPA education requirements, consult the School of Business.*

In addition to the CPA preparation program, the B.S. or B.B.A. degree programs with a major in business administration allow a student to "specialize" in accounting by utilizing accounting courses as elective choices within their degree program. Students transferring from A.A.S. programs or A.O.S. programs can qualify for a degree with a major in business sooner than if they enter the accounting major program. Students interested in corporate accounting, accounting in not-for-profit agencies, government accounting, etc., probably should choose this degree track. These students can also qualify for the Certified Management Accountant (CMA) national examination. Students should consult the business administration section of this catalog for degree requirements. With careful course selection within the business degree program and appropriate post-graduation course selection, these students can eventually also qualify for admittance to the CPA examination, if they so choose.

For additional regulations and special features, consult the Business Administration section of this catalog.

Accounting Minor

See academic minor section.



Applied Mathematics

Applied mathematics is a field that develops and employs a variety of mathematical methods and techniques in order to describe and predict the behavior of systems encountered in science and industry. For example, mathematical and numerical modeling allows engineers to simulate the behavior of many complex systems without having to construct expensive physical models. A degree in applied mathematics appeals to individuals who are interested in applying their mathematical and problem solving skills to real world problems.

There is a need nationally for individuals with rigorous training in applied mathematics, both in industrial and academic settings. Our graduates acquire the necessary mathematical skills to help meet this demand. We are one of three SUNY campuses offering a degree in Applied Mathematics.

People with training in applied mathematics obtain employment in fields as diverse as finance, aerospace, oil exploration and extraction, manufacturing, quality assurance, geology, the actuarial sciences, communications, and computing. They pursue careers in business, industry, government, and academia. Specific job categories include statistician, programmer analyst, cryptographer, reliability analyst, computer modeler, biological systems analyst, and financial analyst.

Depending upon future goals, students may structure their coursework with an emphasis on preparation for graduate school or for more immediate employment. Those who wish to further their study of mathematics may obtain a strong background in the more rigorous and abstract aspects of mathematics. Partial Differential Equations, Real Analysis, Vector and Tensor Calculus, Linear Algebra, and Discrete Mathematics are courses available for students with this interest. For those wishing to pursue careers immediately upon graduation, a rich background in those courses especially suitable to industry may be obtained. Courses supporting this area of study include Mathematical Modeling, Electromagnetism, Numerical Differential Equations, Numerical Linear Algebra, Numerical Computing, Statistics, and Probability.

Students may also work individually with faculty members to pursue special interests outside of our scheduled courses. Students have worked with faculty in areas including fractals and chaos, computational holography, detection and estimation in radar systems, and graph theory.

Students are also encouraged to receive academic credit through our Applied Math internship. This provides interested students the opportunity to work with local companies, putting their mathematics skills to work in applied settings.

Degree Requirements

1. Satisfactory completion of at least 124 semester hours of college-level work.
2. Satisfactory completion of at least 60 semester hours of upper-division college work, at least 30 of which must be taken at SUNYIT.
3. Achievement of at least a "C" cumulative grade point average in all coursework taken at SUNYIT.
4. Satisfactory completion of the Core Mathematics Courses with an average grade of "C" or higher.

I. General Education Requirements (30-56 credits)	*Credits*
Natural Science (Physics I)	3-4
Laboratory Science (Physics II)	3-4
Computer Language	3-4
Computer Science Course	3-4
Mathematics (Calculus I)	3-4
Upper Division Writing	3-4
Basic Communication	3-4
Humanities	3-4
The Arts	2-4
Foreign Language	3-4
Social Sciences	3-4
American History	3-4
Western Civilization	3-4
Other World Civilizations	3-4

II. Physics and Computer Science Courses (12-16 credits)	
Physics I & II	6
Computer Science (including one language course)	6

III. Core Mathematics courses (30-40 credits)	
MAT 151 Calculus I (Differential Calculus)	4
MAT 152 Calculus II (Integral Calculus)	4
MAT 253 Calculus III (Multivariate Calculus)	4
MAT 230 Differential Equations	4
MAT 340 Linear Algerba	4
MAT 370 Applied Probability	4
MAT 381 Modern Algerba	4
MAT 401 Series and Boundary Value Problems	4
MAT 420 Complex Variables and Their Applications	4
MAT 425 Real Analysis	4

IV. Restricted Elective courses (2 courses from the following)	
MAT 335 Mathematical Modeling	4
MAT 345 Introduction to Graph Theory	4
MAT 380 Abstract Mathematics: An Introduction	4
PHY 401 Electromagnetism	4
MAT 413 Discrete Mathematics for Computer	4
CSC 420 Numerical Computing	4
PHY 420 Intermediate Mechanics	4
MAT 423 Vector and Tensor Calculus	4
MAT 430 Number Theory & Its Applications	4
MAT 440 Linear Algebra II	4
MAT 450 Partial Differential Equations	4
MAT 460 Numerical Differential Equations	4
MAT 490 Special Topics	4
MAT 491 Independent Study	4
MAT 492 Applied Math Internship	4

V. Unrestricted Electives (Balance of 124 Credits)

Business Administration

The School of Business is accredited by AACSB International and committed to continuous quality improvement for all our programs.

The Bachelor degree programs in business are supported by a broad general education program. Concentrations are offered in Accounting, Business, Finance, Human Resource Management, and Marketing/Advertising. Students are prepared to become leaders in the business world and hold key management positions in business and industry. Each student is counseled and evaluated in the admissions process as to the most appropriate degree program based upon career objectives, plans for future education, and previously earned college credits if applicable.

All degree programs offered through the School of Business require the completion of a minimum of 124 semester hours, which include 30 semester hours of upper division college work.

All degree programs offered through the School of Business have the following requirements:

a. a minimum of 124 semester hours with a maximum of 64 semesters transferred from two-year institutions

b. at least 24 hours of business coursework must be completed at SUNYIT

c. a minimum of 30 credits completed at SUNYIT

d. distribution and general education requirements as outlined in the degree requirements

e. a minimum of C (2.00) in all business core courses taken at SUNYIT, requirements and electives

f. all business transfer courses must have a grade of "C" or better to apply to the degree program

See separate sections for accounting, finance, and health services management.

SUNYIT also offers a Master's in Business Administration (MBA) degree, a Master of Science (M.S.) degree in Accountancy, Master of Science (M.S.) degree in Health Services Administration and a Master's in Business Administration (MBA) degree in Health Services Management. Consult the graduate catalog and/or the Admissions Office for details.

The B.S. with a Major in Business

The B.S. program is for those students with an A.S. transfer program in business from a two-year college, a broad background in the arts and sciences, or for entering fresshmen who wish to study business. It requires the same core of business courses as the B.B.A. program. In general, a student in the B.S. program has a broader education in content, whereas the B.B.A. student specializes. One is better than the other only in the context of the student's individual personal and career objectives.

B.S. Program (Bachelor of Science)

Course Requirements

The program is designed primarily for the student who has either an Associate in Arts (A.A.) degree, an Associate in Science (A.S.) degree or entering freshmen who meet the college's admissions criteria.

The B.S. degree will be granted to those students who satisfactorily complete at least 124 semester hours of college-level work (including lower division study) distributed as follows:

Arts and Science – *Minimum 64 semester hours*	
Elements of Calculus (3 cr. minimum)	1 course
Statistics (3 cr. minimum)	1 course
Lab Science (3 cr. minimum)	1 course
Natural Science (3 cr. minimum)	1 course
Microeconomics (3 cr. minimum)	1 course
Macroeconomics (3 cr. minimum)	1 course
Basic Communication (3 cr. minimum)	1 course
Upper Division Writing (3 cr. minimum)	1 course
Computer Applications (3 cr. minimum)	1 course
Behavioral Science (3 cr. minimum)	1 course
American History	1 course
Western Civilization	1 course
Other Civilizations	1 course
Humanities*	1 course
Arts	1 course
Foreign Language	1 course
Arts/Science Electives (remainder of credits)	
Business – *Minimum 48 semester hours*	
Financial Accounting (3 cr. minimum)	1 course
Managerial Accounting (3 cr. minimum)	1 course
Introduction to Business (3 cr. minimum)	1 course
Business Law (3 cr. minimum)	1 course
Finance Principles (3 cr. minimum)	1 course
Marketing Principles (3 cr. minimum)	1 course
Organization Behavior (3 cr. minimum)	1 course
Human Resource Management (3 cr. minimum)	1 course
Issues in Business & Society (3 cr. minimum)	1 course
Management Science (3 cr. minimum)	1 course
Management Policy (3 cr. minimum)	1 course
Business Electives (remainder of credits)	
Unrestricted Electives (remainder of credits)	
Total	Minimum 124

** Written communication and technical writing courses do not fulfill this requirement.*

The B.B.A. with a Major in Business

This degree is similar to the traditional business degree offered by colleges and universities nationwide. It is specifically geared to those students who may have focused on business courses at their two-year colleges and want to continue in that direction. This program provides a background in business and management which bridges the gap between specialization and generalization. It gives both freshmen and transfer students the opportunity for concentrated study in one of the basic areas of business as well as a broad-based background to grow with during an extended career.

B.B.A. Program (Bachelor in Business Administration)

Course Requirements

Arts and Science – *Minimum 60 semester hours*	
Elements of Calculus (3 cr. minimum)	1 course
Statistics (3 cr. minimum)	1 course
Lab Science (3 cr. minimum)	1 course
Natural Science (3 cr. minimum)	1 course
Microeconomics (3 cr. minimum)	1 course
Macroeconomics (3 cr. minimum)	1 course
Basic Communication (3 cr. minimum)	1 course
Upper Division Writing (3 cr. minimum)	1 course
Computer Applications (3 cr. minimum)	1 course
Behavioral Science (3 cr. minimum)	1 course
Must complete a minimum of three of the following courses:	
American History	1 course
Western Civilization	1 course
Other Civilizations	1 course
Humanities*	1 course
Arts	1 course
Foreign Language	1 course
Arts/Science Electives (remainder of credits)	
Business – *Minimum 60 semester hours*	
Financial Accounting (3 cr. minimum)	1 course
Managerial Accounting (3 cr. minimum)	1 course
Introduction to Business (3 cr. minimum)	1 course
Business Law (3 cr. minimum)	1 course
Finance Principles (3 cr. minimum)	1 course
Marketing Principles (3 cr. minimum)	1 course
Organization Behavior (3 cr. minimum)	1 course
Human Resource Management (3 cr. minimum)	1 course
Issues in Business & Society (3 cr. minimum)	1 course
Management Science (3 cr. minimum)	1 course
Management Policy (3 cr. minimum)	1 course
Business Electives (remainder of credits)	
Unrestricted Electives (remainder of credits)	
Total	Minimum 124

** Written communication and technical writing courses do not fulfill this requirement.*

Academic Concentrations in the School of Business

The School of Business offers "concentrations" of coursework for those students who desire to specialize in particular fields of study. Upon completion of a series of courses at the Institute of Technology, a student may apply to the office of the dean and be awarded a School Concentration Award, recognizing this accomplishment. Concentrations are available only to those students with sufficient elective hours in their program of study analysis. Students without such elective opportunity may, at their option, complete the necessary concentration work beyond their minimum degree requirements.

Students who have sufficient electives available may decide to satisfy the requirements of two concentrations. Concentrations are presently awarded in accounting, business, finance, human resources management, and marketing/advertising.

These concentration awards may be of value to students who wish to provide prospective employers with evidence of extended work in an area related to a specific employment opportunity.

A student must complete the course sequences at the Institute of Technology. They may substitute by petition other Institute of Technology courses designated by a faculty concentration advisor. Students should not repeat topics completed at the lower division. All courses must be completed with grades of "C+" or better before the award is approved. All of these sequences require preliminary work in these fields either at a two-year school or at the Institute of Technology.

Accounting
Financial Accounting plus:
ACC 310 Income Tax I
ACC 370 Cost Accounting
ACC 385 Intermediate Accounting I
ACC 386 Intermediate Accounting II

Business
Principles of Business plus:
Any four non-core (required) business courses to be determined in consultation with an academic adviser.

Finance
Financial Principles plus:
FIN 332 Investments
FIN 341 Financial Institutions
FIN 411 Financial Management Problems
FIN 420 Financial Planning and Control

Human Resources Management
Human Resources Management plus:
MGT 320 Appraisal, Compensation and Motivation
MGT 415 Industrial and Labor Relations
MGT 425 Human Resource Selection and Staffing
BUS 420 Employee Benefits

Marketing and Advertising
Marketing Principles plus:
MKT 312 Marketing Management Problems
MKT 321 Advertising Management
MKT 465 Consumer Behavior
MKT 470 Marketing Research

Academic Regulations Business Administration

Academic Overload

A student wanting to take more than 16 credits during a semester must demonstrate the ability to handle such a load by achieving a 3.25 average while carrying a full course load (15 to 16 hours) in the previous term.

A student wanting to take more than eight credits during a summer term must demonstrate the ability to handle such a load by achieving a 3.50 average while carrying a course load of at least 15 credits in the previous term. Any overload must be approved in writing by the dean before attempting to register. Permission to take an overload must be requested on a petition form. New students or first semester students must complete one semester before requesting such permission.

Time Limit

A degree candidate will be permitted seven years to complete the degree requirements listed on the program of study provided that he or she maintains continuous matriculation. Failure to complete the degree in that time period will require a new program of study designating the requirements for the degree which exist at that time.

Termination

Any student who does not maintain a minimum acceptable cumulative grade point average as noted under Academic Dismissal is automatically terminated from that degree program.

Field Experience Projects/Internships

The School of Business encourages direct interaction with the business world through a hands-on internship experience. Various internship courses are available that are designed to allow the student to initiate, build and maintain an internship arrangement in the marketplace for possible academic credit. This experience, designed to integrate the real world into the academic environment allows the student to implement the knowledge and skills attained in the classroom while under the supervision of an appropriate faculty.

The Small Business Development Center provides some students field assignments and opportunities for internships.

Program Features

The Management Simulation

A computer simulation of actual management decisions has been integrated into the course in management policy (BUS 485). Students are grouped into competing companies and are required to make decisions concerning production, finance, marketing, sales, and research expenditures. They are held accountable for the results through a complex computer program which determines the profitability and net worth of each company. In the past, some students have represented SUNYIT in national competitions of management simulation.

Microcomputer Experiences

The School of Business has its own student laboratory which is equipped with microcomputers. Each of these computers is connected through the school's local area network to a central file server and to the internet.

Personalized Program of Study

Planning assistance for students, often called advising, is important and is quite different for transfer/upper division students than for freshmen. The advising process in a business program should assist students in planning without making them dependent upon an advisor. It becomes part of the management education for which the student is studying. The advising system gives each student, on the day of their initial registration, an individualized program of study that indicates those courses or requirements for which he or she has received transfer credit and the requirements remaining to be taken. This advising is done through the dean's office to ensure uniform treatment of all students regardless of faculty advisor. It allows students the opportunity for long-range planning of their academic program.

The program of study is filed in a computer-assisted advising system and is updated for each student every semester just prior to the advanced registration period. Students are, therefore, able to plan their own academic schedule. Transfer students who complete the admissions process in a timely manner will ensure that this advisement analysis is ready for them. They will also have the opportunity to request a draft analysis that could be valuable in the transfer decision process. Students attending two-year colleges with formal agreements with the School of Business may follow sample programs while still at the two-year school to ensure maximum transferability.

Accelerated Program for Honors Graduates

Students who graduate from a two-year college with a major in business and at least a 3.50 grade point average are eligible to apply for the accelerated program which allows most students to complete the B.S./Business or B.B.A./Business in fourteen months.

The accelerated program recognizes that there are a number of exceptionally talented and motivated students who may progress toward their degree at a faster rate. The program utilizes the two summer periods which fall between the normal sophomore and senior years. By allowing the student to take an academic overload each term, a student who enters in June of Summer I may graduate in August of Summer II.

While the individual requirements depend on the work taken during the prior two years of lower division college, a general program for a student who receives an associate degree in Spring would follow the pattern of:

Summer—three 4-credit courses	12 credits
Fall—five 4-credit courses	20 credits
Spring—five 4-credit courses	20 credits
Summer—three 4-credit courses	12 credits
	64 credits*

The program is limited to a small number of qualified transfer students. In order to qualify, a student must:

1. Apply for acceptance to the SUNYIT Office of Admissions.
2. Graduate from a SUNY two-year college with a minimum 3.50 grade point average.
3. Request permission to enter the Accelerated Program. (Permission may be obtained by writing to the Dean, School of Business.)
4. Maintain a 3.25 cumulative average while enrolled at SUNYIT.

A student who enters SUNYIT in the Accelerated Program may return to the normal program at any time. Similarly, any student who enters under this option, but does not maintain the required 3.25 average, will be required to continue his or her course of study at the normal rate.

** Students who have 64 applicable credit hours can complete this program in 60 hours. Students who do not enter on the Accelerated Program, but have honor grades at SUNYIT, may accelerate their graduation by one semester through summer study and overload scheduling.*

Civil Engineering Technology

The goals of the Civil Engineering Technology program are to provide quality undergraduate studies, prepare students to enter professional careers and graduate study, and find employment in their field after graduation. This program values and encourages academic and intellectual achievement of the highest quality and the technical competencies inherent to the field of civil engineering technology. The faculty is committed to the integration of these elements in a coherent program of higher education.

Civil engineering technology students may choose one or more emphases in transportation, structural, or construction. Students study a diversity of topics including structural analysis and design, water and waste water systems, highway planning and design, and construction administration. Other courses include hydrology and hydraulics, construction estimating and scheduling, finite element analysis, advanced steel design, and advanced concrete structures.

The B.S. degree in Civil Engineering Technology is accredited by the Technology Accreditation Commission of the Accreditation Board of Engineering and Technology.

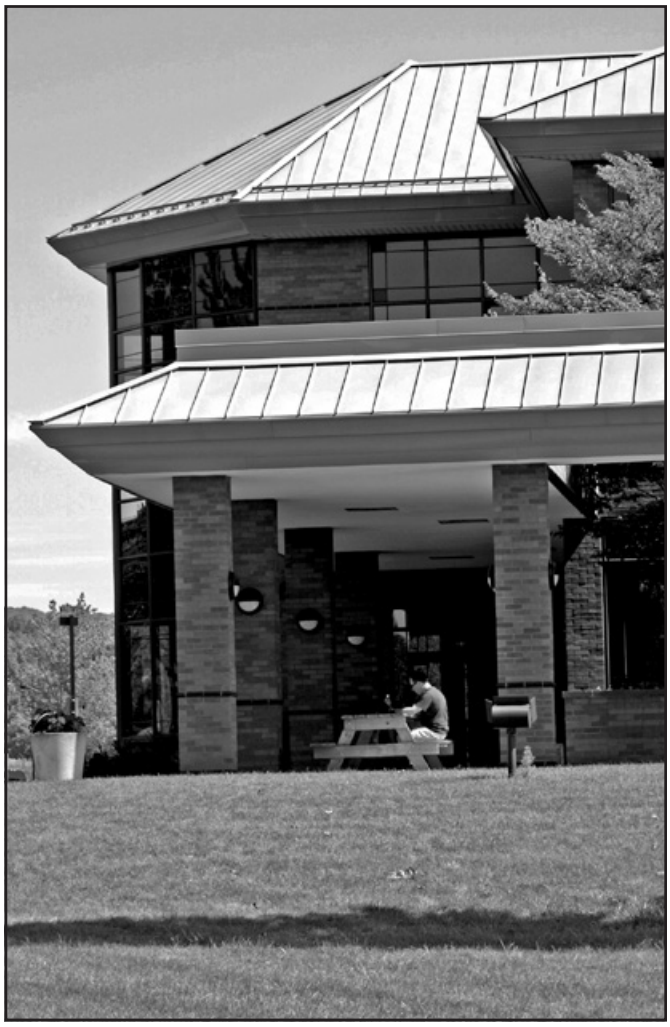
Graduates of the program earn six years of education/experience credit towards licensure in New York State as a Professional Engineer. After graduation, they are eligible to register for the next offering of Part A of the Professional Engineering examination, Fundamentals of Engineering.

Structural, transportation and construction are the primary areas of emphasis.

Structural - Students choosing the structural emphasis are most often employed by engineering design firms, by design/build construction firms, or by local, state and federal governments. Coursework is provided in areas of structural analysis, building/structural design, conceptual to final design projects, and finite element analysis.

Transportation - Students choosing the transportation emphasis are most often employed by county or city highway departments, by state or federal departments of transportation or by road/bridge construction contractors. Coursework is provided in structural analysis, transportation planning, design of roadways, and drainage design.

Construction - Students choosing the construction emphasis are most often employed by design/build firms, construction contractors, and by local, state and federal agencies. Course work is provided in project scheduling and estimating, project administration, construction methods and structural analysis.



Admission

Transfer of Semester Hours

1. Students must submit to the director of admissions official transcripts of any college courses they wish to have evaluated for transfer of semester hours.

2. A cumulative GPA of 2.75 is required for admission. Prospective students with a lower GPA may be considered on an individual basis.

3. Only courses with a minimum grade of "C" are considered for transfer.

B.S. Degree Requirements

To earn a Bachelor of Science (B.S.) degree in Civil Engineering Technology, a student must complete a minimum of 128 credit hours and fulfill the following requirements:

1. Arts and Science (60 credits) Minimum Credits

A. Mathematics and Science – 24 credits

Calculus I	3
Calculus II	3
Calculus-Based Math Elective	3
Physics I with Lab	4
Physics II with Lab	4
Chemistry with Lab	4
Math/Science Electives–Balance of 24 credits	

B. Liberal Arts and Communications – 24 credits

Coursework in at least 5 of the following 7 categories:
- Social Science
- American History
- Western Civilization
- Other World Civilizations
- Humanities
- Arts
- Foreign Language

Oral Communication	3
Basic Communication	3
Upper Division Written Communication	3

Liberal Arts Elective – Balance of 24 credits

C. Computer Programming Language 3

D. Arts and Science Electives
Balance to bring the total of A, B, C, and D to 60 credits

2. Technical Courses (minimum of 54 credits)

Introduction to Engineering Technology (CTC 101)	2
Statics (CTC 218)	2
Strength of Materials (CTC 222)	2
Engineering Graphics (CTC 212,213, MTC 162)	2
Elementary Surveying (CTC 250)*	3
Soils and Foundations (CTC 255)*	3
Steel or Concrete Design (CTC 422 or 424)	3
Hydrology (CTC 260)	2
Hydraulics (CTC 261)	2
Transportation (CTC 340 or 440)	3
Professionalism in the Workplace (CTC 301)	2
Structural Analysis (CTC 320)	4
Water and Wastewater Systems (CTC 450)	4
Economic Analysis in Technology (CTC 475)	4
Capstone Design (CTC 490)	3

*Offered at Mohawk Valley Community College through the "Mohawk Valley College Consortium Agreement"

***Select One Emphasis:**

Structural (Minimum Credits – 12)
Core Courses (8 credits)
- CTC 422 – Design of Steel Structures
- CTC 424 – Design of Concrete Structures

Required Elective (Minimum 4 credits)
- CTC XXX – Upper Level Civil Engineering Technology Elective

Transportation (Minimum Credits – 12)
Core Courses (8 credits)
- CTC 340 – Transportation Analysis
- CTC 440 – Highway Design

Required Elective (Minimum 4 credits)
- CTC XXX – Upper Level Civil Engineering Technology Elective

Construction (Minimum Credits – 12)
Core Courses (8 credits)
- CTC 415 – Construction Estimating and Scheduling
- CTC 470 – Construction Administration

Required Elective (Minimum 4 credits)
- CTC XXX – Upper Level Civil Engineering Technology Elective

Civil Tech Electives - Balance of 54 credits

3. Open Electives Balance of 128 credits

TOTAL CREDITS - 128

CAD Proficiency

Success in the Engineering Technology field is strongly dependent on a proficiency in computer aided drafting (CAD). Many of our graduating students will be actively involved with CAD or will work directly with those who are. To ensure a minimum level of proficiency, all students are required to pass a CAD Test to graduate. CAD proficiency may be in either AutoCAD or Microstation.

Civil Laboratories

Civil laboratories are heavily computerized. Students entering the program are expected to have basic skills in word processing, spreadsheets, computer aided drafting, and the use of the internet. Labs encompass all aspects of civil engineering technology and the computer applications which represent industry standards. Laboratories are PC-based networks running applications in AutoCAD, Microstation, RAM Structural System, InRoads, Haestad Methods, Microsoft Project and Primavera Project Planner.

Communication and Information Design

Communication and Information Design (CID) deals with all aspects of communicating technical, business, and scientific information to both professional and general audiences. To meet the need for qualified professionals in this area, SUNYIT offers a program that leads to a Bachelor of Science (B.S.) degree in Communication and Information Design. The program stresses graphic design, new media, technical writing, editing, and oral communication skills. It provides practical, hands-on experience in such areas as digital photography, computer animation, video production, Internet publishing, applied writing and speaking, editing, graphic arts, and document and product design.

Graduates from this program have gone on to find employment in web design, technical writing and editing, communication management, computer documentation, public relations, graphics, journalism, and document design. Students may also go on to graduate study in information design, rhetoric and professional and technical communication.

Design Studios and Laboratories

SUNYIT has two 24-station digital design studios to support advanced writing, design and graphics courses. The studios include dual-boot (PC and Mac operating systems) Apple Macintosh computers with 24" displays and a full suite of software to support graphic design, digital photography, text layout and other information design projects. The studios are equipped with large-format and color printers for CID student projects.

Real World Experience

The program places emphasis on working with clients in "real-world" situations. In select core courses and internships, students contract for work with clients, work with them on thumbnails and sketches, and complete high-end deliverables. In capstone courses, students craft print and multi-media portfolios and try them out in mock interviews with professionals in their fields.

Students work under the direction of lead writers, documentation specialists or publication managers and while in the internship, students are exposed to the demands and constraints of the career in organizational settings.

In COM 495, students are required to initiate and complete a documentation project for a domestic or international client; students work through the entire development process and produce some documentation for mass distribution. Students are required to work on site for 50% of this course.

Additionally, in COM 499 students build an online and print portfolio of their work, which is later reviewed by the faculty and advisory board members in mock job interviews. This portfolio can then be used in job interviews.

To qualify for an internship, seniors must have an overall cumulative average of at least a 2.0, a 3.0 in the major, and apply through Career Services.

Degree Requirements

The general requirements for the B.S. degree in Communication and Information Design ensure that students have a basic knowledge of mathematics, science, behavorial/social science, computer science, and liberal arts. The required professional and technical communication courses provide students with communication skills as well as theoretical background. The career concentration gives students the expertise in a single field that an employer will expect.

In response to the growing trend toward new media and graphic design, the program recently added a number of courses in these areas.

To earn a Bachelor of Science (B.S.) degree in Communication and Information Design, a student must fulfill the following requirements (transfer credits usually fulfill half the degree requirements):

1. Satisfactory completion of at least 124 semester hours of college-level work distributed as follows:

A.	General Education Requirements	31-44 credits
B.	Program Requirements	44 credits
C.	General Electives	36-49 credits
	Total	124 credits

2. Satisfactory completion of at least 60 semester hours of upper division course work, at least 30 of which must be taken at SUNYIT.

3. Achievement of at least 2.00 cumulative quality point average in course work taken at SUNYIT, and a "C" or better in all Communication and Information Design Core courses.

I. GENERAL EDUCATION REQUIREMENTS (31-44)

Natural Science Coursework/Lab Science (4)
(BIO, CHE, PHY, ENV)
Science Elective (3-4)
Math (3-4)
Basic Communication (3-4)
Foreign Language (3-4)
Arts (ART, MUS) (3-4)
Humanities (ENG, HUM, PHI) (3-4)
Social Sciences (3-4)
(ANT, ECO, POS, PSY, SOC, STS)
HISTORY
American History (2-4)
Western Civilization (2-4)
Other World Civilization (2-4)

II. PROGRAM REQUIREMENTS
CORE COURSES (28)

COM 302	Presentational Speaking
COM 106/306	Report Writing/Technical Communication
COM 320	Information Design
COM 380	Communication Theory
COM ***	Professional Writing Elective
COM 495	Senior Practicum in Communication
COM 499	Portfolio and Professional Development

(*** Courses that fill this requirement currently include COM 206, 240, 311, 350, and 400. COM 308 and 305 do not meet this requirement.)

Career Track (16) Four courses from one of the following tracks: (Substitutions are permitted with permission of adviser.) Students graduating in the spring of 2011 and thereafter can choose any four courses from ANY of the following tracks, in consultation with their adviser.

Graphic Design	*Professional Writing/Editing*	*New Media*
ART 210	COM 206	COM 240
COM 212	COM 310	COM 262
COM 213	COM 311	COM 316
COM 360	COM 353	COM 341
COM 414	COM 354	COM 342
COM 420	COM 350	COM 411
COM 460	COM 400	COM 420
COM 490	COM 410	COM 490
MKT 321	COM 415	PHI 350
PHI 310	COM 490	ENG 360
	PHI 310	

A "C" or better is required in all core classes and a 2.00 in the major as a whole.

III. GENERAL ELECTIVES (36-49)

Communication and Information Design Minor

See academic minor section.

Computer Engineering Technology

Graduates of this program are prepared for positions which rely on an understanding of hardware and software applications of digital, microprocessor, and computer-based systems. An emphasis is placed on the technical, analytical, problem-solving and communications skills necessary to excel in the technical workplace. Some companies hire computer engineering technology graduates to install, maintain, calibrate and repair both hardware and software systems for their customers. Other students may work on integrated systems which are comprised of both hardware and software components.

The Program

The Bachelor of Science (B.S.) degree in computer engineering technology is designed for students wishing to prepare for professional careers, and whose interests lie at the intersection of computer science and electrical/electronics technology.

The B.S. Degree with a major in Computer Engineering Technology is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering & Technology.

Computer Engineering Technology Employers

The following organizations have been reported as hiring CET graduates:

AFRL, Con Med, Eaton Corp. Powerware Division, ESPN, Hipotronics, New York State Technology Enterprise Corp. (NYSTEC), National Grid, Orion Industry, Special Metals, The Boeing Company, Virtual Medical Sales, U.S. Coast Guard, Welch Allyn.

Placement

A degree in computer engineering technology has helped build rewarding careers for many of SUNYIT's graduates. Some students go on to obtain an M.S. Degree in Computer Engineering.

B.S. Degree Requirements

To earn a Bachelor of Science (B.S.) degree in computer engineering technology, a student must complete 128 credits, with a minimum of 60 credits in arts and sciences disciplines, and complete the following degree requirements:

Arts & Science *Minimum Credits*

Liberal Arts

Oral Communications
Basic Communications
Upper-Division Writing
Humanities*
Social Science*
American History*
Western Civilization*
Non-Western Civilization*
Fine Arts*
Foreign Language*

*** Complete course work in at least four out of the above seven categories.**

24 Credits

Mathematics and Science – 24 credits

Physics with lab & Basic Science with a lab (Biology/Chemistry/Physics/Environmental Science)

Mathematics, including the following:
Differential Calculus (MAT121)
Integral Calculus (MAT122)
Restricted Math Elective (MAT115, MAT230, MAT340, or MAT 413
Math/Science Elective for balance of 24 credits

24 Credits

Technical Courses – 62 credits

Required Core

QC and Workplace Issues (CET 299)
Mircoprocessors & Embedded System Programming (CET342)
Data Communication and Computer Networks (CET416)
Microprogramming and Computer Architecture (CET429)
PC Integration and Maintenance (CET431)
Programming Foundations (CS108)
Object Oriented Programming (CS244)
Data Structures (CS240)
Two Programming Languages (including one course in either C, C++, or Java)
Integrative Capstone Course (CET 423 or ETC 445)

Balance of 62 credits in CET, CS, CSC, ETC, or IS

62 Credits

Unrestricted Electives **Balance of 128 Credits**

Total Credits 128

A residency of 24 hours in the major is required to graduate.

Computer Science

The field of computing enables much of the on-going revolution in information technology and communications. Its techniques, tools and problem-solving approaches have proven most powerful and effective. Computing professionals define and provide the new information infrastructure thereby changing society and culture by extending and enhancing everyone's abilities. SUNYIT recognizes the need for trained professionals in the computer field. Two undergraduate programs provide the flexibility that allows students to position themselves in the field according to their own strengths and interests.

The B.S. Degree in Computer and Information Science

The Bachelor of Science program in computer and information science provides a broad education in major areas of the field. The program, which closely follows the Association of Computing Machinery (ACM) recommendations, gives students the flexibility to concentrate studies according to their interests.

The general educative goal of the undergraduate program is to ensure that each graduate has a solid background in all the fundamental areas of computer science and to provide a sufficiently wide spectrum of advanced electives to allow each student to fashion a specialization (or concentration) suited to their strengths and interests.

Some concentrations that could be constructed from current and recent offerings are:

- Information Assurance/Data Security
- Entertainment Computing (including game design and game programming)
- System Administration
- Scientific and Engineering Computing
- Network and Grid Programming
- System Modelling and Simulation
- Information Technology

The B.S. Degree in Computer Information Systems

The Bachelor of Science program in computer information systems places an emphasis on business applications of computing. Students acquire basic skills in computer systems areas, including programming, database management, and other business-oriented areas. The program is designed to follow the curricular guidelines of the ACM, which are endorsed by the Association for Information Technology Professionals (AITP). Many graduates who pursue advanced study enter graduate programs in management or business administration. Also, with appropriate course selection, a student in computer/information systems may be prepared to continue on into the M.S. program in computer and information science.

The B.S. Degree in Applied Computing

The Bachelor of Science program in applied computing prepares the graduate to apply the analytic and programming skills of the science of computing to a cognate intellectual domain. The degree combines the core of the baccalaureate program in computer information systems or computer and information science with strong academic preparation in another area of study. The capstone project requires the student to apply the tools and techniques of science of computing to the cognate area through the design and implementation of a project. The cognate area requirement may be fulfilled by an associate degree in the cognate area, completion of an approved SUNYIT minor, or courses in another area approved by an advisor. With appropriate course selection, the applied computing graduate may continue into the M.S. program in computer and information science.

Joint BS/MS Program in Computer and Information Science

The joint BS/MS program is a well-integrated program that permits students to complete both a bachelor's degree and a master's degree in computer and information science in a reduced time frame with a reduced total number of credits.

Requirements

Completion of the joint BS/MS program requires a minimum of 145 semester hours, including a minimum of 33 semester hours of graduate study. All specific requirements for both the BS and the MS degrees must be met. Students in the joint program may apply up to twelve credits of graduate coursework to both the undergraduate and graduate degrees simultaneously. Students in the joint program may register for CSC 500 - Discrete Structures - which will satisfy the undergraduate Finite or Discrete Math requirement and will simultaneously be applied as a general graduate elective. Two graduate courses may be applied as undergraduate "Advanced" computer science electives. One or two other graduate courses (depending on whether students earned credit for CSC 500) may be applied as undergraduate unrestricted electives. Graduate bridge courses, other than CSC 500, may not be applied simultaneously to both degrees.

Status

A student enrolled in the joint program will be considered to remain in undergraduate status until the completion of 124 semester hours, and thereafter tuition and fees will be charged at the graduate level. The BS degree will be awarded at such time as all the requirements for that degree are satisfactorily met. Students are expected to complete their BS program requirements prior to pursuit of the MS degree except where those two programs overlap.

Academic Standing

Continued matriculation in the joint program requires maintenance of a GPA of 3.0 for courses taken at SUNYIT in each of the following categories: (a) all courses applicable to the undergraduate degree; (b) computer science courses applicable to the undergraduate degree; (c) all graduate courses. Students with a GPA of less than 3.0 in any of these categories will be placed on academic probation in the program. Students who are on academic probation for any two semesters or who have a GPA of less than 2.50 in any of these categories will be academically dismissed from the joint program. Students who are academically dismissed but have not yet completed the baccalaureate program but whose performance constitutes satisfactory performance in the undergraduate program will automatically be placed in that program.

Admission to the BS/MS Program

Admission to the BS/MS program may be achieved, and enrollment maintained, in one of the following ways:

A) As an entering freshman; continued enrollment in the joint program requires achievement of grades of B or better in CS 108, CS 240, CS 249, MAT 115 (or Mat 413), and a mathematics elective (calculus, linear algebra, or statistics). In addition, students must have an overall GPA of at least 3.0 at the end of the semester in which the first 60 credits have been completed.

B) Upon initial transfer to SUNYIT; students must have earned grades of B or better in CS 108, CS 240, CS 249, MAT 115 (or MAT 413), and in a mathematics elective (or in their transfer equivalents), and must have a transfer GPA of at least 3.0.

C) Subsequent to initial enrollment at SUNYIT; students must receive grades of B or better in those courses (or their transfer equivalents) listed in A) and B) above, have an overall GPA of at least 3.0 for all courses taken at SUNYIT, and have a GPA of at least 3.2 for courses in their major.

Students entering the joint BS/MS program must not have completed more than 94 credit hours toward their Bachelor's degree, and must be able to complete all requirements for the Bachelor's degree within the first 124 credit hours earned.

B.S. Degree Requirements

To earn a B.S. degree in either computer and information science or computer information systems a student must successfully complete 124 credits. Requirements specific to each degree and general education requirements count toward the 124 credit requirement. Electives make up the remainder. In addition, all students are expected to be familiar with the UNIX operating system. This may be achieved through prior coursework, self-study, or enrollment in CS 307: The UNIX Programming Environment.

Specific Requirements for B.S. in Computer and Information Science

Computer Science Courses (40-42 credits)

Introductory Courses (12 credits)
CS 108 - Computing Fundamentals
CS 220 - Computer Organization
CS 240 - Data Structures and Algorithms
Students must achieve a grade of C or better in both CS 108 and CS 240 to be allowed to register for any intermediate courses or advanced electives.

Intermediate Courses (16 credits)
CS 249 - Object-Oriented Programming
CS 330 - Operating Systems and Networking
CS 350 - Information and Knowledge Management
CS 370 - Software Engineering

Advanced Electives (10-12 credits must be taken at SUNYIT; can not be transferred in)
Three courses to be selected from electives listed below or from graduate courses.
CS 345 - Logic Design
CS 381 - Principles of Computer Security and Cryptography
CS 407 - UNIX System Administration
CS 420 - Numerical Computing
CS 421 - Computational Linear Algebra
CS 431 - Principles of Programming Languages
CS 441 - Computer Architecture
CS 445 - UNIX Network Programming
CS 446 - Local Area Network Architecture
CS 450 - Computer Graphics
CS 451 - Distributed Systems
CS 454 - System Simulation
CS 477 - Algorithms
CS 480 - Compiler Design
CS 490 - Special Topics in Computer Science
CS 491 - Independent Study
CS 495 - Artificial Intelligence
CS 5xx - Graduate Computer Science Courses *

** Up to two graduate CS courses, other than bridge courses, may be chosen to fulfill this requirement. (See graduate catalog for a description of course offerings.)*

The department offers a wide variety of courses under the course number CS490, Special Topics. Some of these topics have been : ASP.NET/PHP.NET, Functional Programming, C#/Visual Basic.NET, Fuzzy Sets and Systems, Game Programming, Digital Image Processing, Wireless Computer Applications, Embedded Systems.

In addition, there are a number of courses whose course description are available but which do not appear in this year's catalog. Some of these are: Structure and Interpretation of Programs, a second course in Operating Systems, Logic Programming, Object-Oriented Systems, Ada Software Development, Lisp Programming, Software Engineering Projects, Introduction to the Theory of Computing.

CS Major Capstone Project (2 Credits)

CS 498 Project in Computer Science (2 Credits)

Open Upper-division Computing Electives

The following courses are available to CS majors for open elective credit:

CS 307 - The UNIX Programming Environment
CS 311 - Data Analysis
CS 324 - Internet Tools in Windows
CS 351 - Web Development and Internet Programming
CS 409 - Software Project Management
CS 489 - Cooperative Work Study in Computer Science
CS 491 - Independent Study
IS 305 - Applications Programming with COBOL
IS 310 - Hardware and Network Infrastructure
IS 315 - Networking of Information Systems
IS 320 - Systems Analysis and Design
IS 325 - Database Management Systems
IS 330 - Decision Support and Intelligent Systems
IS 340 - E-Commerce
IS 470 - Database Programming
IS 490 - Special Topics in Information Systems

General Education Requirements (applicable to students entering the State University of New York system Fall 2000 or later; students who entered the SUNY system prior to Fall 2000 should determine General Education Requirements in consultation with an Academic Advisor):

A minimum of thirty credits to be selected from approved general education courses, including (unless otherwise specified) a minimum of one course in each of the following areas:

1. Composition/Communication (For Freshmen, English 101)
2. Humanities
3. Arts
4. Social/Behavioral Sciences
5. Laboratory Science
6. Science Elective
7. Foreign Language
   Requirement waived if the student attained a score of 85 or higher on a third year Regents examination in a foreign language. Consult with an advisor for other means of satisfying this requirement.
8. American History
   An approved course covering a period of at least one century; students attaining a score of 85 or higher on an American History Regents examination may substitute any approved course in American History.
9. Western Civilization
10. Other Civilizations
11. Mathematics
    Two courses; must include one course in Finite or Discrete Mathematics (MAT 115 or MAT 413), and at least one other course taken from Calculus/Linear Algebra/Statistics)

Upper-Division Writing Course:

In addition to the general education requirements, students must select either COM 350 - Designing Online Information or COM 400 - Computer Software Documentation to fulfill the Upper Division Writing Requirement.

Open Electives (30 or more credits)

Computer science majors are encouraged to broaden their education by taking any of the excellent course offerings from the various disciplines at SUNYIT. Open elective credit may be used to meet the requirements of a minor. Some suggested areas are - Applied Mathematics, Physics, Bio-informatics, Engineering, Engineering Technology, Management and Telecommunications. Please see catalog for available areas for the minor and specific requirements. Note that completing a minor may require completion of coursework beyond 124 hours.

Specific Requirements for B.S. in Computer Information Systems

Introductory Courses (8 credits)

CS 108 - Computing Fundamentals
CS 240 - Data Structures and Algorithms
Students must achieve a grade of C or better in each of these courses to be allowed to register for any intermediate courses or upper-division electives.

Intermediate Computer Information Systems Courses (16 credits)

IS 310 - Hardware and Network Infrastructure
IS 320 - Systems Analysis and Design
IS 325 - Database Management Systems
IS 330 - Decision Support and Intelligent Systems

Business and Management Courses (8 credits)

Any two courses, one of which must be 300 level or higher, chosen from courses with the following prefixes: ACC, BUS, ECO, FIN, MGT, MKT.

Upper Division Electives (12 credits must be taken at SUNYIT; can not be transferred in)

In addition to the required courses listed above, students must complete 12 credits in electives at the 300, 400, or 500 level. Students who declare a minor may count 300 and 400 level courses required by a minor program of study toward this requirement. Students who do not declare a minor must select courses with IS or CS prefixes. The following list is not all-inclusive (the courses listed will be taught on a recurrent basis); students should check the current catalog and course schedule for the most recent list of 300, 400 and 500 level courses. (Note: Some CS courses may require a level of computer science knowledge that is not provided by the Introductory Computing Courses and Intermediate Computer Information Systems Courses. Additionally, each student's career goals should influence her/his course selections. For example, students who desire a career in the banking or insurance industry should consider taking IS305 Application Programming with COBOL. To facilitate effective course selection and to ensure that prerequisites are met, all students should consult with their advisors for guidance prior to course selection and registration.)

IS 305 - Application Programming with COBOL
IS 315 - Networking of Information Systems
IS 340 - E-Commerce
IS 470 - Database Programming
IS 490 - Special Topics in Information Systems

IS 491 - Independent Study
CS 307 - The Unix Programming Environment
CS 350 - Information and Knowledge Management
CS 351 - Web Development and Internet Programming
CS 370 - Software Engineering
CS 407 - Unix System Administration
CS 409 - Software Project Management
CS 489 - Cooperative Work Study in Computer Science
CS 5xx - Graduate Computer Science Courses *

** Up to two graduate CS courses may be chosen to fulfill this requirement. (See graduate catalog for a description of course offerings.)*

CIS Major Capstone Course (2 Credits)
IS 495: Computer Information Systems Practicum

General Education Requirements (applicable to students entering the State University of New York system Fall 2000 or later):

A minimum of thirty credits to be selected from approved general education courses, including (unless otherwise specified) a minimum of one course in each of the following areas:

1. Composition/Communication (For Freshmen, English 101)
2. Humanities
3. Arts
4. Social/Behavioral Sciences
5. Laboratory Science
6. Science Elective
7. Foreign Language
   Requirement waived if the student attained a score of 85 or higher on a third year Regents examination in a foreign language. Consult with an advisor for other means of satisfying this requirement.
8. American History
   An approved course covering a period of at least one century; students attaining a score of 85 or higher on an American History Regents examination may substitute any approved course in American History.
9. Western Civilization
10. Other Civilizations
11. Mathematics
    Two courses; must include one course in Finite or Discrete Mathematics (MAT 115 or MAT 413), and at least one other course taken from Calculus/Linear Algebra/Statistics)

Upper-Division Writing Course:
In addition to the general education requirements, students must select either COM 350 - Designing Online Information or COM 400 - Computer Software Documentation to fulfill the Upper Division Writing Requirement.

Open Electives
Students may choose courses from any discipline. However, students are strongly advised to seek guidance from their advisors before selecting any open electives courses because open electives may be used to satisfy prerequisites for upper-division electives. Additionally, for those students who declare a minor, courses taken to satisfy a minor's course of study may be applied as open electives.

Applied Computing – *Select either Computer and Information Science or Computer Information Systems Track*

Computer and Information Science Track

Core Requirements:
1. Computing Fundamentals (CS 108)
2. Data Structures (CS 240)

Intermediate Requirements:
1. Computer Organization (CS 220)
2. Object Oriented Programming (CS 249)

Advanced Requirements – two of the following:
1. Operating Systems & Networking (CS 330)
2. Information Knowledge & Management (CS 350)
3. Software Engineering (CS 370)

Advanced Electives – two of the following courses (must be taken at SUNYIT; can not be transferred in):
CS 345 Logic Design
CS 381 Principles of Computer Security and Cryptography
CS 420 Numerical Computing
CS 421 Computational Linear Algebra
CS 431 Principles of Programming Languages
CS 441 Computer Architecture
CS 445 UNIX Programming Environment
CS 446 Local Area Network Architecture
CS 450 Computer Graphics
CS 451 Distributed Systems
CS 454 System Simulation
CS 477 Algorithms
CS 480 Compiler Design
CS 490 Special Topics in Computer Science
CS 495 Artificial Intelligence

Capstone:
CS 498 Project in Computer Science

Computer Information Systems Track:

Core Requirements:
1. Computing Fundamentals (CS 108)
2. Data Structures (CS 240)

Intermediate Requirements :
1. Hardware and Network Infrastructure (IS 310)
2. System Analysis & Design (IS 320)
3. Data Base Management (IS 325)
4. Decision Support & Intelligent Systems (IS 330)

Advanced Electives (2 courses taken in residence (no less than 8 credits) chosen from the following:
IS 305 Application Programming With COBOL
IS 315 Networking of Information System
IS 340 E-Commerce
IS 470 Database Programming
IS 490 Special Topics in Information Systems
CS 307 The UNIX Programming Environment
CS 311 Data Analysis
CS 324 Internet Tools in Windows

CS 350 Information and Knowledge Management
CS 351 Web Development and Internet Programming
CS 370 Software Engineering
CS 407 UNIX System administration
CS 409 Software Project Management
CS 410 Data Security

Capstone:

IS 495 Computer Information Systems Practicum

Remaining Requirements are applicable to both tracks:

Cognate Area (no less than 20 credit hours) satisfied via one of the following:

1. any approved SUNYIT minor except Computer Science or Computer Information Systems
2. an associate's degree in an area other than computer science, data processing, information technology, information systems, or similar titles or in individual studies, general studies, or similar titles lacking a substantial focus
3. a minimum of twenty credits in a single discipline or interrelated disciplines subject to the approval of the department chair who shall consult with a faculty member in the pertinent discipline

General Education (applicable to students entering the State University of New York system Fall 2000 or later-students entering prior to Fall 2000 should determine the general education requirements in consultation with an advisor):

A minimum of thirty credits to be selected from approved general education courses, including (unless otherwise specified) a minimum of one course in each of the following areas:

1. Composition/Communication (for Freshmen, ENG 101)
2. Humanities
3. Arts
4. Social/Behavioral Sciences
5. Laboratory Science
6. Science Elective
7. Foreign Language - requirement waived if the student attained a score of 85 or higher on a third year Regents examination in a foreign language. Consult with an advisor for other means of satisfying this requirement.
8. American History - an approved course covering a period of at least one century; students attaining a score of 85 or higher on an American History Regents examination may substitute any approved course in American History.
9. Western Civilization
10. Other Civilizations
11. Mathematics - two courses; must include one course in Finite or Discrete Mathematics (MAT 115 or MAT 413), and at least one other course chosen from Calculus, Linear Algebra, or Statistics.
12. Upper Division Writing Course - either COM 350 Designing Online Information or COM 400 Computer Software Documentation

Unrestricted Electives:

Balance of 124 credits

Academic Minors

CS and CIS students are encouraged to select an academic minor and to use the minor's course of study as a means of satisfying open electives requirements and upper-division electives requirements. Academic minors enable students to pursue in-depth education in a second discipline that supports or enhances the use and application of their computing and information systems education. Attaining an academic minor in addition to a B.S. may require a student to take more than 124 total credits to graduate. Students who declare a minor are strongly encouraged to consult with their advisors for guidance prior to course selection and registration. CS and CIS majors may choose to minor in Accounting; Anthropology; Finance; Health Services Management; Marketing; Mathematics; Physics; Professional and Technical Communication; Psychology; Quality Engineering and Systems Technology; Science, Technology, and Society; and Sociology. The detailed requirements for each minor are contained in this catalog.

Computer Science Laboratories

The Department of Computer and Information Sciences maintains six labs containing a mix of operating systems and software in support of the Computer and Information Science and the Computer Information Systems programs. These labs are interconnected on a modern high speed network and supported by multiple file servers for central data storage and is accessible both on and off campus. Students are strongly encouraged to view the CS website (**www.cs.sunyit.edu**) and access the large quantity of software and services available. This includes remote access, databases (mySQL, PostgresSQL, and Oracle), software repositories, streaming video, and many other services. The Computer Science network is maintained by full time staff with the assistance of student administrators.

DogNET UNIX Lab (Kunsela C-012) provides access to UNIX workstations (named after dogs). Twenty-five workstations (currently Pentium IV/3.4GHz with 17" flat panel monitors). These machines run the Gentoo Linux operating system and provide access to many programs for internet access, multimedia applications, publishing, language compilers, etc. Used for computer science courses in programming languages, operating systems, networking, web development, and system administration, the lab has open access during building hours when not occupied by a class.

Microsoft Windows Labs (Kunsela C-014 and Kunsela C-109) provide access to the MS Windows operating system and software. The C-014 lab contains twenty-five workstations (currently Core 2 Duo/3.0 GHz, 2 GB RAM with 17" flat panel monitors and DVD/RW) and has open access during building hours when not occupied by a class. The C-109 special purpose lab contains six workstations and is ideal for small groups working collaboratively on projects. These labs support instruction and experimentation in object-oriented programming, client-server and distributed computing (networking, systems administration and interoperability with other platforms), collaborative computing (web development, videoconferencing, multimedia). Programming environments supported include SUN Java, Visual Studio (C#, J#, C++, Visual Basic), FORTRAN 90, Prolog, LISP, ML-Object-Caml, APL. Application software includes Microsoft Office, Sharepoint, Publisher, Visio, Matlab, Maple, and several Adobe titles.

Kunsela 24 Hour Open Lab (Kunsela B-118) provides access to resources found in other computer science labs on a 24/7 basis while classes are in session. Current hardware includes ten MS Windows workstations, two Gentoo Linux workstations, and a multimedia station with flatbed scanner and blu-ray writer.

Parallel Processing Lab – provides access to an assortment of hardware to facilitate experimentation in parallel programming and distributed computing. Current equipment includes a cluster of Sun Fire 4100 quad core Linux servers, Sony Playstation 3 consoles, and workstations with high end graphics processors to support GPU programming projects.

Computer and Information Science Minor

See academic minor section.

Computer Information Systems Minor

See academic minor section.

Criminal Justice

What is Criminal Justice?

The criminal justice program prepares four-year undergraduate, transfer students and professionals for careers and career advancement in policing and law enforcement, corrections, probation and parole, addiction/mental health counseling, and re-entry. The program systematically explores the full spectrum of conduct prohibited by criminal law, from street crime through white collar crime and terrorism, as well as the universe of criminal actors including the impoverished underclass, the rich and powerful, and large public and private organizations. CJ explores four dimensions of the phenomenon of crime: the conditions under which societal norms become embedded in law; the conditions under which criminal laws are violated; the conditions under which criminal laws are enforced; and the consequences of the enforcement for larger society.

Criminal Justice students investigate key issues in criminal justice, including: the links between mental health and substance abuse in crime, rehabilitation and recidivism; the growing use of technology in monitoring, surveillance, and geographical mapping of crime "hotspots;" and the reintegration of former offenders into mainstream society. The program focuses on core skills essential to professionals in Criminal Justice and many other fields. Students learn how to identify, interpret, evaluate, and write about relevant research; conceptualize and measure key concepts and variables in real-world settings; collect and analyze qualitative and quantitative data; identify and "translate" key ideas in written text, presenting them effectively and succinctly in both written and spoken form; think critically about theoretical concepts and practical issues, and communicate your ideas in a variety of formats.

Careers in Criminal Justice

According to the U.S. Department of Labor, New York State can expect a great deal of growth in employment opportunities in the criminal justice field. By 2014, the number of available jobs in probation, corrections, law enforcement, policing, criminal investigations, mental health, and addiction counseling is expected to increase by 12,160. When jobs in community service, counseling, social work, and social service specialists are included, the figure rises to 22,920. With the high number of criminal justice facilities in Central New York, the region should account for a substantial portion of this job growth. SUNYIT's criminal justice degree program prepares students for positions in these criminal justice fields.

Specific employment opportunities in Central New York include:

Policing and law enforcement
- New York State Police
- Oneida County Sheriff's Office
- Herkimer County Sheriff's Office
- Madison County Sheriff's Office
- Utica Police Department
- Rome Police Department
- Numerous smaller municipal police departments

Corrections
- Oneida Correctional Facility
- Marcy Correctional Facility
- Mohawk Correctional Facility
- Mid-State Correctional Facility
- Camp Pharsalia
- Camp Georgetown
- Oneida County Jail
- Madison County Jail
- Herkimer County Jail
- Marcy facility for sexual offenders

Probation and parole
- Oneida County Probation Department
- Herkimer County Probation Department
- Parole Division (Utica)

Addiction/mental health counseling
- Central New York Psychiatric Center
- Oneida County Psychiatric Facility
- Insight House
- McPyke Center for Addiction Recovery

Re-entry
- Workforce Investment Board
- JCTOD Outreach, Inc.
- Catholic Charities
- Working Solutions
- YMCA

Degree Requirements

Group 1: General Education Requirements (36-48 credits)

Mathematics/Statistics	3-4 credits
Basic Communication	3-4 credits
Upper Division Writing	4 credits
Natural Sciences	3-4 credits
Lab Science	4 credits
Foreign Language	3-4 credits
The Arts	3-4 credits
Humanities	3-4 credits
Social Sciences	3-4 credits
American History	3-4 credits
Western Civilization	3-4 credits
Other World Civilization	3-4 credits

Group 2: Core Program Requirements

All CJ students must complete the following courses and receive a grade of "C" or better:
CJ 101: Introduction to Criminal Justice
CJ 204: Ethics in Criminal Justice
CJ 310: Explaining Crime
ANT 321: Distinctions
CJ 332: Research Methods
CJ 333: Data Analysis/ Writing
CJ 493: Senior Seminar

Group 3: Criminal Justice Electives

Students must complete two classes (6-8 cr.) of general elective coursework (at the 100, 200, or 300-level), including CJ 100. Students must also have 12 credits (3 classes) of 400-level (senior-level) coursework in Criminal Justice or Sociology.

Group 4: General Electives

The remainder of 124 credits are electives. These classes should be used to round out skills and knowledge and to meet future goals. Additional foreign language, additional writing and public speaking, and computer science should be included. Students may use their general electives to pursue professional preparation, but at least 50% of total coursework must be within Arts & Sciences.

Electrical Engineering

Electrical Engineering (EE), one of the broadest engineering disciplines, is the branch of engineering that focuses on designing and analyzing components and systems that utilize electrons and photons. In addition to the traditional roles of designing, analyzing and working with electrical and electronic systems, components and system integration, electrical engineers work in information technology and software development and function on multidisciplinary teams.

Through a jointly registered program with Binghamton University (BU), SUNYIT provides four-year and transfer students the opportunity to study EE at SUNYIT. This program, supported by faculty from both SUNYIT and BU, gives undergraduate students the opportunity to earn a Bachelor of Science degree in Electrical Engineering (BSEE) from BU without travel to the BU campus. The BSEE is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Our program provides breadth across the discipline and a balance between theory and application. In addition, a large number of laboratory courses provide students opportunities for hands-on learning. The program provides graduates the skills and knowledge necessary for a dynamic career in electrical engineering.

Program Objectives

The specific Educational Objectives of the program are:

1. To provide graduates with a solid foundation in mathematics, physical sciences, humanities and social sciences, and the fundamentals of engineering design and analysis.

2. To provide graduates the technical knowledge and critical thinking skills required for the professional practice of electrical engineering and for seeking advanced degrees.

3. To assist graduates in developing communication skills, working cooperatively in teams, recognizing the need for life-long learning, and understanding professional, ethical and social responsibility in a global context.

Admission Guidelines

To satisfy the enrollment eligibility criteria established jointly by SUNYIT and BU, prospective students must either have a 2.8 or better GPA in Engineering Science or an equivalent plan of study prior to transfer at the junior-level. SUNYIT students completing the first two years of the applied mathematics program at SUNYIT with a GPA of 2.8 or better are also eligible for matriculation into the program. Students must complete certain courses to be accepted at the junior level, only courses with grades of C– or higher will be accepted for transfer. SUNYIT students who are not enrolled in the applied mathematics program but who complete the prerequisite courses and who have achieved a minimum GPA of 2.8 with grades of C– or higher are also eligible for enrollment as transfer students into the EE program.

Students are considered for merit scholarships under the academic guidelines established by SUNYIT and BU.

BSEE Degree Requirements

To receive the BSEE degree, students must complete a minimum of 125 credit hours in the courses outlined below with a grade-point average of 2.0. All students must meet the General Education requirements for the program.

Arts and Science – Required Courses

Composition/ENG 101	4
Global Interdependencies/IDS 101	4
Aesthetics/IDS 102	4
Social Science/IDS 103	4
Pluralism/IDS 104	4
Humanities	4
Physical Education/Wellness	2

Mathematics and Science – Required Courses

MAT 151 – Calculus I	4
MAT 152 – Calculus II	4
MAT 253 – Calculus III	4
MAT 230 – Differential Equations	4
MAT 370 – Applied Probability	4
CHE 110 – Chemistry (w/lab)	4
PHY 201 – Physics I (calc-based)	4
PHY 202 – Physics II (calc-based)	4
CS 108 – Computing Fundamentals	4
CS 240 – Data Structures	4

Engineering – Required Courses

ECE 251 – Digital Logic Design	4
ECE 252 – Microprocessors	4
ECE 260 – Electrical Circuits	4
ECE 281 – ECE Seminar I	1
ECE 301 – Signals and Systems	4
ECE 315 – Electronics I	4
ECE 323 – Electromagnetics	3
ECE 332 – Semiconductor Devices	3
ECE 361 – Control Systems	4
ECE 377 – Communications Systems	3
ECE 382 – ECE Seminar II	1
ECE 387 – Junior Design Laboratory	3
ECE 487 – Senior Design Lab I	4
ECE 488 – Senior Design Lab II	4
ECE Technical Elective I	3
ECE Technical Elective II	3

Electives

Professional Elective I	4
Professional Elective II	4
Open Elective	3

Technical Elective I/II: Any 300-level or better elective ECE course.

Professional Elective I/II: Any 300-level or better math course, lab science, engineering course, or faculty-approved special choice.

BSAM/BSEE Dual-Degree Option: An Electrical Engineering student wishing to fulfill degree requirements for the BS in Applied Mathematics must additionally take Linear Algebra, Modern Algebra, Series and Boundary Value Problems, Complex Variables and their Applications, and Real Analysis, plus two restricted electives in order to satisfy degree requirements in Applied Mathematics. Additionally, to ensure that the SUNYIT General Education Requirements are met, students must complete coursework in Upper Division Writing, Foreign Language, and Social Sciences.

More Information: A sample course schedule and additional information regarding the EE program at SUNYIT can be found on the web at *http://www.sunyit.edu/pdf_files/ee/BSEEProgramSheet.pdf*

Electrical Engineering Technology

In today's world, the great majority of all products, systems, and services include electrical or electronic aspects. Teams of trained people are needed to conceive, design, develop, and produce new answers to modern technical problems.

The roles of the team members may vary, but the electrical engineering technologist generally uses the hands-on, application-oriented approach. Although technologists have knowledge of theoretical issues, they tend to focus on using current, state-of-the-art and emerging technologies to solve practical design and application problems.

The Program

Electrical engineering technology students can tailor their program to meet their needs by selecting specific technical electives to fill individual interests or career plans. The areas of concentration are:

- Communication Systems
- Control Systems
- Microprocessors & Digital Systems

The B.S. Degree with a major in Electrical Engineering Technology is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering & Technology.

B.S. Degree Requirements

To earn a Bachelor of Science (B.S.) degree in electrical engineering technology, a student must complete a minimum of 128 credit hours and fulfill the following requirements:

Arts & Science - 60 credits

Minimum Credits

Liberal Arts
Oral Communications
Written Communications
Upper-Division Writing
Humanities*
Social Science*
American History*
Western Civilization*
Non-Western Civilization*
Fine Arts*
Foreign Language*

*** Complete course work in at least five out of the above seven categories.**

24 Credits

Mathematics and Science – 24 credits

Physics with lab & Basic Science with a lab (Biology, Chemistry, Physics, or Environmental Science)

Mathematics, including the following:
Differential Calculus (MAT 121)
Integral Calculus (MAT 122)
Differential Equations (MAT 230)
Math/Science Elective for balance of 24 credits

24 Credits

Computer Programming Language	2 credits
Liberal Arts, Math and Science, C.S. Electives	10 credits

Technical Courses – 54 Credits

Required Core

QC and Workplace Issues (ETC 299)	2 Credits
Control Systems/Communications	4 Credits
Digital Systems/Microprocessors	4 Credits
Senior Level courses (ETC 4xx courses)	8 Credits
Capstone Course (ETC 423, 435, 445, or 483)	4 credits
Technical Elective (ETC courses)	32 Credits
	54 Credits

Unrestricted Electives **Balance of 128 Credits**

Total Credits 128

EET students who have an EET associate's degree may not enroll for credit in ETC 101, 102, 103, 203, 210, or equivalent.

A residency of 24 hours in the major is required to graduate.

Areas of Concentration*

Communications

ETC 316— Communication Transmission Techniques
ETC 391— Fiber Optics
ETC 416— Data Communications & Computer Network Technology
ETC 419— Satellite Communication
ETC 421— Wireless Communication Systems
ETC 475— Data Compression and Multimedia Technology
ETC 483— Optical Communications
ETC 490— Special Topics: Communication Techniques
ETC 437— Digital Filters

Control Systems

ETC 331— Control Systems
ETC 356— Programmable Controllers
ETC 433— Automatic Control Systems
ETC 435— Digital Control and Robotics

Microprocessors

ETC 265— Digital Systems II
ETC 342— Microprocessor and Embedded Systems Programming & Design
ETC 423— Microprocessor Interfacing
ETC 429— Microprocessor/Microprogramming & Computer Architecture
ETC 444— Special Topics: Digital/Microprocessors
Recent Topics: RISC Processors, IBM PC
Assembly Programming
ETC 445— Microcontrollers
ETC 446— Programmable Logic Devices

Miscellaneous Electives

ETC 300— Tools in Technology
ETC 360— Advanced Circuit Analysis
ETC 391— Fiber Optics
ETC 455— VLSI Design
ETC 480— Electrical Technology Senior Project I
ETC 481— Electrical Technology Senior Project II
ETC 491— Independent Study
ETC 494— Co-Op

* *Students are not required to complete a concentration.*

Laboratories

The Electrical Engineering Technology Department has 10 laboratories dedicated to support of EET and CET laboratory courses, projects, and hands-on experience. Many of the labs are open beyond scheduled lab periods so students can investigate more extensively concepts developed in their courses.

Communications, Controls, Digital and Microprocessor labs are equipped with a variety of instrumentation described below. Much of the instrumentation in these labs is state-of-the-art equipment of the type that students will encounter in industrial settings, including meters, oscilloscopes, plotters, signal generators, frequency counters, spectrum analyzers, data and protocol analyzers, OTDRs, etc.

The department has established a multi-purpose EET lab equipped with sixteen stations. These computers are used for CAD, general purpose report writing using Microsoft Office and for support of EET, ECE and CET lab courses. Application software supporting a range of courses includes Electrical CAD software PCAD2007 for Schematic Capture and PCB layout, assemblers and general purpose tools such as Micro Sims Schematic and Pspice A/D and Basics, Circuit Analysis software, Electronics Workbench, and MATLAB by the MathWorks supporting Controls and Communications courses; and SILO software supporting digital design and OptSim, LAN Planner solo and MIDE software packages; The department continues to add applications software to provide easy access on these high performance computers for EET and CET coursework.

Controls: The control systems laboratory is equipped with EMMA II microprocessor control systems for speed and position control of dc/stepper motors. Six stations of in-house designed DC and Stepper Motor trainers have been added to the control system lab. The laboratory also has two Feedback Robot arm and PLC workcell conveyer. Siemens and Gould Modicon PLCís are also housed in this laboratory.

Communications: Labs are equipped with Microwave trainer systems, Mobile communication trainer, Doppler radar trainer systems, PC based analog and digital communication systems, wireless LAN, an FDDI LAN, HP protocol analyzers, spectrum analyzers, RF field strength analyzers and Emona communication modules for digital and wireless communications . An experimental lab running multi protocol network with TCP/IP is used for ETC416 and is equipped with a Cisco Router.

The fiber optics lab is equipped with optical time domain reflectometers (OTDR), fusion splicers, optoscope, power meters, optical spectral analyzers, couplers and Erbium doped fiber amplifier, light sources in addition to infrared viewers, cameras, coherent fiber optics, fiber optic telecommunication links and plastic and glass fibers. This lab is also equipped with various splicing, connectorizing, cleaving and polishing kits and tool accessories necessary to provide students with hands-on experience.

Digital: The digital systems design laboratories are fully equipped with equipment which can handle systems based on the Intel architecture.

Microprocessor: Microprocessor laboratories supporting microprocessor courses include: EPROM and PLD programmers; 68HC12 microcontroller trainers; MicroChip PIC trainers and programmers; Tektronix 308 8-channel logic analyzers; Tektronix 338 32-channel logic analyzers and PC Windows-based 40-channel logic analyzers.

Electrical Engineering Technology Employers

SUNYIT's EET graduates have been hired by hundreds of local and national companies and organizations across the spectrum of the field. Listed is a sampling of those companies.

Acu-Rite, Air Force Research Lab, Anaren Corp, BAE Systems, Bartell Machinery Systems Corp., Boeing, ConMed, Cond Edison of NY, Eastman Kodak Co., Eaton Corp. Powerware Division, ESPN, Fiber Instrument Sales, Hamilton College, Hiptronics, IBM, Interetek Eti Senko, Lockheed Martin Corp., Lucent Technology, Marquart Switches, Mohawk Valley Community College, Motorola, National Grid, NY Power Authority, NYSTEC; Orion Bus, PAR Microsystems, PAR Technology, Remington Arms Corp., Sensis, Special Metals, SUNY Health Science Center, Syracuse Research, Tektronix, Time Warner, Toshiba, Verizon, Virtual Medical Sales, Welch Allyn, Xerox Corp.

Finance

EARNED EXCELLENCE

THE BEST BUSINESS SCHOOLS IN THE WORLD

The major in finance is designed for students interested in specializing in the finance industry. Graduates can seek employment within organizations specializing in finance, such as banks, investment companies, brokerage houses, or in the finance departments of corporations.

Finance is one of the principal topic areas within business management. All students preparing in business should know the principles of finance, since money is a basic measure of business activity and capital funds are an essential element for all organizations. Students majoring in finance will go well beyond the principles and will study the topic of finance in-depth.

The finance major is narrow in perspective in that any elective opportunities are in finance, but the degree requirements give each student a broad perspective in business management. The major is available in both the B.S. (Bachelor of Science) and B.B.A. (Bachelor of Business Administration) degree for transfer students and the B.S. degree for freshmen. Because the curriculum is very course specific, some students may find that they need to attend SUNYIT for more than the normal 124 total credit hours. These students may find it desirable to pursue the general management major while concentrating their electives in the finance area to finish in the normal 124 total credit hours.

The degree requirements which follow are based upon four years of study so the students will have fulfilled many of these requirements through transfer credits.

Degree Requirements

B.S./B.B.A. Programs

Arts and Science – *Minimum 60 semester hours*
B.B.A., 64 semester hours B.S.

Elements of Calculus (3 cr. minimum)	1 course
Statistics (3 cr. minimum)	1 course
Lab Science (3 cr. minimum)	1 course
Natural Science (3 cr. minimum)	1 course
Microeconomics (3 cr. minimum)	1 course
Macroeconomics (3 cr. minimum)	1 course
Basic Communication (3 cr. minimum)	1 course
Upper Division Writing (3 cr. minimum)	1 course
Computer Applications (3 cr. minimum)	1 course
Behavioral Science (3 cr. minimum)	1 course

Must complete all the following courses for B.S., minimum of three for B.B.A.

American History	1 course
Western Civilization	1 course
Other Civilizations	1 course
Humanities*	1 course
Arts	1 course
Foreign Language	1 course

Arts/Science Elective (remainder of credits)

Business Requirements – *Minimum 33 semester hours B.S./47 semester hours B.B.A.*

Financial Accounting (3 cr. minimum)	1 course
Managerial Accounting (3 cr. minimum)	1 course
Introduction to Business (3 cr. minimum)	1 course
Business Law (3 cr. minimum)	1 course
Finance Principles (3 cr. minimum)	1 course
Marketing Principles (3 cr. minimum)	1 course
Organization Behavior (3 cr. minimum)	1 course
Human Resource Management (3 cr. minimum)	1 course
Issues in Business & Society (3 cr. minimum)	1 course
Management Science (3 cr. minimum)	1 course
Management Policy (3 cr. minimum)	1 course
Business Elec (remainder of credits)	

Finance Requirements – *Minimum 15 semester hours*

Intermediate Accounting (3 cr. minimum)	1 course
Investments (3 cr. minimum)	1 course
Financial Institutions (3 cr. minimum)	1 course
Financial Management Problems (3 cr. minimum)	1 course
Financial Planning and Control (3 cr. minimum)	1 course

Unrestricted Electives (remainder of credits)

Total	Minimum 124

NOTE: A minimum of C (2.00) is required in all finance and business core courses taken at SUNYIT, requirements and electives.

NOTE: All business transfer courses must have a grade of "C" or better to apply to the degree program.

** Written communication and technical writing courses do not fulfill this requirement.*

Finance Trading Room

Students in the School of Business have at their disposal an electronic ticker outside the School of Business that allows them to track the trading of listed securities on an ongoing, real time basis. In addition, a finance trading room in computer lab 1157 allows for practical asset trading experience.

Finance Minor

See academic minor section.

General Studies

In the General Studies major students plan their own programs around a core of interdisciplinary courses. Graduates will be prepared to enter graduate studies in interdisciplinary majors or in traditional liberal arts disciplines, to enter teaching, business, government, or any field where a strong liberal arts background is desired.

All General Studies students take a core of five courses. "Understanding Human Nature" analyzes what it means to be human from a variety of perspectives. "Critical Methods of Inquiry in the Humanities and Social Sciences" provides an introduction to various modes of analyzing subjects in the humanities and social sciences. "Prominent Themes in Western Civilization since the Renaissance" studies central issues in Western culture using primary readings in a variety of disciplines, and "Contemporary Worldviews" traces such issues through the twentieth century to the present, using sources from history, art, literature, psychology, management, and so on. The last core course is an independent project (with concurrent seminar meetings) in which the student creates her own interdisciplinary study, either a long essay based on issues like those in the core, or an applied project that uses the core courses indirectly.

In addition to the core, the student will choose two other areas of concentration or will design his own program in consultation with an advisor. If the first option is chosen, one of the two areas must fulfill the requirements for a SUNYIT minor in that field or constitute the equivalent of a minor (the student, in consultation with the General Studies advisor, will draw up a selection of courses.) If the second option is chosen, the student may plan a concentration of courses similar to a traditional major or may create a unique amalgam, such as a combination of marketing, internet, psychology, and political science courses to study the human factors in electronic communication.

** The program in General Studies is a Bachelor of Arts Degree. As a result, a student is limited to a maximum of 30 credit hours of coursework in professional areas outside of Arts and Sciences.*

Degree Requirements for General Studies

To earn a degree in General Studies, students must submit a proposed course of study identifying the student's areas of interest and proposed means of completing the degree requirements to the general studies advisor.

Satisfactory completion of 124 semester hours of college-level work distributed as follows:

General Education Requirements:	38-48
Program Requirements	56
General Electives:	28-38

Satisfactory completion of a minimum of 40 semester hours of upper division course work, of which at least 30 semester hours must be taken at SUNYIT.

Achievement of a minimum cumulative grade point average of 2.00 in courses taken at SUNYIT.

A grade of C or better in general studies courses and program courses.

General Studies Requirements

I. General Education Requirements
(12 Courses: 38-48 Credits)
Mathematics: MAT 111 or equivalent
Natural Sciences
Lab Science
Natural Science
Social Sciences
American History
Western Civilization
Other World Civilizations
Humanities
The Arts
Foreign Language
English Composition: ENG 101 or equivalent
Upper Division Writing: COM 308 or approved alternative

II. Program Requirements
(14-18 courses; 56 credits)
The student must complete 56 credit hours.
Required General Studies Courses
GEN 204: Understanding Human Nature
GEN 310: Critical Methods of Inquiry in the Humanities and Social Sciences*
GEN 400: Prominent Themes in Western Civilization since the Renaissance
GEN 401: Contemporary Worldviews
GEN 499: General Studies Project

*Option A students who incorporate a concentration in Sociology or Psychology may substitute SOC 332 or PSY 310 for this course; Option B students also may substitute an alternative methods course into their course of study, pending its approval from the General Studies faculty.

Option A: (36 credit hours in two of the following areas to be decided upon with your advisor; one area must satisfy the requirements for a SUNYIT minor or a series of courses equivalent to a minor not offered at SUNY-IT, to be determined in consultation with the General Studies advisor.)
* Sociology (ANT/SOC)
* Humanities (ENG/HUM/ART/MUS/PHI/STS/HIS)
* Communication
* Mathematics
* Natural Sciences
* Psychology
* Social Sciences (ECO/POS/STS/HIS)
* Professional Area (from any program outside of Arts and Sciences that has sufficient courses for creating a cluster).

Option B: The student must complete 36 credit hours by designing his or her own course of study, but the student MUST select courses in consultation with the general studies advisor, and the student MUST then petition the general studies faculty for approval. The student must complete a minimum of 16 credit hours within this option at the upper-division level.

III. General Electives
(28-38 credit hours)
College level courses in any discipline carrying SUNYIT or transferable credit.

Health Information Management

Health information management (HIM) professionals play a critical role in maintaining, collecting, and analyzing data that physicians, nurses and other healthcare providers rely on to deliver quality healthcare. They are experts in managing patient health information and medical records, administering computer information systems and coding the diagnoses and procedures for healthcare services provided to patients. HIM professionals work in a multitude of settings throughout the healthcare industry including hospitals, physician offices and clinics, long-term care facilities, insurance companies, government agencies and home care providers. Some of the health information managers work as consultants and some establish their own small businesses. For more information about the field, check the American Health Information Management Association web site: www.ahima.org.

The Program

The health information management program is designed to prepare graduates for the rapidly growing field of health information management. The professional courses that the students study to become a health information manager cover topics such as health information science, health information terminology, computer applications in health information administration, and the evaluation of health care systems.

Graduates of the SUNYIT health information management program are eligible to write the registered health information administrator (RHIA) examination of the American Health Information Management Association.

Accreditation

The program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Degree Options

Two degrees are offered in the health information management program:

Bachelor of Professional Studies (B.P.S)
Bachelor of Science (B.S.)

The Bachelor of Science degree program is open to freshman-level students as well as transfer students. The Bachelor of Professional Studies degree is open to transfer students only. Both degrees require the completion of 124 semester hours.

Transfer Credit

Graduates of two-year health information technology programs usually choose the B.P.S. degree option. In this degree program, students can enter with two years of transfer credit. Students can anticipate completion of the degree program in four semesters of full-time study. Transfer credit is given for prior course work in health information technology.

Graduates of other two-year technical programs also usually choose the B.P.S. degree option. Transfer credit is given for prior course work that is applicable to the major.

Transfer students from two-year liberal arts programs usually choose the B.S. degree option. Transfer credit is given for prior course work that is applicable to the major.

Each applicant's transfer credit is evaluated individually. Recommended pre-requisites for the program for transfer students include introductory courses in statistics and accounting, and a one-year laboratory sequence in human anatomy and physiology.

Residencies

Each student in the program completes three residencies*. The first residency (3 credits) is completed between the junior year and the senior year. This is normally a summer course and students should be prepared to pay summer tuition. In this residency, the student spends three weeks full time in a hospital health information department. The residency provides the student with the opportunity to gain practical experience in the technical aspects of health information management.

The second residency (1 credit) is completed in ten (10) half days during the fall semester of the senior year. This residency exposes students to various non-hospital settings.

The third residency (3 credits) is taken for three weeks during the last semester of the senior year. It takes place in the health information management department of a healthcare or health-related organization. This residency focuses on the management role of the health information manager.

Additional expenses may be incurred during the residency for transportation, housing, health testing and proper work attire. Every effort is made to place students in organizations that are within reasonable commuting distance of SUNYIT or the student's hometown. The decision regarding the proper placement of the student is made by the program faculty.

** Note: Transfer students with associate degrees in health information technology may transfer the equivalent of the first technical-level residency and the specialty rotation.*

Distance Education

Professional courses are available through the Internet/web. The program uses the State University of New York (SUNY) Learning Network for this purpose. Students interested in this option should contact the program director for the schedule of Internet/web courses. Full-time, on-campus students will be required to take some of their courses via the web. For more information, visit the SUNY Learning Network website at: sln.suny.edu.

On-campus HIM courses use an Internet supplement to the classroom environment. Distance-learning students may also participate in these courses via the Internet.

Minimum Average Required in Major

Health information management students are required to maintain a minimum 2.0 grade point average in the HIM major courses in order to qualify for graduation. These courses are listed under department requirements in the degree programs.

Second Major in Health Services Management

Students in the health information management program have a unique opportunity to complete a second major in health services management. This is because the two programs have many courses in common. The following additional courses must be taken for the second major:

ECO 405	Economics of Health Care (3)
HSM 300	Introduction to Quantitative Methods in Health Services (3)
HSM 436	Financial Management for Health Care Organizations – Case Study (1)
HSM 425	Health Care Marketing and Strategic Planning (4)

These courses may be used to meet some of the elective requirements in the health information management program.

Suggested Schedules —

Freshman Student

Freshman Year

Fall Semester	*Spring Semester*
HIM 100 – 3	HIM 111 - 3
General Education – 12	General Education –12
Total 15	Total 15

Sophomore Year

Fall Semester	*Spring Semester*
HIM 212 –3	HIM 220 – 3
General Education/ Arts & Sciences – 12	General Education/ Arts & Sciences – 12
CSC 311B – 1	CSC 311C –1
Total 16	Total 16

Junior Year

Fall Semester	*Spring Semester*	*Summer*
HIM 305 – 3	HIM 306 – 3	HIM 392 – 3
Upper-division writing – 4	MGT 318 – 4	
HSM 309 – 3	ACC 301 – 4	
HSM 311 – 3	Arts and Sciences – 4	
Other Requirements – 3		
Total 16	Total 15	Total 3

Senior Year

Fall Semester	*Spring Semester*
HIM 400 – 2	HIM 410 – 3
HIM 401 – 3	HIM 435 – 3
HIM 494 – 1	HIM 440 – 3
HIM 425 – 3	HIM 493 – 2
HSM 401 – 3	HIM 495 – 3
HSM 435 – 3	
Total 15	Total 14

Transfer Student from a Health Information Technology Program

Junior Year

Fall Semester	*Spring Semester*
HIM 220 – 3	HSM 435 – 3
COM 306 – 4	HSM 311 – 3
Other degree requirements – 8-9	HSM 401 – 3
	Other degree requirements – 6
Total 15-16	Total 15

Senior Year

Fall Semester	*Spring Semester*
HSM 309 – 3	HIM 410 – 3
HIM 425 – 3	HIM 435 – 3
Other degree requirements – 8-9	HIM 440 – 3
	HIM 493 – 2
	HIM 495 – 3
	Other degree requirements 1-3
Total 14-15	Total 15-17

Transfer Student New to the Health Information Management Field

Junior Year

Fall Semester	*Spring Semester*	*Summer*
HIM 100 – 3	HIM 305 – 3	HIM 392 – 3
HIM 111 – 3	HIM 306 – 3	
HIM 212 – 3	HSM 309 – 3	
HIM 220 – 3	HSM 401 – 3	
Upper-division writing – 4	HSM 311 – 3	
Total 16	Total 15	Total 3

Senior Year

Fall Semester	*Spring Semester*
HIM 400 – 2	HIM 410 – 3
HIM 401 – 3	HIM 435 – 3
HIM 425 - 3	HIM 440 – 3
HIM 494 – 1	HIM 493 – 2
HSM 435 – 3	HIM 495 – 3
MGT 318 – 3	
Total 15	Total 14

Health Information Management Program

Bachelor of Science Degree Requirements*

Arts and Sciences – General Education (30 credit hours)

- Mathematics
- Science: Human Anatomy and Physiology I with a laboratory
- Science: Human Anatomy and Physiology II with a laboratory
- Social Science
- Courses to satisfy at least three of the following categories:
  - American History
  - Western Civilization
  - Other Civilization
  - Humanities
  - Arts
  - Language
- Freshman Composition
- Upper-division writing

Arts and Sciences – Other Requirements (31 credit hours)

	Credits
Oral Communication	(3-4)
Statistics	(3-4)
Spreadsheets	(1)
Word Processing	(1)
Electives	(20-22)

Department Requirements (63 credit hours)

	Credits
Introduction to the Health Information Management Field – HIM 100	3
Medical Terminology – HIM 111	3
Pathophysiology for Health Information Management – HIM 212	3
Data Management and Analysis for Health Information – HIM 220	3
Inpatient Coding and Classification – HIM 305	3
Outpatient Coding and Classification – HIM 306	3
Technical-Level Residency – HIM 392	3
Non Hospital Health Information Management Systems – HIM 400	2
Systems for the Evaluation and Improvement of Health Care Systems – HIM 401	3
Health Information Services Management – HIM 410	3
Research in Health Information Management – HIM 425	3
Health Care Management/Medical Information Systems – HIM 435	3
Electronic Health Records – HIM 440	3
Senior Seminar – HIM 493	2
Specialty Rotation – HIM 494	1
Management-Level Residency – HIM 495	3
Health Care and the Law – HSM 309	3
Management for the Health Professions – HSM 311	3
Introductory Accounting	3
Financial Management for Health Care Organizations – HSM 435	3
Epidemiology - HSM 401	3
Human Resources Management – MGT 318	4

Total Credits 124

** Open to freshman-level students and transfer students*

Health Information Management Program

Bachelor of Professional Studies Degree Requirements**

Arts and Sciences – General Education (30 credit hours)

- Mathematics
- Science: Human Anatomy and Physiology I with a laboratory
- Science: Human Anatomy and Physiology II with a laboratory
- Social Science
- Courses to satisfy at least three of the following categories:
  - American History
  - Western Civilization
  - Other Civilization
  - Humanities
  - Arts
  - Language
- Freshman Composition
- Upper-division writing

Arts and Sciences – Other Requirements (10 credit hours)

	Credits
Oral Communication	(3-4)
Statistics	(3-4)
Spreadsheets	(1)
Word Processing	(1)
Electives	(0-2)

Department Requirements (63 credit hours)

	Credits
Introduction to the Health Information Management Field – HIM 100	3
Medical Terminology – HIM 111	3
Pathophysiology for Health Information Management – HIM 212	3
Data Management and Analysis for Health Information – HIM 220	3
Inpatient Coding and Classification – HIM 305	3
Outpatient Coding and Classification – HIM 306	3
Technical-Level Residency – HIM 392	3
Non Hospital Health Information Management Systems – HIM 400	2
Systems for the Evaluation and Improvement of Health Care Systems – HIM 401	3
Health Information Services Management – HIM 410	3
Research in Health Information Management – HIM 425	3
Health Care Management/Medical Information Systems – HIM 435	3
Electronic Health Records – HIM 440	3
Senior Seminar – HIM 493	2
Specialty Rotation – HIM 494	1
Management-Level Residency – HIM 495	3
Health Care and the Law – HSM 309	3
Management for the Health Professions – HSM 311	3
Introductory Accounting	3
Financial Management for Health Care Organizations – HSM 435	3
Epidemiology - HSM 401	3
Human Resources Management – MGT 318	4

Unrestricted Electives (21 credit hours)

Total Credits 124

**Open to transfer students only.

Health Services Management

Earned Excellence

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The Best Business Schools In The World

Significant changes are taking place in the health field due to advancing technology, an aging population, innovative approaches to the payment for care, and a dynamic health care delivery system. Many of these changes are creating excellent opportunities for persons interested in a career in health services management. Graduates of the program have been employed in hospitals, nursing homes, physician practice management, government service, and the health insurance industry. They have accepted positions as administrators and health professionals in finance, marketing, planning, and data management, as well as many other capacities in the health care field. Others have successfully pursued graduate studies.

The Health Services Management Program blends business management with health services management, preparing the student to work in or manage programs and facilities in a health services environment. Coursework is designed to acquaint the student with various aspects of the health care delivery system. Topics include: health care delivery, health law, health economics, facility administration, budgeting and reimbursement. Business coursework includes: accounting and human resources management. A strong emphasis throughout the curriculum is on computer applications in data analysis, management and decision-making. This combination of coursework in the program has enabled students to successfully enter and excel in the health care field.

Mission

The Health Services Management Program adopted the following mission statement to guide its curriculum, students and faculty in the pursuit of excellence.

The mission of the Health Services Management (HSM) Program at the State University of New York Institute of Technology is to provide undergraduate students with a comprehensive understanding of the health care delivery system; to prepare students for an integrated health and business environment, an environment characterized by rapid changes in health care management, delivery, and financing systems; to offer an opportunity to apply classroom experience to the working environment; and to encourage participation in educationally-oriented community and public service. The HSM Program values and encourages: high quality academic and intellectual achievement by its faculty through development and enhancement of skills in new technologies in the health care field; the performance of health care related research which informs the policy, practitioner, and academic communities; and through community service through participation on health agency/ organization related boards and advisory groups.

Certification

In the pursuit of excellence the Health Services Management Program has sought recognition from the most prestigious certifying body for undergraduate programs in Health Services Administration - The Association of University Programs in Health Administration (AUPHA); and was certified for full membership in 2001 and renewed in 2006. The following statement has been extracted from the AUPHA website: (http://www.aupha.org)

The Association of University Programs in Health Administration (AUPHA) is a not-for-profit association of university-based educational programs, faculty, practitioners, and provider organizations. Its members are dedicated to continuously improving the field of health management and practice. It is the only non-profit entity of its kind that works to improve the delivery of health services throughout the world - and thus the health of citizens - by educating professional managers.

From its inception 50 years ago, membership in AUPHA has grown from seven graduate programs in the United States and Canada to more than 100 graduate and undergraduate university programs in North America. Schools of medicine, public health, allied health, and business administration house these interdisciplinary academic programs.

In addition to AUPHA's Program Members throughout North America, our membership also includes more than 100 international health administration programs and affiliated health care organizations. In addition, the Association's membership includes hundreds of educators, executives, corporations, individuals and libraries committed to the organization's mission.

Degree Program

The Health Services Management Program offers a Bachelor of Science (B.S.) in Health Services Management. The degree requires the completion of 124 semester hours, including: 56 hours specific to the major, 60 hours of Arts and Sciences and the remaining hours are open electives. A minimum of 30 hours must be completed at SUNYIT.

For transfer students, the Associate of Science (A.S.) or Associate of Arts (A.A.) degrees will facilitate a transfer into the Health Services Management Program. Regardless of the student's academic or professional background, a program of study can be developed to meet his/her specific needs.

As with all programs, degree requirements include a strong base of general education, conveying a diverse educational experience that the student can use beyond a chosen area of professional preparation.

Students will be required to maintain at least a 2.3 GPA in HSM courses to continue in the HSM program. A lower GPA will result in academic counseling.

Students may repeat courses only once without academic petition.

Internship

The Health Services Management Program affords students an opportunity to apply their classroom experience to the work environment through an internship. Students work under the direction of a qualified preceptor in one of the many types of organizations involved in health care in New York or other states. The internship exposes the student to the various operational components of the organization, and they may prepare special reports or studies on behalf of the organization. In many cases, this is the student's first health related job experience and it has played a vital role in establishing a successful career path for health services management graduates.

To qualify for an internship, a student must have an overall cumulative average of at least 2.00, no less than a "C" in all health services management core and required business courses, health services management elective courses, and no less than a 2.30 cumulative average in health services management core and elective courses.

Bachelor of Science Degree in Health Services Management

Courses	Credit Hour Requirements	SUNYIT Reference
Arts and Sciences - General Education Requirements		
Written Communications	1 course	ENG 101
Mathematics (elements of calc or higher)	1 course	MAT 112
Social Sciences	1 course	SOS 001
Science Elective	1 course	NSC 001
At least 3 of the following categories		
American History	1 course	AMH 001
Western Civilizations	1 course	WCV 001
Other Civilizations	1 course	OCV 001
Humanities	1 course	HUM 001
Arts	1 course	ART 001
Foreign Language	1 course	FLN 001
Arts and Science - Other Requirements		
Economics of Health Care	3	HSM 405
Communications (upper division)	4	COM 307
Lab Science	4	LSCI 000
Spreadsheets	1	CSC 000
Statistics	3	STA 000
Arts and Science Electives	Remaining Credits	ASCI 000
TOTAL Arts and Sciences	**60 credits**	
HSM Core Course Requirements		
Health Care Delivery in the US	3	HSM 201
Intro to Quantitative Methods in HSM	3	HSM 300
Health Care and the Law	3	HSM 309
Mgmt for the Health Professions	3	HSM 311
Introduction to Epidemiology	3	HSM 401
Health Care Marketing/Strategic Planning (HSM capstone course)	4	HSM 425
Financial Mgmt for HCO	3	HSM 435
Fin Mgmt for HCO - Case	1	HSM 436
Health Care Mgmt/Med Info Systems	3	HIM 435
HSM Electives	9	HSME 000
Other Electives with permission of the student's adviser or program director.		
HSM Internship	4 - 16	HSM 492
TOTAL HSM Requirements	**48 credits**	
Business Credits		
Financial Accounting	3	ACC 201
Human Resources Management	3	MGT 318
Total Business Credits	**6 credits**	
Open Electives		
Open Electives	8 - 10 Credits	
TOTAL Degree Requirements	**124 Credits**	

The following sample shows how a student could complete their studies in 4 years. This is only a sample, and with only a few exceptions, changes can be made to accommodate student needs.

4 Year Plan - Health Services Management

Freshman Year:

Fall Semester (16 credits)	Spring Semester (16 credits)
Written Communications	Science Elective
Mathematics	Statistics
General Education	General Education
Arts and Science Elective	Arts and Science Elective

Sophomore Year

Fall Semester (16 credits)	Spring Semester (15 credits)
Lab Science	Arts and Science Elective
Social Science	Communication (upper division)
General Education	ACC 201
HSM 201	HSM 300
Spreadsheets	

Junior Year

Fall Semester (17 hours)	Spring Semester (15 hours)
ECO 405	Art and Science Elective
MGT 318	HSM 435
HSM 309	HSM 436
HSM 311	HSM 401
HSME	HIM 435
	HSME

Senior Year

Fall Semester (16 hours)	Spring Semester (12 - 16 credits)
HSM 425	Internship
HSME	
Open Elective	
Open Elective	

Health Services Management Minor

See academic minor section.

Distance Learning

The Health Services Management Program makes its courses available and accessible to working professionals and persons who are place-bound without a Health Administration degree in their area. The web-based asynchronous learning mode allows students to work on their classes with a great deal of flexibility and within the confines of their personal circumstances. All that is required is a computer, an Internet connection and the desire to pursue a health services management degree. It should be noted that these courses are no different than their on-campus counterparts, and in some cases may by more difficult without classroom interaction. Students must be both disciplined to "attend class" and motivated to work through problems that might be easier to understand when presented on a blackboard. Some basic computer skills are necessary to begin this learning modality, and more advanced skills will be required with increased involvement in the curriculum. The Health Services Management Department uses the SUNY Learning Network (SLN) for course management and technical support. To visit the SLN, go to: www.sln.suny.edu. The undergraduate degree may require web-based coursework at a local community or other college depending on each student's prior academic preparation. The program of study also includes an internship, which may be completed in the area in which the student resides.

Health Services Management Hybrid Course Attendance

Hybrid courses are those available to both online and on campus students. The course content is available "fully" online, and a class meeting time has been scheduled. Attendance requirements are related to a student's geographic proximity to campus.

The following **guidance** pertains to **hybrid** course listings for the HSM program.

Students living within a 50-mile radius:

- Required attendance at the first class;
- Attendance at additional classes at the faculty's discretion; and
- Required attendance at any class with student presentations and/or a final seminar.

Students living outside the 50-mile radius:

- Encouraged attendance at the first class;
- Encouraged attendance at other scheduled classes; and
- Required attendance at classes with student presentations.

Other faculty contact with individual students are at the faculty and student's discretion.

Faculty may waive attendance at any class, due to a personal or professional commitment, with a written request.

HSM Program Information

B.S. program: http://www.sunyit.edu/programs/undergraduate/hsm

Campus Residence Requirement

- The purpose of the Campus Residency is to ensure program integrity and identify areas of student weakness. Testing, seminars, student presentations and other such activities deemed appropriate to evaluate the student's learning may be required. At this time students will meet with an advisor and could be advised of the need to repeat selected coursework or engage in other such academic activities that will satisfy the reviewing panel's concerns.
- All students are required to participate in one campus residency per academic year. Two campus residency opportunities are available with one each Fall (September) and one each Spring (April or May).

Industrial Engineering Technology

Graduates of the industrial engineering technology (IET) program have found positions in all aspects of manufacturing and service industries. Typically, students work in functional areas such as cost estimation, facilities planning, manufacturing process design, design drafting, supplier quality control, production control, or quality assurance. Many manufacturing plants are continuously being modernized and IET graduates are well prepared to participate in this trend.

The B.S. is designed to provide students with a broad-based education and the opportunity to create a specialized program by following one of the options or by selecting technical courses to fill an individual interest or career plan. The concentrations are:

Manufacturing Engineering Technology – This concentration covers manufacturing and industrial processes in industry. Coursework includes: process planning, cost estimation, machining processes, metal working processes, laser application, CAD/CAM, safety and environment impact and design for manufacturing.

Quality Assurance Technology – In addition to manufacturing core coursework, this concentration offers intensive training in SPC, ISO9000, ISO14000, TQM, quality improvement, concurrent engineering, and reliability for design & production.

Industrial Engineering Technology – This concentration concentrates on the traditional industrial engineering technology courses. Coursework is offered in such areas as engineering economics, plant layout, rapid prototyping, simulation and optimization, manufacturing control, network scheduling, method study, industrial safety, and industrial administration.

Computer-Aided Design/Computer-Aided Manufacturing/Robotics – In this concentration, the use of microcomputers in manufacturing is explored. Coursework includes: integrated and flexible manufacturing systems, group technology, process control, computer-assisted numerical control programming and operation, computer-aided manufacturing.

The B.S. Degree with a major in Industrial Engineering Technology is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering & Technology.

B.S Degree Requirements

To earn a Bachelor of Science (B.S) degree in industrial engineering technology, a student must complete a minimum of 128 credit hours and fulfill the following requirements:

I. Arts and Sciences – 60 credits

Minimum Credits

A. Liberal Arts – 34 credits

Oral Communications
Written Communications
Upper-Division Writing
Humanities*
Social Sciences*
American History*
Western Civilization*
Non-Western Civilization*
Fine Arts*
Foreign Language*

***Complete coursework in at least five out of the above seven categories**

Arts & Sciences Electives

34 credits

B. Mathematics and Science – 26 credits

Physics with Lab
Basic Science with Lab
Mathematics (including Calculus I/II)
Math & Science Elective
Computer Programming Language

26 credits

II. Technical Courses – 62 credits

A Grade Point Average (GPA) of 2.0 is required in all IET courses taken at SUNYIT. A total of 62 credits is required, of which a minimum of 32 credits must be taken at SUNYIT. The following courses are required:

ITC 101 – Intro to Engineering Technology
or ITC 301 – Professionalism in the Workplace
ITC 162 – Computer-Aided Design
ITC 198 – Industrial Instrumentation
or ITC 398 – Mechanical Measurements
ITC 211 – Manufacturing Processes
ITC 311 – Manufacturing Operations
ITC 327 – Production and Operation Manufacturing
ITC 358 – Plant Layout and Material Handling
ITC 373 – Statistical Quality Control
ITC 462 – Computer-Aided Manufacturing
ITC 475 – Engineering Economics
ITC 483 – Quality Improvement
ITC 320 – Applications Project I
ITC 321 – Applications Project II
Technical Electives — Balance of 62

III. Open Electives — Balance of 128

Students with a minimum of five years of work experience in a related job can waive one application project, i.e., take Application Project II (ITC 321) only, with the prior approval of the student's advisor.

Areas of Concentration†

Students may specialize in one of the following areas. A total of 20 credits must be taken from the following courses:

Manufacturing Engineering Technology - 20 credits
- ITC 411 – Manufacturing Cost Estimation
- ITC 467 – Industrial Safety & Environmental Impact
- ITC 485 – Concurrent Engineering & Design for Manufacture
- ITC 488 – Introduction to Ergonomics

Quality Engineering Technology - 20 credits
- ITC 390 – ISO 9000 & Total Quality Assurance
- ITC 391 – ISO 14000 – Auditing & Implementing
- ITC 392 – ISO 9000 & QS 9000 – Audit & Impl
- ITC 486 – Reliability for Design and Production

Industrial Engineering Technology - 20 credits
- ITC 390 – ISO 9000 & Total Quality Assurance
- ITC 411 – Manufacturing Cost Estimation
- ITC 485 – Concurrent Engineering & Design for Manufacture
- ITC 488 – Intro to Ergonomics

CAD/CAM - 20 credits
- MTC 388 – Fundamentals of Solid Modeling With Pro/Engineer
- ITC 405 – Solid Modeling/Rapid Prototyping
- ITC 430 – Engineering Dynamics
- ITC 485 – Concurrent Engineering & Design for Manufacture
- ITC 486 – Reliability for Design and Production

†Students are not required to complete a concentration.

Laboratories

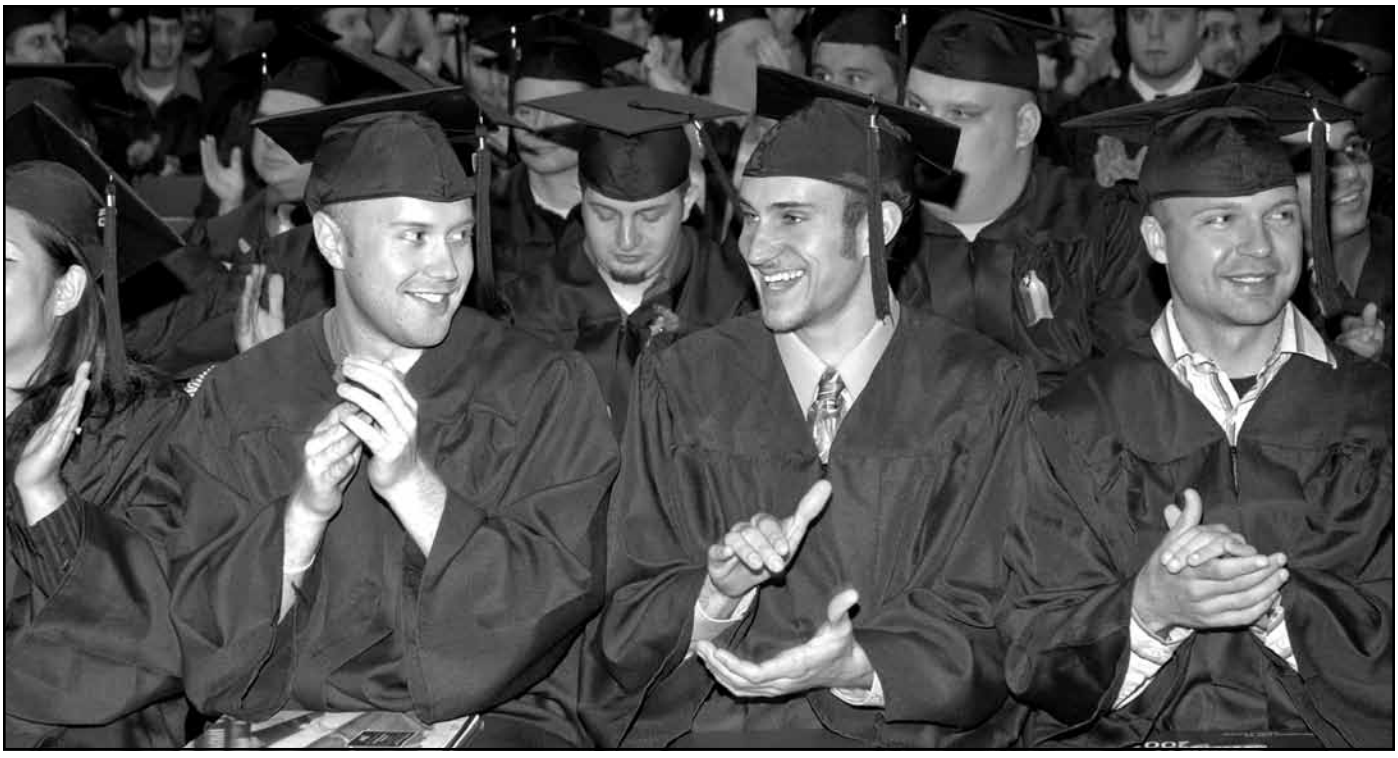
The IET program utilizes various laboratories to provide students with both equipment and software to use. These laboratories provide hands-on exposure. Examples of these labs include:

Computer Numeric Control (CNC), CNC machining center, CNC turret lathe

Computer laboratory with the following software packages:
- AutoCAD
- SolidWorks
- SimuLink
- Production Operations Management
- Quality Improvement (SPSS)
- Computer-Aided Design (CAD) and rapid prototyping
- Machine shop for student projects

Quality Engineering and System Technology Minor

See academic minor section.



Mechanical Engineering Technology

The goals of the Mechanical Engineering Technology (MET) program are to provide quality undergraduate studies, prepare students to enter professional careers and graduate study, and find employment in their field after graduation. This program values and encourages academic and intellectual achievement of the highest quality and the technical competencies inherent to the field of MET. The faculty are committed to the integration of these elements in a coherent program of higher education.

MET graduates are problem solvers with hands-on skills and a well-rounded technical background. They work in a wide range of advanced mechanical systems and processes. Job functions include design and development, installation, maintenance, documentation, manufacturing, fabricating, testing and evaluation, and technical sales. Typical starting jobs for MET graduates include product development and design, computer-aided design and manufacturing, and technical management and supervision. Graduates of this program pursue careers not only in MET, but also in related fields such as computer science and industrial, manufacturing, and civil engineering.

Students take a series of required courses to obtain technical expertise in the fundamental areas of mechanical engineering technology. Technical expertise with added technical depth is required in each of the following three areas:

1. Mechanical Design
2. Thermal Sciences
3. Computer-Aided Engineering Graphics

The MET program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET.) In January 2005, the American Society for Engineering Educators (ASEE) ranked SUNYIT tenth in the nation based on the number of engineering technology bachelor's degrees awarded.

B.S. Degree Requirements

To earn a Bachelor of Science (B.S.) degree in MET, a student must complete a minimum of 128 credits hours and fulfill the following requirements:

I. Arts and Sciences - 60 credits

A. *Liberal Arts*
Oral Communication
Written Communication
Upper-Division Writing
Humanities*
Social Sciences*
American History*
Western Civilization*
Other World Civilizations*
Fine Arts*
Foreign Language*
**Complete coursework in at least 5 of the above 7 categories*
24 credits

B. *Mathematics and Science*
Physics (with laboratory)**
Chemistry (with laboratory)**
Physics elective**
Mathematics, including Calculus I & II, Differential Equations
***Students are encouraged to take calculus-based sciences*
24 credits

C. *Computer Programming Language*
Electives: Liberal Arts, Math, Science, Computer Science
12 credits

II. Technical Courses - 66 credits
A Grade Point Average (GPA) of 2.0 is required in all MET courses taken at SUNYIT.

A. *Required Courses - 30 credits*
MTC 101 - Intro to Engineering Technology
or MTC 301 - Professionalism in the Workplace
MTC 162 - Computer-Aided Design
MTC 198 - Industrial Instrumentation
or MTC 398 - Mechanical Measurements
MTC 211 - Manufacturing Processes
MTC 218 - Statics
MTC 222 - Strength of Materials
MTC 336 - Material Science Applications
MTC 352 - Thermodynamics
MTC 430 - Engineering Dynamics
MTC 461 - Fluid Mechanics
MTC 420 - Capstone Experience (taken during senior year at SUNYIT)

B. *Courses with Technical Depth - 12 credits*
Students must take at least 4 credits from each of the following groups at SUNYIT.

Group 1: Mechanical Design
MTC 308 - Mechanical Components
MTC 362 - Experimental Stress Analysis
MTC 465 - Advanced Machine Design

Group 2: Thermal Sciences
MTC 450 - Solar Energy Concepts
MTC 454 - Engineering Heat Transfer
MTC 462 - Turbomachinery

Group 3: Computer-Aided Engineering Graphics
MTC 388 - Fundamentals of Solid Modeling with Pro/E
MTC 405 - Solid Modeling and Rapid Prototyping
MTC 476 - Finite Element Applications

C. *Mechanical Electives - 20 credits*
Students must take at least 10 credits at SUNYIT.

D. *Electrical Electives - 4 credits*

III. Open Electives - Balance of 128 credits
Students are encouraged to take course in Industrial Engineering Technology (ITC), Electrical Engineering Technology (ETC), Computer Science (CSC), Mathematics (MAT), and Physics (PHY).
Total Credits 128

Areas of Concentration†

Students may specialize in one of the following areas. A total of 20 credits must be taken from the following courses:

Mechanical Design - 20 credits
- MTC 218 - Statics
- MTC 222 - Strength of Materials
- MTC 308 - Mechanical Components
- MTC 330 - Assistive Technology
- MTC 336 - Material Science Applications
- MTC 388 - Fundamentals of Solid Modeling with Pro/ENGINEER
- MTC 398 - Mechanical Measurements
- MTC 430 - Engineering Dynamics
- MTC 464 - Vibrations Analysis
- MTC 465 - Advanced Machine Design

Thermal Sciences - 20 credits
- MTC 350 - Solar Energy Technology
- MTC 352 - Thermodynamics
- MTC 450 - Solar Energy Concepts
- MTC 454 - Engineering Heat Transfer
- MTC 461 - Fluid Mechanics
- MTC 462 - Turbomachinery
- MTC 471 - Space Technology

Computer-Aided Engineering Graphics - 20 credits
- MTC 222 - Strength of Materials
- MTC 308 - Mechanical Components
- MTC 362 - Experimental Stress Analysis
- MTC 388 - Fundamentals of Solid Modeling with Pro/ENGINEER
- MTC 405 - Solid Modeling/Rapid Prototyping
- MTC 442 - Computer-Aided Manufacturing
- MTC 465 - Advanced Machine Design
- MTC 467 - Computer-Aided Design
- MTC 476 - Finite Element Applications

†*Students are not required to complete a concentration.*

Mechanical Laboratories

The MET program has numerous laboratories with equipment to provide hands-on application of classroom learning. These laboratories encompass many aspects of the MET curriculum, including:

- Instron multi-purpose testing machine
- Bending moment and deflection of beams apparatus
- Electronic strain measurement equipment
- Static equilibrium devices
- Dynamics test stands: centrifugal force, ballistic projectiles, linear momentum, conservation of potential energy, acceleration, forces of gravity
- Machine shop for prototyping
- Computer Numeric Control (CNC), CNC machining center, CNC turret lathe
- Rapid prototyping
- Heat exchangers - conduction, convection, and radiation heat transfer units
- Heat pipes and pumps, solar energy systems
- Subsonic wind tunnels, reaction and impulse turbines
- Mechanical measurements lab with a wide range of electro-mechanical sensors and data acquisition electronics
- Electrical course requirements also include dedicated laboratories with electronic equipment.

Computer Skills

This curriculum provides students experience with modern software and hardware that is used in industry. Some of the advanced courses are taught using software such as:

- AutoCAD for mechanical design and layout
- AutoDesk Inventor Professional
- ALGOR for finite element analysis
- LabVIEW for mechanical measurements
- MATLAB/SimuLink for simulation
- ProENGINEER for solid modeling and analysis
- SolidWorks for rapid prototyping

The MET program has several dedicated computer labs, and students have access to numerous other modern computer labs throughout the campus. For the computer language requirement, students may learn C/C++, JAVA, and Visual Basic.

Student Clubs

MET students may join chapters of the following professional societies:

- ASME - American Society of Mechanical Engineers
- SAE - Society of Automotive Engineers
- SME - Society of Manufacturing Engineers
- SWE - Society for Woman Engineers
- ASQ - American Society for Quality

Recent activities of these clubs include the SAE Baja project, where students design and build a single-passenger off-road vehicle for the international race and design competitions. Members of the ASME club have also participated in regional and international design competitions.

Nursing

Improving the nation's health in the twenty-first century requires increasing the variety of care delivery settings available to the general population. Professional nurses of tomorrow must be prepared today to meet the challenges of highly complex health care needs and services for people of our communities and globally. The curricular emphases in baccalaureate nursing programs on health promotion and healthy behaviors, coordinating cost-effective quality care, community-focused health care, and the evidence based practice, are particularly appropriate to achieving the future's agenda. It is estimated, however, that the next decade's demand for baccalaureate-prepared nurses will continue to exceed their availability.

RN to BS Nursing Program

The School of Nursing and Health Systems at SUNYIT offers a curriculum leading to a Bachelor of Science degree with a major in nursing. The baccalaureate program is designed to serve licensed registered nurses from state-approved associate or diploma nursing programs who are prepared to focus on their professional and career development.

Students may attend the SUNYIT program on campus, on a full-time or part-time basis. Courses are also offered at outreach sites in the capital district and for select cohorts in the north country and Cooperstown areas. Course offerings at these outreach locations are scheduled within a select time frame and are delivered by our nursing faculty, with courses offered through traditional classroom teaching and web enhanced/hybrid distance education. Complete details regarding scheduling of nursing courses are available upon request from the School of Nursing and Health Systems.

The nursing program, in support of the mission of SUNYIT, offers direct articulation and joint admission agreements with associate degree and diploma nursing programs. These agreements provide potential students advanced advisement regarding transfer of credits.

The curriculum includes coursework in the theoretical bases of professional nursing practice, comprehensive health assessment, nursing research and evidence based practice, nursing leadership, and public health nursing science.

As with all programs at SUNYIT, the nursing program includes a strong base in the arts and sciences. This provides students with the tools and knowledge to relate their experiences to their work and to the broader context of their lives. It helps create a more diverse, complete education that continues to grow through life long learning.

Accreditation

The undergraduate and graduate nursing programs are registered by the New York State Education Department and accredited by the Commission on Collegiate Nursing Education (CCNE, 1 Dupont Circle NW, Washington, DC, 202-887-6791).

Graduate Study

SUNYIT further displays its ongoing commitment to meeting the needs of the nursing profession by also offering a Master of Science (M.S.) in nursing degree with programs in nursing administration, adult nurse practitioner, family nurse practitioner, gerontological nurse practitioner, and nursing education. Graduates are able to advance the practice of nursing by applying the knowledge and skills they've learned. In addition, the graduate program provides a strong foundation for subsequent doctoral study.

Accelerated BS/MS Programs for Professional Registered Nurses

This program offers qualified registered nurses the opportunity to earn both the BS and MS in Nursing within a shortened time frame. The curriculum combines elements of the BS program with the MS program and streamlines the BS program by substituting with select accelerated courses. Full-time study is preferred to proceed through the program at an accelerated pace. Students have the option of selecting from three graduate specialty areas of concentration: nursing administration, adult nurse practitioner, or family nurse practitioner. At the end of the option, the graduate will be eligible to seek advanced practice certification. The RN to BS/MS student will receive both BS and MS degrees upon program completion.

Faculty

The faculty, with their broad and varied experiences and educational philosophies, are outstanding proponents of baccalaureate education for registered nurses. The faculty are highly qualified to assist the adult learner and guide both the new registered nurse and those with extensive and/or varied experiences through the program. Faculty serve as academic advisors to all students.

Clinical Application

Students of the School of Nursing and Health Systems test nursing principles in real-life situations at a wide variety of health care settings, including hospitals, schools, health care agencies, community based and public health focused programs. These clinical experiences are designed with working registered nurses in mind, allowing them to earn their degrees as conveniently as possible.

Mission

The mission of the School of Nursing and Health Systems is to provide a nursing education at the baccalaureate and master's levels that focuses on collaboration, active participation in one's own learning, critical reflection, and creative practice to meet the needs of clients across the lifespan. Nursing education is built upon a general education of the arts and sciences that complements professional education in: nursing knowledge and theory; inquiry and research; leadership and community; nursing standards and professional practice.

Vision Statement

The School of Nursing and Health Systems faculty aspire to professional excellence in teaching, practice, scholarship, and service to SUNYIT and the communities of Central and Upstate New York. Our vision is to be a community of nurse scholars and mentors guiding professional nurses as nurse leaders and advanced practitioners who are committed to professional ideals, lifelong learning, and meaningful practice within increasingly technological health care systems and communities.

Goals of the School of Nursing and Health Systems

1. Integrate nursing knowledge with a blend of liberal education in the arts and sciences.
2. Provide an educational environment that promotes caring, critical reflection, collaboration, professionalism, and lifelong learning.
3. Mentor and guide nurses toward personal and professional transformation in nursing.
4. Foster clinical decisions and ethical practice in health care based upon the codes and standards of practice to meet unique needs of individuals, families, and communities.
5. Promote the development of faculty in teaching, practice, community service, and scholarship within the nursing profession, community, and university.

Program Outcomes

At the completion of the baccalaureate program, the graduate will be able to:

1. Synthesize theoretical and empirical knowledge in nursing and from related arts, natural, social, and behavioral sciences essential for professional practice.
2. Apply theories of caring, teaching and learning, wellness, health promotion, leadership, and management to meet health care needs of individuals, families, groups, and culturally diverse communities.
3. Integrate concepts of critical reflection, collaboration, community, and research to foster independent judgment and decision making in one's practice.
4. Embrace the code of ethics and standards of nursing practice in the provision of care and professional performance.
5. Collaborate with consumers, providers, and organizations to provide meaningful health services for others.
6. Demonstrate commitment to ongoing personal and professional development through professional involvement, and lifelong learning.

Admission

Transfer of Semester Hours

1. Students must submit to the director of admissions official transcripts of any college courses they wish to have evaluated for transfer of semester hours.
2. Only those semester hours acceptable toward meeting the curriculum requirements of the nursing program will be accepted for transfer; transfer credits are determined on an individual basis. At the lower division level, 30 semester hours in nursing and a maximum of 34 semester hours in arts and sciences can be transferred from an associate degree program.
3. Only courses with a minimum grade of "C" are considered for transfer as upper division transfer semester hours.

Academic Requirements

Before being admitted into the baccalaureate nursing courses at SUNYIT, a potential student must meet the following requirements:

1. Applicant must be a graduate of a state-approved associate degree or diploma nursing program.
2. After matriculation and completion of up to 64 lower division credits, students can transfer a maximum of twelve (12) credits that are not upper division coursework. Lower division coursework is classified as: all credit taken at two-year institutions and lower division credit as defined by a four-year institution. This 12 credit restriction refers to lower division coursework and credit by external examination (credit by examination is limited within this 12 credit restriction regardless of course level of exam). Students must receive prior approval by filing an academic petition in accordance with the procedures of the School of Nursing and Health Systems Academic Standards Committee. These petitions must be filed through an advisor, with sufficient and specific justification and relevant information to support the student's request.
3. Upper division level, non-nursing courses to be considered for transfer as upper division credit (30 semester hours maximum) must be passed with a minimum grade of "C".
4. Prior to admission, each student is required to have a minimum of 26 lower division semester hours in arts and sciences courses, or equivalent, in English composition, anatomy, physiology, microbiology, introductory psychology, and introductory sociology.
5. Applicants who need to validate lower division arts and sciences credits may do so through Excelsior College or CLEP tests. CLEP tests may be scheduled at SUNYIT by contacting the Learning Center.
6. Students are required to pass an upper division writing course within the first 32 semester hours after matriculation at SUNYIT. Any student may be exempt from the required course if they successfully complete the test-out procedure established at SUNYIT.

In addition, **students requesting admission to the Accelerated RN to BS/MS Program** must meet the following requirements:

1. Hold an associate's degree with a major in nursing from an accredited program, with a minimum 3.2 GPA (on a 4.0 scale) for the last 30 hours of undergraduate course work.
2. Be currently licensed as a Registered Professional Nurse in New York State.
3. Have completed the equivalent of one year of work experience in nursing.
4. Submit three (3) letters of recommendation from professional nurses; one (1) must come from faculty with whom the applicant had studied, and two (2) others from recent employers or any other individual who can provide evidence of the applicant's past and potential contributions to the profession.
5. Discuss in writing precisely the applicant's reasons for seeking admission to the BS/MS program, identifying immediate and long-term professional goals, and relating intended contributions to the professional field after completion of the master's program.
6. Participate in a personal interview with a member of the nursing faculty.
7. Submit a professional portfolio containing samples of writing and any project development.

Online Course Access

The School of Nursing and Health Systems offers selected courses online in addition to traditional classroom instruction. Some courses may only be offered online in a given semester requiring that the student have access to the internet through personal home computer or other access venues. SUNYIT computer laboratories offer access to students at multiple on-campus locations including the School of Nursing and Health Systems Informatics Laboratory.

Program Policies

1. Prerequisites for participation in the clinical nursing courses (NUR 444, NUR 474) include:
   a. Licensure – A copy of the student's current New York State R.N. Registration Certificate must be on file in the School of Nursing and Health Systems.
   b. Health Clearance – Written evidence of the satisfactory completion of the health requirements for the School of Nursing and Health Systems and health agencies must be on file in the Health and Wellness Center.
   c. CPR Certification – Written evidence of current satisfactory completion of CPR certification must be on file in the School of Nursing and Health Systems.
   d. Matriculated status - fulfillment of all prerequisite and admission requirements.

2. Degree Requirements: the degree applicant must meet the requirements of the B.S. degree with a major in nursing and the general education requirements as determined at the time of admission.

3. Grading: The student must maintain a 2.0 cumulative grade point average (GPA) to remain in good standing. The student must obtain a minimum grade of "C" in each nursing course. The student must pass both the theoretical and clinical components of a nursing course, or the course must be repeated in its entirety. A student may repeat a nursing course only once. If a minimum grade of "C" is not obtained a second time, the student will be required to withdraw from the nursing program.

4. Withdrawal from Program: The School of Nursing and Health Systems reserves the right to request the withdrawal of any student whose continuance in the program would be detrimental to the health and safety of self or others.

5. Add/Drop Courses: A student dropping corequisites of a nursing course will also be required to drop the applicable nursing course.

6. Academic Overload: A full-time student desiring to take more than 16 semester hours in either the fall or spring term must demonstrate the ability to carry an overload by achieving a 3.25 GPA while carrying 16 semester hours in the previous semester. Any overload must be approved in writing by the Dean of the School of Nursing and Health Systems.

7. Readmission: Students seeking readmission to the School of Nursing and Health Systems will have their coursework evaluated by the Academic Standards Committee of the School of Nursing and Health Systems. Upper division nursing credits taken more than five years before admission will be evaluated for applicability to the student's new program of study.

R.N. Licensure

A current New York (NY) Registered Nursing (RN) License is required upon completion of first semester coursework. Students who do not have a current NY State RN License by the end of the first semester may not take additional nursing courses until licensure is obtained.

Health

All students must meet the health requirements of the nursing program and health agencies. Each student must be able to perform a full range of clinical activities. Satisfactory health clearance must be complete and on file in the Health and Wellness Center prior to participating in each of the clinical courses (NUR 444 and NUR 474). Health forms will require students to be free from physical or mental impairments, including habituation or addiction to depressants, stimulants, narcotics, alcohol, or other behavior-altering substances that might interfere with the performance of their duties or would impose a potential risk to patients or personnel. Attendance at clinical activity without prior clinical clearance will result in clinical failure.

Transportation and Professional Attire

All students must provide their own transportation for fieldtrips, laboratory, and clinical assignments associated with their nursing courses. Professional attire and roles will be specified for each course by the clinical professor in collaboration with agency supervisors.

Graduation Requirements

The candidate for the Bachelor of Science degree with a major in nursing must have met the following requirements:

1. Completion of a minimum of 124 semester hours (62 arts and sciences semester hours required for the B.S. degree).
2. Satisfaction of general education distribution requirements as well as the nursing curriculum.
3. Maintenance of a cumulative average of no less than 2.0 for all courses attempted, and a minimum grade of "C" in each nursing course.

Sigma Theta Tau International

Sigma Theta Tau International is the Honor Society of Nursing. The School of Nursing and Health Systems' Iota Delta Chapter includes in its membership students, alumni, faculty, and community leaders in nursing. The purposes of this society are to recognize superior achievement and the development of leadership qualities to foster high professional standards, to encourage creative work, and to strengthen commitment to the ideals and purposes of the profession. Eligibility is determined by scholastic achievement, evidence of professional potential, and/or marked achievement in the field of nursing.

Degree Requirements: RN to BS Program

To earn a Bachelor of Science (B.S.) degree in nursing, a student must fulfill the following requirements:

Program of Study

Required Nursing Courses (62 credits)

NUR 313	Theoretical Bases for Professional Nursing Practice	4
NUR 314	Comprehensive Health Assessment **Prerequisites:** Human Anatomy & Physiology I & II, Microbiology; **Pre/Corequisite:** Bio 350	4
NUR 325	Epidemiology in Nursing	2
NUR 344	Ethical Issues in Nursing	2
NUR 390	Nursing Research **Pre/Corequisites:** NUR 313, Statistics	4
NUR 444	Nursing Leadership **Prerequisites:** Matriculated status, NUR 313, NUR 390, current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file; **Pre/Corequisites:** NUR 344	4
NUR 455	Public Health Nursing Science I **Prerequisites:** NUR 313, NUR 314, NUR 325, NUR 390, BIO 350, Cultural Ant, Dev Psy; **Pre/Corequisites:** NUR 444	4
NUR 474	Public Health Nursing Science II **Prerequisites:** NUR 313, NUR 314, NUR 325, NUR 390, NUR 444, NUR 455, current New York State Registered Professional Nurse license, current CPR certification, complete health clearance on file. Clinical clearance must be validated prior to first scheduled clinical agency experience. Attendance at clinical activity without prior clinical clearance will result in clinical failure. **Pre/Corequisites:** Sociology elective.	4
NUR 480*	Special Topics in Nursing or Nursing elective	2
NUR 490	Culminating Seminar **Pre/Co Requisites:** NUR 474; Student must be within 4 credits of graduation at completion of culminating seminar.	2

* Nursing electives meet/are equivalent to NUR 480 requirements. See schedule for listing.

General Education/Arts and Sciences Course Requirements (62 credit hours)

General Education Category

1	Math	1 course		3-4
2	Science	Anatomy and Physiology *	#	6-8
		Microbiology *	#	3-4
		Advanced Physiology - BIO 350	#	3-4
3	Social Science	Introductory Psychology *	#	3-4
		Developmental Psychology	#	3-4
		Introductory Sociology *	#	3-4
		Cultural Anthropology	#	3-4
		Sociology elective	#	3-4
4	American History	** Must satisfy at least two (2) of the General Education categories from 4-9.	total	6-8
5	Western Civilization	**		
6	Other Civilizations	**		
7	Humanities	**		
8	Arts	**		
9	Language	**		
10	Communication	Freshman English*		3-4
		Upper Division Writing		3-4

Other Required Courses

Statistics may satisfy math gen. ed. requirement.	#	3-4
Arts & Sciences Elective		as needed

* These courses required prior to entry into the School of Nursing and Health Systems.

** Must satisfy two of the six general education categories (4 through 9).

\# Nursing requirement

Sample Nursing Curriculum Model for Full-Time Study

Semester 1	Credits
NUR 313	4
NUR 314*	4
NUR 325	2
BIO 350	4
Cultural Anthropology	4
	18

Semester 2	Credits
NUR 390	4
Statistics	4
Developmental Psych. or Gen. Ed.	4
Upper Division Writing	4
	16

Semester 3	Credits
NUR 344	2
NUR 444*	4
NUR 455	4
Gen. Ed.	4
	14

Semester 4	Credits
NUR 474*	4
NUR 480 or Nursing Elective(s)	2
NUR 490	2
Sociology	4
Gen. Ed.	**4
	12-16

*** If fewer than 34 A&S credits transferred*

Sample Nursing Curriculum Model for Part-Time Study

Fall (1)		*Spring (2)*		*Fall (3)*		*Spring (4)*	
NUR 313	4	NUR 314*	4	NUR 390	4	NUR 325	2
BIO 350	4	Cult. Anthro.	4	Statistics	4	DevPsych/Gen Ed.	4
	8 cr.		8 cr.		8 cr.		6 cr.

ONE (1) Summer – 4 cr. Gen. Ed. if fewer than 34 A&S credits transferred

Fall (5)		*Spring (6)*		*Fall (7)*		*Spring (8)*	
NUR 344	2	NUR 444*	4	NUR 474*	4	NUR 490	2
NUR 480/NUR Elective	2	NUR 455	4	Sociology	4	Gen. Ed.	4
COM 306	4		8 cr.		8 cr.		6 cr.
	8 cr.						

**These courses have a laboratory or clinical component requirement*

Degree Requirements for all Accelerated Programs:

1. Continued matriculation in the Accelerated RN to BS/MS programs requires maintenance of a GPA of 3.00 for all courses taken at SUNYIT.
2. A student must also maintain a GPA of 3.00 in all graduate nursing courses and may not have more than two (2) "C"s on record at the time of graduation.
3. Students may repeat a graduate nursing course only once.
4. Students with an average GPA of less than 3.00 will be placed on academic probation in the program. Students with less than a "B" (3.0) in graduate nursing courses will be placed on academic probation. Students who are on academic probation for any two semesters or who have a GPA of less than 2.50 will be academically dismissed from the Accelerated BS/MS program.
5. Students who are academically dismissed or choose not to complete the Accelerated BS/MS program, and whose performance constitutes satisfactory performance in the undergraduate program, will be placed in the baccalaureate RN to BS program. If these students have satisfactorily completed the accelerated courses in Nursing Theory (2cr), Nursing Research (2cr), and/or Nursing Leadership (1cr) a directed study will be available for those students to complete course requirements of the baccalaureate program of study. In addition, the exemptions from Special Topics in Nursing (2cr) and Culminating Seminar (2cr) will be invalid, and the student will be required to complete these courses for the baccalaureate degree requirement.
6. Each semester a required two-hour colloquium will be held for all students in the Accelerated RN to BS/MS nursing program. Colloquia will focus on content areas and issues unique to this specialized program. Self-paced learning modules which focus on creating power point presentations, using APA Publication Guidelines, and principles of teaching and learning will be available.
7. Up to 12 credits in select graduate nursing courses can simultaneously apply to the BS and MS degrees. See School of Nursing & Health Systems for selection.

8. Students must complete all undergraduate courses and a total of 124 credits to be awarded a BS with a major in nursing.
9. Residence requirement is 57 hours; see school for transfer credits.
10. Graduate status begins at the 2nd fall term in the student's program of study.
11. Upon completion of the accelerated program, both BS and MS degrees will be conferred.
12. For all NP programs, students must maintain a B grade in all course components.
13. For all NP programs, a comprehensive exam will be given.

Sample Curriculum Plan:

Accelerated RN to BS/MS with a Major in Nursing Administration

Students enrolled in the Accelerated BS/MS program with a Major in Nursing Administration can expect to complete the degree requirements within three years of full-time study after completion of an associate degree nursing program.

Undergraduate status

Summer	1st Fall	1st Spring
Soc Elect. Or	NUR 320A	NUR 340A
Cul Anthro	NUR 330A	NUR 344
and/or	NUR 314	NUR 455
Dev Psych	NUR 325	Anthro or Soc
	BIO 350	COM 306
	Stats	

Graduate status

Summer	2nd Fall	2nd Spring
NUR 474	NUR 500	NUR 526
	NUR 503	NUR 560
	MGT 607	HIM 501
	CSC 507	HRM 518

Summer	3rd Fall	3rd Spring
General education	NUR 522	NUR 524
as needed	NUR 608	NUR 610
	NUR 624	NUR 611
	General education	NUR 627
	as needed	General education
		as needed

Note: Graduate status begins at the 2nd fall term in the program of study.

Sample Curriculum Plan:

Accelerated BS/MS for Professional Registered Nurses with a Major in Adult Nurse Practitioner

Students enrolled in the Accelerated BS/MS program with a Major in Adult Nurse Practitioner can expect to complete the degree requirements within three years of full-time study after completion of an associate degree nursing program.

Undergraduate status

Summer	1st Fall	1st Spring
Soc Elect. or	NUR 320A	NUR 340A
Cult. Anthro	Nur 330A	NUR 344
and/or	NUR 314	NUR 455
Dev Psych	NUR 325	Anthro or Soc
	BIO 350	COM 306
	Stats	

Graduate status

Summer	2nd Fall	2nd Spring
NUR 474	NUR 500	NUR 555
	NUR 570	NUR 560
	NUR 566	NUR 574
	NUR 567	NUR 582
		General education
		as needed

Summer	3rd Fall	3rd Spring
	NUR 503	NUR 669
	NUR 653	NUR 682
	NUR 658	NUR 692
	NUR 672	General education
	General education	as needed
	as needed	

Note: Graduate status begins at the 2nd fall term in the program of study.

Sample Curriculum Plan:

Accelerated RN to BS/MS with a Major in Family Nurse Practitioner

Students enrolled in the Accelerated BS/MS program with a Major in Family Nurse Practitioner can expect to complete the degree requirements within three years of full-time study after completion of an associate degree nursing program.

Undergraduate status

Summer	1st Fall	1st Spring
Soc Elect. or	NUR 320A	NUR 344
Cult. Anthro	NUR 330A	NUR 455
and/or	NUR 314	NUR 340A
Dev Psych	NUR 325	Anthro or Soc
	BIO 350	COM 306
	Stats	

Graduate status

Summer	2nd Fall	2nd Spring
NUR 474	NUR 500	NUR 555
	NUR 531	NUR 560
	NUR 570	NUR 572
	NUR 566	NUR 580
	NUR 567	General Education as needed
Summer	**3rd Fall**	**3rd Spring**
	NUR 503	NUR 668
	NUR 652	NUR 680
	NUR 658	NUR 692
	NUR 670	General education as needed
	General education as needed	

Note: Graduate status begins at the 2nd fall term in the program of study.

Sample Curriculum Plan:

Accelerated RN to BS/MS with a major in Gerontological Nurse Practitioner

Students enrolled in the Accelerated BS/MS program with a Major in Gerontological Nurse Practitioner can expect to complete the degree requirements within three years of full-time study after completion of an associate degree nursing program.

Undergraduate status

Summer	1st Fall	1st Spring
Soc Elect. or	NUR 320A	NUR 344
Cult. Anthro	NUR 330A	NUR 455
and/or	NUR 314	NUR 340A
Dev Psych	NUR 325	Anthro or Soc
	BIO 350	COM 306
	Stats	

Graduate status

Summer	2nd Fall	2nd Spring
NUR 474	NUR 500	NUR 555
	NUR 531	NUR 560
	NUR 566	NUR 576
	NUR 567	NUR 584
	NUR 570	General education as needed
Summer	**3rd Fall**	**3rd Spring**
	NUR 503	NUR 667
	NUR 654	NUR 679
	NUR 674	NUR 684
	General education as needed	NUR 692
		General education as needed

Sample Curriculum Plan:

Accelerated RN to BS/MS with a Major in Nursing Education

Students enrolled in the Accelerated BS/MS program with a major in Nursing Education can expect to complete the degree requirements within three years of full-time study after completion of an associate degree nursing program.

Undergraduate status

Summer	1st Fall	1st Spring
Soc Elect. or	NUR 320A	NUR 344
Cult. Anthro	NUR 330A	NUR 455
and/or	NUR 314	NUR 340A
Dev Psych	NUR 325	Anthro or Soc
	BIO 350	COM 306
	Stats	

Graduate status

Summer	2nd Fall	2nd Spring
NUR 474	NUR 500	NUR 526
	NUR 503	NUR 536
	NUR 535	NUR 635
	NUR 545	NUR 560
	General education as needed	General education as needed
Summer	**3rd Fall**	
General education as needed	NUR 624	
	NUR 645	
	graduate electives (6 credits)	

Facilities

The nursing program makes use of new and modern facilities, laboratories and equipment giving students the opportunity to learn from current research and developments.

Laboratory equipment features an extensive learning library of audio-visual tapes, computer software and complete health assessment laboratories with examination tables, full-scale anatomical models, diagnostic instruments and video monitoring. Students also make use of the latest equipment available in health care facilities where they apply classroom theory to practical situations.

All students have access to computers in the School of Nursing and Health Systems Informatics Laboratory, Assessment Labs and other venues throughout campus.

Joint Articulation Partnership a 1 + 2 + 1 Program of Study

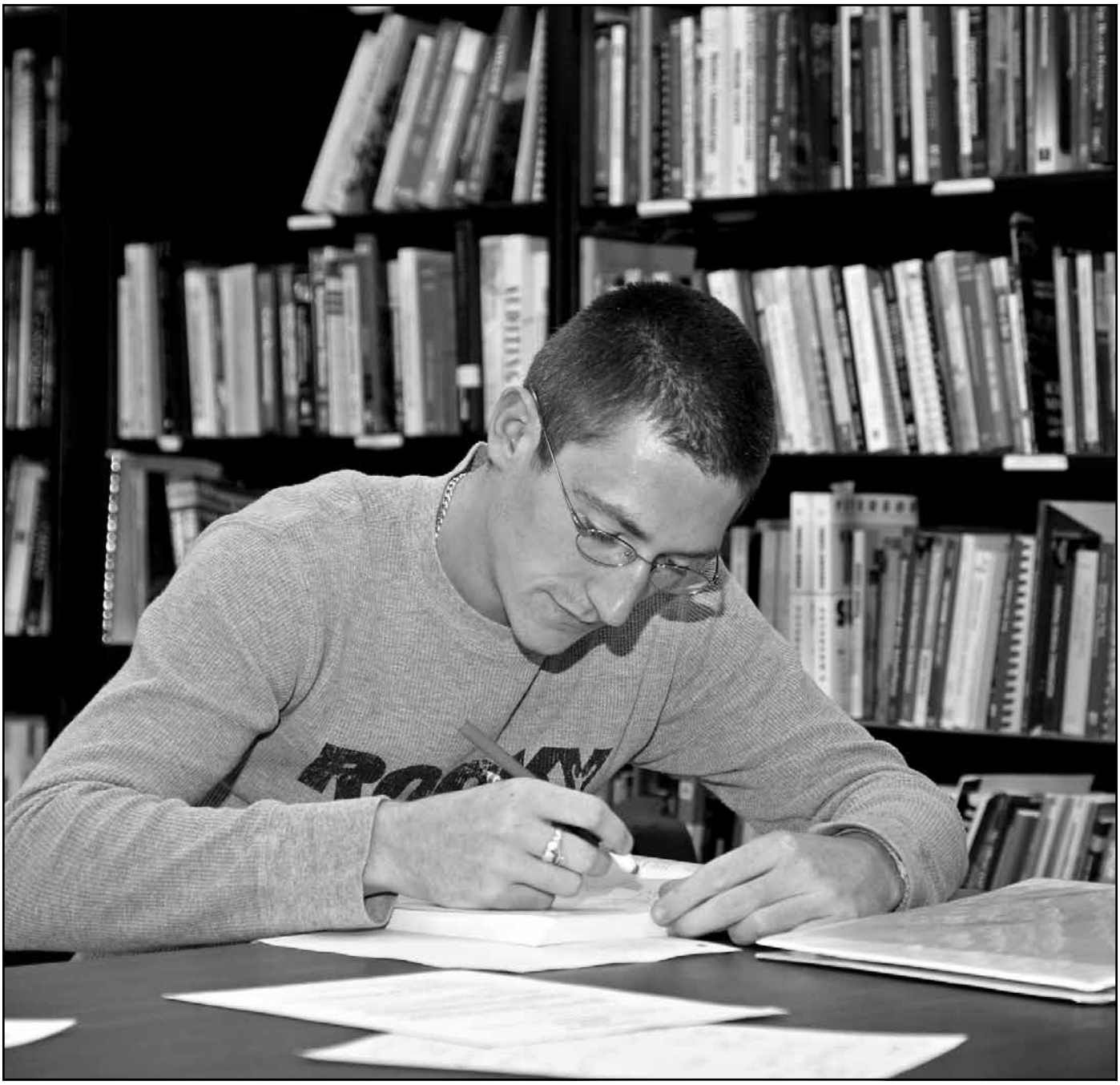
SUNYIT has a unique Joint Articulation Partnership with St. Elizabeth's College of Nursing (SECON) for students who want to earn an A.A.S. degree and a B. S. degree with a major in Nursing. This partnership is designed for students to enroll in SUNYIT courses year 1, then matriculate to SECON years 2&3, sit for RN licensure at the successful completion of year 3, and then matriculate into the School of Nursing at SUNYIT to complete year 4 for a B.S. degree with a major in Nursing. This partnership is specially designed for the high-school graduate interested in a nursing career. Please contact SUNYIT Admission's Office for further details and admission reqruirements to begin this program.

Pre-Law Option

SUNYIT believes that students obtain the best preparation for law school by enrolling in challenging academic programs that provide rigorous study. This belief is supported by the Law School Admissions Council (LSAC), which recommends that a specialized pre-law curriculum is neither advisable nor advantageous for students who wish to attend law school. The LSAC suggests that students pursue academic programs that lead to disciplined habits of study and that provide students with strong reasoning and communication skills. Because no one curriculum provides better preparation than any other, we encourage students to select a major based on their interests and aptitudes.

Faculty are available to counsel students on course selection. SUNYIT provides a resource library and other pertinent materials to assist in the law school application process.

Students interested in attending law school after completing their baccalaureate degree studies should notify the School of Arts and Sciences for assistance.



Psychology

The program in psychology leads to a Bachelor of Arts (B.A.) degree. Psychology is the scientific study of individual and group behavior. The psychology program stresses theoretical understanding of the principles of psychology, as well as practical applications to the solution of human problems. The program has three tracks: mental health, social-industrial psychology, and general experimental.

- The mental health track is designed to provide students with a broad perspective on the adjustments, both healthy and unhealthy, to problems faced throughout the lifespan. The courses cover specific issues in mental health, vocational and rehabilitation psychology and health psychology. Students will be exposed to models of health and illness, as well as to psychological assessment and treatment techniques.
- The social-industrial track emphasizes the application of psychological principles to understanding human behavior. The student in this track will receive training in diverse areas, such as, psychological analysis of social issues, understanding and controlling aggression, personnel selection, leadership, and psychological testing.
- The general experimental psychology track is designed to give students a broad background in scientific psychology. We cannot simply look within, or introspect, to understand the mind; the mind yields its secrets only to experiment. The emphasis of this track will be on understanding how experimental evidence allows psychologists to uncover these hidden rules. The courses suggested for this track deal with the fundamental processes of the mind.

Graduates in psychology find employment in the areas of health, mental health, human services, social work, mental retardation, counseling, personnel administration, education, allied health fields and business. They also go on to graduate study or allied fields.

Psi Chi Honor Society

Psi Chi, the National Honor Society in Psychology, recognizes outstanding academic achievement and promotes active student involvement in the field of psychology. The SUNYIT chapter of Psi Chi received its charter in 1984. A program in psychology must meet high standards in academic requirements and faculty qualifications in order to qualify for a Psi Chi charter. Students with outstanding academic records and demonstrated commitment to psychology are eligible for membership.

Psi Chi Lecture

Since 1993, our Psi Chi Chapter has sponsored a lecture series. A distinguished psychologist of national repute is invited every year to our campus to share his/her research and expertise. Therefore, our psychology students get an opportunity to meet eminent scholars in the field. The following are some of the psychologists and physicians who have delivered the Psi Chi Lecture:

Dr. Florence L. Denmark, Former President of American Psychological Association

Dr. Robert J. Sternberg, Yale University

Dr. Duane M. Rumbaugh, Georgia State University

Dr. Stephen J. Ceci, Cornell University

Dr. John M. Darley, Princeton University

Dr. Jill M. Hooley, Harvard University

Dr. Daryl Bem, Cornell University

Dr. Milton E. Strauss, Case Western Reserve University

Dr. J. Richard Hackman, Harvard University

Dr. Michael Posner, University of Oregon

Dr. Shepard Siegel, McMaster University, Ontario

Dr. Sam Tsemberis, Founder and Executive Director of Pathways to Housing in New York City

Dr. Wendy Williams, Professor, Human Development Department, Cornell

Dr. Robert Anda, M.D., Senior Scientific Consultant to the Centers for Disease Control

Psychology Club

There is also an very active Psychology Club open to all psychology students. The club sponsors lectures and discussion on current topics in psychology, graduate schools and relevant employment. Alumni return frequently and describe their work or graduate school experiences.

Psychology Laboratory

Since psychology is an empirical discipline, the psychology program has a laboratory to support its research courses. The psychology laboratory has ten experimental stations, each equipped with a desk-top computer to conduct experiments. The program also provides a laboratory with an observation room for clinical and social interaction courses. These laboratory facilities substantially enhance the quality of the psychology program and the scientific education of students enrolled in it.

Degree Requirements

To earn a Bachelor of Arts (B.A.) degree in psychology, a student must fulfill the following requirements:

1. Satisfactory completion of at least 124 semester hours of college-level work distributed as follows:

A	General Education Requirements	54 credits
B.	Program Requirements	40 credits
C.	General Electives	30 credits
	Total	124 credits

2. Satisfactory completion of at least 60 semester hours of upper division college work at least 30 of which must be taken at SUNYIT.

3. No more than 30 semester hours in professional courses outside the arts and sciences.

4. Achievement of at least 2.00 cumulative quality point average in coursework taken at SUNYIT.

5. A grade of "C" or higher required in all core courses (PSY 305, 310, 385, 493) and statistics for a degree in psychology.

Group I—General Education Requirements (54 credits)

	Credits
Mathematics (MAT 111 or equivalent)	3-4
Natural Sciences	
Lab Science	3-4
Other Science	3-4
Social Sciences (ANT, ECO, GOG, POS, SOC, STS)	9-12
American History	3-4
Western Civilization	3-4
Other World Civilizations	3-4
Humanities	3-4
The Arts	3-4
Foreign Language	3-4
Basic Communication	3-4
Upper Division Writing	4
Statistics (Intro Statistics)	3-4
Arts & Science Electives (to total 54)	

Group II—Program Requirements (38-44 credits)

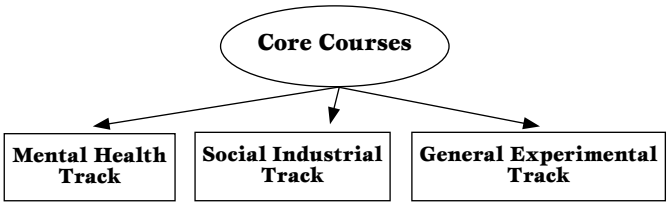
1) All majors, regardless of the track they choose, will be required to complete the following core courses:

Core Courses*
Psy 101: Principles of Psychology
Psy 305: History and Systems of Psychology (4 credits)
Sta 100: Statistics (4 credits)
Psy 310: Research Methods (4 credits)
Psy 385: Evaluation Research (4 credits)
Pay 493: Senior Seminar (4 credits)

**A grade of C or better is required of Psychology majors in these core courses.*

2) All majors will be required to complete one of the following tracks. They must take at least two intermediate electives and two advanced electives from the track that they select. They must also take at least one psychology elective outside their selected track A

3) A minimum GPA of 2.0 is required for the selected track.



Mental Health Track[A]
Intermediate
Psy 216 Child and Adolescent Development
Psy 218 Adult Development and Aging
Psy 222 Abnormal Psychology
Psy 273 Dying Death and Bereavement
Psy 325 Psychology of Gender
Psy 326 Treatment of the Exceptional Individual
Psy 331 Psychology of Personality
Psy 377 Health Psychology

Advanced
Psy 445 Group Dynamics and Interpersonal Communication
Psy 460 Neuropsychology
Psy 470 Psychological Testing
Psy 477 Principles of Psychological Counseling
Psy xxx Vocational & Rehabilitation Psychology
Psy 492 Practicum

[A] Students wishing to devise their own individual track may do so in conjunction with an advisor

Social-Industrial Track[B]
Intermediate
Psy 242 Social Psychology
Psy 262 Learning and Motivation
Psy 331 Personality
Psy 352 Industrial and Organizational Psychology
Psy 390 Engineering Psychology & Human Performance

Advanced
Psy 415 Human Aggression and Nonviolence
Psy 444 Applied Social Psychology
Psy 445 Group Dynamics & Interpersonal Communication
Psy 470 Psychological Testing
Psy 490 Special Topics
Psy 492 Practicum

General Experimental Track[C]
Intermediate
Psy 242 Social Psychology
Psy 262 Learning and Motivation
Psy 360 Perception
Psy 390 Engineering Psychology & Human Performance

Advanced
Psy 415 Human Aggression and Nonviolence
Psy 425 Cognitive Psychology
Psy 460 Neuropsychology
Psy xxx Cognitive Development
Psy 492 Practicum

[A] Students wishing to devise their own individual track may do so in conjunction with an advisor.

[B] It is suggested that students opting for the social-industrial track take two Management courses: Organizational Behavior (MGT 307), Human Resource Management (MGT 318), Organizational Development (MGT 406), and Consumer Behavior (MKT 465),

[C] It is suggested that students opting for the general experimental track take Genetics (BIO 302) and Evolution (BIO 310)

Group III—General Electives (30 credits)
College-level courses in any discipline which carry SUNYIT or transferable credit. See (2) and (3) under Degree Requirements for the psychology program.

Psychology Minor

See academic minor section.

Sociology

What is Sociology?

Sociology is the scientific and systematic study of human behavior. Sociologists explore the social forces that shape modern society, with an eye toward understanding how these dynamics create social inequalities and social problems. Students at SUNYIT receive a strong foundation in sociological theory and methods and sharpen these skills in areas that interest them, typically concentrating on the criminal justice or human services fields.

What can you do with a Sociology Degree?

Anything! The skills we offer in terms of data collection and analysis are useful in a large range of occupations, from medical research to journalism, from administration to marketing. Many of our students choose careers in human and social services or criminal justice. You should know that employers in all of these fields often hire individuals with a degree in Sociology. Individuals trained in the sociological perspective have a greater understanding of the social context in which human behavior and social problems take place. In order to better understand this context, your education at SUNYIT takes place on and off campus. The Sociology Program provides students numerous opportunities to work collaboratively with professors on research and writing projects, or to try out career paths through an internship. In these ways, students can engage intellectual ideas in a practical setting and make meaningful connections between classroom learning and the real world that makes them more attractive on the job market. Employers appreciate the practical experience our students can bring to the workplace.

Who should consider a B.A. in Sociology from SUNYIT?

Our program is designed to meet the needs of a wide range of students:

- freshmen entering SUNYIT with an interest in human behavior, applied sociology or human services;
- students holding Associate of Applied Sciences (A.A.S.) or Associate of Arts (A.A.) degrees in a field such as sociology, liberal arts, general studies, social sciences, human services, criminal justice, policing, or industrial relations.

Who are SUNYIT Sociology Majors?

They are a diverse group of individuals who work or are interested in a variety of fields, including:

Social and human services fields, working with

- Developmentally disabled children and adults
- Victims of domestic/family violence
- Teen mothers
- The elderly

Education, working in

- School counseling
- Tutoring/mentoring programs
- Special needs programs
- Alternative schools

Many students plan to pursue further education after the B.A. in Sociology, going on to

- Graduate school in Sociology, including SUNYIT's M.S. in Applied Sociology
- Law school
- Master's in Business Administration (MBA)
- Master's in Social Work (MSW)

Will I be Able to Work Closely with Faculty?

Sociology students at SUNYIT have ample opportunities to gain practical research experience that will be valuable to them on the job market. At times, an entire course will plan and conduct a research project, often in conjunction with local organizations. Recent examples include: a survey of SUNYIT students on their satisfaction with campus life; a survey of factors that promote and inhibit economic self-sufficiency of women in the Mohawk Valley (for the Women's Fund of Herkimer and Oneida Counties). Students also have opportunities to work with faculty individually under our Independent Study option. Students are encouraged to participate in a research project that will lead to a professional presentation or publication of a paper.

What do Sociology Majors do for Fun?

SUNYIT has a very active Sociology Club. Students plan and participate in social and community service activities. Club events include midnight bowling, outings with children from the local Big Brothers/Big Sisters organization, Take Back the Night events on campus (including speakers and a rally), fundraising for local charities (including raffles and canned good drives), providing aid to women and children fleeing domestic violence during the holidays, and a Rock the Vote campaign to encourage their fellow students to register for and participate in upcoming elections.

Degree Requirements

1. Satisfactory completion of at least 124 semester hours of college-level work.
2. At least 30 hours of upper-division college work must be taken at SUNYIT.
3. No more than 30 semester hours of professional courses outside the arts and sciences.
4. A grade of "C" or higher in all core courses and statistics.
5. A 2.00 cumulative grade point average in all coursework taken at SUNYIT.
6. A 2.00 cumulative grade point average in sociology and anthropology coursework toward the major.

Group I: General Education Requirements (36-48 credits)
All Sociology majors must complete the following General Education Courses:

Mathematics (MAT 111 or equivalent)	3-4 credits
Natural Sciences	
Lab Science	3-4 credits
Other Science	3-4 credits
Social Sciences	3-4 credits
American History	3-4 credits
Western Civilization	3-4 credits
Other World Civilizations	3-4 credits
Humanities	3-4 credits
The Arts	3-4 credits
Foreign Language	3-4 credits
Basic Communication	3-4 credits
Upper Division Writing (COM 306 or COM 308)	3-4 credits

Group II: Program Requirements

1. All majors must complete at least ten (10) courses in sociology and anthropology, at least seven of which must be completed at SUNYIT;
2. Students may elect no more than two (2) courses in anthropology toward the sociology major;
3. All majors must take SOC 100 or SOC 110;
4. All majors must take one intermediate elective before taking an advanced course;
5. All majors must take two electives at the lower level (from groups A or B);
6. All majors are required to take 3 courses (12 credits) of advanced coursework at the 400-level.

Course Options:

A. SOC 100 Introduction to Sociology
SOC 110 Social Problems

B. Intermediate Course Electives:

SOC 210 Sociology of the Family
SOC 314 Sociology of Deviance
SOC 350 Chemical Dependencies and Human Behavior
SOC 351 Sociology of Crime
SOC 360 Sociology of Work
SOC 381 Social Gerontology
ANT 301 General Anthropology
ANT 320 Social Policy
ANT 382 Cultures, Health and Healing

C. Group III: Advanced Coursework

Human Services:
SOC 410 Power and Violence in the Family
SOC 411 Sociology of Community
SOC 424 Social Welfare Policy
SOC 446 The Individual and Society

Criminal Justice:
SOC 450 Sociology of Corrections
SOC 452 White Collar Crime
SOC 455 Sociology of Law and the Courts

Other Advanced Courses:
SOC 465 Sociology of Occupations and Professions
SOC 466 Worker Social Psychology
SOC 490 Selected Topics in Sociology (varies each semester)
SOC 491 Independent Study
SOC 495 Practicum in Sociology (offers internship opportunity)
ANT 460 Ethnography

D. *Group IV: Core Courses (Required of all Majors)*

SOC 100 or SOC 110
SOC 310 History of Sociological Theory
SOC 332 Methods of Inquiry
ANT 321 Distinctions: Race, Class, and Gender
SOC 493 Senior Seminar in Sociology
STA 100 Statistical Methods

Sociology Minor

See academic minor section.

Telecommunications

The convergence of the telecommunications and data communications networks, and the rise of the Internet as an essential tool in the 21st century have created unprecedented demand for individuals with knowledge and skills in networking. SUNYIT has responded to the rapid changes in this industry by evolving our Telecommunications curriculum towards data networking, data/voice convergence, and wireless technologies. This broad field includes what today is known as Information Technology (IT), and also includes core material in the growing field of information security. Although there is substantial overlap with computer science and electrical engineering, the Telecommunications program has a focus towards understanding the fundamental aspects of data, wireless, and voice networks within a business environment in which networking professionals build and maintain networks.

Success in this field requires competent technical skills in combination with a strong interdisciplinary foundation that includes practical skills in the areas of business management and policy. College graduates who have been formally educated in data networking and telecommunications convergence are currently in high demand and the long-term career opportunities are very encouraging. A multitude of career opportunities are available for network professionals. Particularly sought after are those with training in network security, VoIP (Voice over Internet Protocol), and wireless networks. Areas where demand is strong also include network management, and network operations, sales engineering, product marketing, technical support, consulting, and product development.

The Program

Students majoring in Telecommunications develop a working knowledge of networking, as well as an awareness of current issues, policies, advancements, and applications that characterize the field of telecommunications. The program focuses on the interrelationship and application of network technology as a primary catalyst for an information-driven society. Areas covered in coursework include optical networking, vendor selection, network integration, network design and administration, network management, domestic and international telecommunications policy. As with all programs at SUNYIT, the telecommunications program includes a strong emphasis in liberal arts and science. This provides students with a more diverse and more complete lifelong education that continues to grow after graduation.

Accelerated BS/MS Program in Telecommunications

The joint BS/MS program is a well-integrated program that permits students to complete both a bachelor's degree and a master's degree in telecommunications in a reduced timeframe with a reduced total number of total credits.

Requirements

Completion of the joint BS/MS program requires a minimum of 145 credit hours, including a minimum of 33 semester hours of graduate study. All specific requirements for both the BS and the MS degrees must be met. Students in the joint program may apply up to twelve credits of graduate coursework to both the undergraduate and graduate degrees simultaneously. The intent of this program option is to allow well-prepared students to finish both a bachelor's and master's degree within a 5 year period.

Status

A student enrolled in the joint BS/MS program will be considered to remain in undergraduate status until the completion of 124 semester hours, and thereafter tuition and fees will be charged at the graduate level. The BS degree will be awarded at such time as all the requirements for that degree are satisfactorily met. Students are expected to complete their BS program requirements prior to pursuit of the MS degree except where those two programs overlap.

Academic Standing

Admission to and continued matriculation in the joint BS/MS program requires maintenance of a GPA of 3.0 for courses taken at SUNYIT in each of the following categories: (a) all courses applicable to the undergraduate degree; (b) telecommunications courses applicable to the undergraduate degree; (c) all graduate courses. Students with a GPA of 2.75 to 2.99 in any of these categories will be placed on academic probation in the program. Students who are on academic probation for any two semesters or who have a GPA of less than 2.50 in any of these categories will be academically dismissed from the joint program. Students who are academically dismissed but have not yet completed the baccalaureate program but whose performance is satisfactory in the undergraduate program will automatically be placed in that program.

Admission to the BS/MS Program

Admission to the BS/MS program may be achieved, and enrollment maintained, in one of the following ways:

A) As an entering freshman: continued enrollment in the joint program requires achievement of grades of B or better in all Telecommunications coursework and in calculus. In addition, students must have an overall GPA of at least 3.0 at the end of the semester in which the first 60 credits have been completed.

B) Upon initial transfer to SUNYIT: students must have earned grades of B or better in courses that receive transfer credit as Telecommunications course equivalents, and calculus. The student must have a transfer GPA of at least 3.0.

C) Subsequent to initial enrollment at SUNYIT: students must receive grades of B or better in those courses (or their transfer equivalents) listed in A) and B) above, have an overall GPA of at least 3.0 for all courses taken at SUNYIT, and have a GPA of at least 3.2 for courses in their major.

Students entering the joint BS/MS program must not have completed more than 94 credit hours toward their Bachelor's degree, and must be able to complete all requirements for the Bachelor's degree within the first 124 credit hours earned.

B.S. Degree Requirement

To earn a Bachelor of Science (BS) degree in telecommunications, a student must complete a minimum of 124 credit hours and fulfill the following requirements. Students must maintain a minimum GPA of 2.0 in their major to graduate.

I.	**Arts & Science Requirements**		**Minimum credits**
	A	***Liberal Arts***	
		COM 300 – Oral/Speech Communications	3
		COM 306 – Technical Writing	4
		Social Science	3
		American History	3
		Western Civilization	2
		Other World Civilizations	2
		Humanities	3
		The Arts	3
		Foreign Language	3
		ENG 101/105 – English Composition	3
	B	***Mathematics and Science***	
		PHY 101 – Physics I	4
		PHY 102 – Physics II	4
		MAT 112/151 – Elem. of Calc/Calculus I	4
		STA 100/225 – Statistics	3
		College Math Elective	3
	C	***Computer Science***	
		CS 307 – UNIX Programming Environment	2
		CSC 317 – Computer Systems & C Program	3
		Computer Science Electives	8
II.	**Professional Coursework**		
	A	***Telecommunications Core Courses***	***12***
		TEL 100 – Introduction to Telecommunications	4
		TEL 201 – Basic Voice Communications	4
		TEL 205 – Basic Data Communications	4
	B	***Telecommunications Technical Electives***	***19***
		Must complete 19 credits from the following:	
		TEL 310 – Transmission Technology	
		TEL 316 – Data Network Design	
		TEL 340 – Network Standards and Protocols	
		TEL 381 – Introduction Information Assurance	
		TEL 383 – Network Firewalls	
		TEL 384 – Network Intrusion Detection	
		TEL 400 – Wireless Telecommunications	
		TEL 416 – Digital and Internet Telephony	
		TEL 425 – Internetworking Telecom Systems	
		TEL 430 – Local Area Networks	
		TEL 493 – Special Topics in Telecommunications – Technical Topic	
		TEL 494 – Telecommunications Internship	
	C	***Telecommunications Management/Policy***	***8***
		Must complete 8 credits from the following:	
		TEL 330 – International Telecommunications	
		TEL 382 – Information Assurance Policies and Disaster Recovery	
		TEL 420 – Telecommunications System Analysis and Project Management	
		TEL 493 – Special Topics in Telecommunications – Management Topic	
	D	***Business/Management***	***8***
		ACC 201 – Accounting I	
		FIN 302 – Financial Management Principles	
III.	**Open Electives**		**Balance of 124**
	Total Credits 124		

Student Internships

The Telecommunications Department strongly encourages its majors to apply their knowledge and skills in this field by participating in the summer internship program. Generally completed between their junior and senior years, the internship allows students to apply their knowledge and skills, to refine their awareness of the career opportunities available, and gain experience to give them an edge in the job market after graduation. During the past decade, interns from the telecommunications program have been placed with leading organizations geographically located across the United States as well as abroad.

Placement

Since its inception in 1985, over 500 graduates of SUNYIT's Telecommunications program have obtained rewarding careers in their field of study. Some of the companies that have employed SUNYIT Telecommunications graduates include: iBasis, Avaya, Nortel Networks, Cabletron, Cigna, Cisco Systems, Compaq, Concert, Bell Atlantic, AT&T, WorldCom, Sprint, GE, GTE, EDS, Citizen Telecom, Quest, Verizon, UPS, Lucent Technologies, IBM, US Department of the Treasury, Global Crossing, Merrill Lynch, Diversified Investments, Texaco Corp., Travelers, Microsoft, SUNY, Fleet Services, and HSBC in addition to many other organizations.

Student Organization

SUNYIT Telecom Club is an organization that works in conjunction with the Telecommunications Department. The club uses its connections through the department's advisory board and business contacts to enhance the education of its members by organizing activities related to the telecommunication field. These activities include guest speakers from the telecommunications industry, discussion of employment opportunities, and field trips to observe application of technology in the field.

Telecommunications Advisory Board

The Advisory Board consists of industry executives representing the end-user community, service and equipment suppliers, consultants, academicians, and policy makers. The board meets on a regular basis to provide input ensuring the program's continued growth and development. Board members give their time and effort to keep SUNYIT's Telecommunications programs on the leading edge of this fast-paced industry, as well as arranging for scholarships and equipment donations.

Telecommunications Laboratories

The Telecommunications Department maintains several labs for hands-on learning and experimentation. These include a wireless networking lab, router and switching lab, digital telephone switching and transmission lab, an information assurance computer lab, a computer network simulation lab, and an optical networking lab.

Academic Minors

A student at SUNYIT has the opportunity to enrich his or her education by obtaining an academic minor in an area of study different from the area of the academic major. SUNYIT offers minors in accounting; anthropology; computer and information science; communication and information design; computer information systems; criminal justice; finance; gerontology; health services management; mathematics; physics; psychology; quality engineering and system technology; science, technology & society; and sociology, to complement major programs of study in business, the technologies, and health-related fields and liberal arts disciplines. These minors enable a student to pursue in-depth education in a second discipline that supports and enhances the primary field of study.

Accounting Minor

The accounting program offers a minor for students in majors other than accounting. The accounting minor fits into the curricula of SUNYIT by providing students with the opportunity to acquire knowledge in an important professional discipline that can complement their major. The minor adds value to a degree because all organizations maintain accounting systems and require that their employees understand the financial implications of tactical and strategic decisions. In an increasingly competitive job market, accounting knowledge can play a consequential role in satisfying the needs of employers.

Program Description
Minimum Total Credit Hours: 18*

* A student must earn at least a C in every accounting course applied to the minor and at least 10 credits must be taken at SUNYIT.

NOTE: "Petition For An Academic Minor" forms are available at the School of Business office. Any changes to the following course requirements must be approved through an Academic Petition Form.

Course Requirements
ACC 201 Financial Accounting Principles
ACC 385 Intermediate Accounting I
ACC 310 Income Tax I
ACC 205 Managerial Accounting Problems OR
ACC 370 Cost Accounting

At Least 1 Elective From List:
ACC 311 Income Tax II
ACC 320 Fund Accounting
ACC 321 Financial Planning and Controls for Not-for-Profit Organizations
ACC 386 Intermediate Accounting II
ACC 430 Accounting Controls, Not-For-Profit Organizations
ACC 450 Auditing
ACC 471 Advanced Management Accounting
ACC 475 Advanced Accounting Problems
ACC 491 Independent Study

Prerequisite Education
No prerequisites are required for a minor in accounting.

Anthropology Minor

The anthropology program offers a minor in anthropology. The minor is of value to students who wish to integrate interests in a wide range of humanist concerns with the cross-cultural perspective and analytic framework provided by anthropology.

Total credit hours required for minor: 17

A student desiring a minor in anthropology must register with the program and take a minimum of 17 credits of anthropology courses, at least 8 of which must be taken at SUNYIT. The first course should be ANT 301 or an introductory anthropology course. To promote coherence, additional courses must be selected in consultation with an anthropology advisor.

ANT 301 - General Anthropology or Equivalent

Additional Courses:
ANT 320 - Social Policy
ANT 321 - Distinction: Race, Class and Gender
ANT 371 - People and Systems: Cultural Perspectives on Information Practice
ANT 382 - Cultures, Health and Healing
ANT 391 - Selected Topics in Anthropology
ANT 460 - Ethnography
ANT 491 - Independent Study (Variable 1-4)

Computer & Information Science Minor

The minor in Computer & Information Science is a valuable choice for students in all technical disciplines as well as for students in management, social sciences, and mathematics. The importance of computer and information science is increasing in all organizations and businesses. Use of ever-changing hardware and software systems continue to permeate research laboratories and offices throughout the world. In a competitive job market, an understanding of the computer and information science field can play a significant role in satisfying conditions for employment.

Total credit hours required for minor: 20.

Required courses (12 Credits)
- MAT 115 - Finite Mathematics for Computer Science
- CS 240 - Data Structures & Algorithms
- CS 249 - Object-Oriented Programming

Elective courses (at least 8 Credits)
- CS 220 - Computer Organization
- CS 330 - Operating Systems and Networking
- CS 350 - Information and Knowledge Management
- CS 370 - Software Engineering

No more than eight credits may be applied to both the Computer & Information Science and Computer & Information Systems minors. At least 12 credits must be taken in residence at SUNY IT. A maximum of two courses taken at other institutions may be applied to the minor. Computer Information Systems majors may not use Computer Science courses to fulfill both the upper division elective requirement for the major and the elective course requirement for the minor.

Computer Information Systems Minor

The minor in Computer & Information Systems is a valuable choice for students in all technical disciplines as well as for students in management, social sciences, and mathematics. Computer systems are essential to the successful operation of all organizations and businesses. Advances in hardware and software continue to permeate research laboratories and offices throughout the world. In an increasingly competitive job market, a general understanding of computer information systems can play a significant role in satisfying conditions for employment.

Total credit hours required for minor: 20.

Required courses (12 Credits)
- MAT 115 - Finite Mathematics for Computer Science
- CS 108 - Computing Fundamentals
- CS 240 - Data Structures & Algorithms

Elective courses (at least 8 Credits)
- IS 310 - Hardware and Network Infrastructure
- IS 320 - Systems Analysis and Design
- IS 325 - Database Management Systems

No more than eight credits may be applied to both the Computer & Information Systems and Computer & Information Science minors. At least 12 credits must be taken in residence at SUNY IT. A maximum of two courses taken at other institutions may be applied to the minor.

Criminal Justice Minor

A minor in Criminal Justice is highly desirable for students wishing to add a criminal justice focus to a more traditional discipline within Arts & Sciences (such as Psychology, Sociology, or Communication), as well as to students within one of SUNYIT's professional programs (such as Nursing ,Computer and Information Sciences, or Business) who are looking to augment their skills with a foundation in today's market and society.

A. General Requirements

A student desiring a minor in Criminal Justice must register with the program and take a minimum of 17 credits of Criminal Justice courses, at least 8 of which must be taken at the Institute of Technology.

B. Specific Requirements

CJ 101 (Introduction to Criminal Justice)
CJ 310 (Explaining Crime)
CJ 332 (Research Methods in Criminal Justice)
Plus 3 electives (at least one of which must be at the 400-level).

It is highly recommended that these courses be selected in coordination with a program advisor to ensure the best fit with the student's interests and major program of study.

Students who have taken an equivalent research methods course may petition to replace CJ 332 with an additional elective.

Finance Minor

The minor in finance is designed to integrate previous business coursework with financial decision-making as a specific function within an organization or to an individual. The minor integrates concepts from economics, accounting and a number of other areas. Many students approaching the field of finance might wonder what opportunities exist. For those who develop the necessary skills and viewpoints, jobs include corporate financial officer, banker, stockbroker, financial analyst, portfolio manager, investment banker, financial consultant, or personal financial planner. The minor in finance is designed to help prepare the student for entry into these fields or add value to their major by giving each student a deeper exposure to the finance function.

Program Description
Minimum Total Credit Hours: 18

A student desiring a minor in finance must register for the program within the School of Business. The first course taken shall be FIN 302, Financial Management Principles (prerequisite ACC 201 or equivalent, Financial Accounting). Course sequencing should be done in consultation with an academic advisor.

Minor Course Requirements:

ACC 201	Financial Accounting	(3–4)
FIN 302	Financial Management Principles	(3–4)
FIN 332	Fundamentals of Investments	(4)
FIN 411	Financial Management Problems	(4)
		Total 14–16

Elective Courses (one):

FIN 341	Financial Institutions	(4)
FIN 343	Personal Finance	(4)
ECO 330	Economics of Aging	(4)
ECO 450	Money & Banking	(4)
ECO 420	Public Finance	(4)
		Total 4

At least 12 credits must be taken at SUNYIT. Any course substitutions must gain prior approval through an academic petition.

Health Information Management Minor
(18 credit hours*)

The minor in health information management is a valuable choice for students in nursing, health services management, computer and information science, computer and information systems, psychology, sociology, or any technical field. According to the American Health Information Management Association, health information management plays a critical role in maintaining, collecting, and analyzing data that doctors, nurses and other healthcare providers rely on to deliver quality healthcare. Health information management involves managing patient health information and medical records, administering computer information systems and coding the diagnoses and procedures for healthcare services provided to patients.

Required Courses from Entry-Level Sequence (6 credits)	**Credits**
HIM 100 Introduction to the Health Information Management Field	3
HIM 111 Medical Terminology	3
Elective Courses from Entry-Level Sequence (3 credits)	
HIM 212 Pathophysiology for Health Information Management	3
HIM 220 Data Analysis for Health Information Management	3
Electives from Advanced Courses (9 credit hours must be chosen from the courses in the list)	
HIM 305 Inpatient Coding and Classification	3
HIM 306 Outpatient Coding and Classification	3
HIM 400 Nonhospital Health Information Management Systems**	2
HIM 401 Systems for the Evaluation and Improvement of Health Care	3
HIM 435 Healthcare Management/Medical Information Systems	3
HIM 440 Electronic Health Records	3
HIM 490 Selected Topics in Health Information Management	1-4
HIM 494 Specialty Rotation**	1

*At least eight credit hours must be taken at SUNYIT. At least eight credit hours must not be required courses in the student's major. The student must maintain a minimum cumulative grade point average of 2.0 (average of "C") in the minor.

**Corequisites. Courses must be taken at the same time.

Health Services Management Minor

The health services management program offers a minor for students in other disciplines. The minor is intended to provide the student with substantial background to this complex and increasingly significant field. Depending on the student's major, the minor in health services management may be of benefit in seeking work or enabling them to address health care issues in their current or future employment.

Courses	**Credit Hour Requirements**	**SUNYIT Reference**
Economics of Health Care	3	HSM 405
Health Care Delivery in the US	3	HSM 201
Intro to Quantitative Methods in HSM	3	HSM 300
Health Care and the Law	3	HSM 309
Management for the Health Professions	3	HSM 311
Introduction to Epidemiology	3	HSM 401
Financial Mgmt for HCO	3	HSM 435
Total Credits Required	21	

Human Resources Management Minor

The human resources management function includes a variety of activities critical to the success of any organization. Key among them is deciding what staffing needs you have and whether to use independent contractors or hire employees to fill those needs, recruiting and training the best employees, ensuring they are high performers, dealing with performance issues, and ensuring your personnel and management practices conform to ethical standards. The human resources management minor offers the student the opportunity to expand his/her background in these essential decision areas.

Program Description:
1. Minimum credit hours: 17
2. At least 12 credit hours must be taken at SUNYIT.
3. Any course substitutions must gain prior approval from the School of Business via an academic petition.
4. A student desiring a human resources management minor must apply through the School of Business.

Course Requirements

MGT 318 Human Resources Management
MGT 320 Appraisal, Motivation and Compensation
MGT 415 Industrial land Labor Relations
MGT 425 Human Resource Selection and Staffing
BUS 420 Employee Benefits

Marketing Minor

Selecting a marketing minor will prepare a student for a career in a business or non-profit organization. The primary challenge to a marketing professional is to create and retain profitable customers through activities such as market research, competitive analysis, determination of market potential, market segmentation, and target marketing. This information is used to develop the marketing strategy mix, marketing plans, marketing audits, and other strategic policies. The evolution of the global economy invigorated through the use of modern technology demands an ever-increasing attention to the marketing function as an integral part of the total business environment. Revenue enhancement, social and ethical responsibility, cost controls, and stockholder wealth maximization are all driven by the strategies developed within the marketing function.

Program Description
1. Minimum credit hours: 17
2. At least 12 credits must be taken at SUNYIT.
3. Any course substitutions must gain prior approval from the School of Business via an academic petition.
4. A student desiring a marketing minor must apply through the School of Business.

Course Requirements or Equivalents:
MKT 301 Marketing Principles
MKT 312 Marketing Management Problems
MKT 321 Advertising
MKT 465 Consumer Behavior
Plus one of the following:
MKT 345 Retail Management
MKT 410 Market Based Management
MKT 470 Marketing Research

Mathematics Minor

The minor in mathematics is valuable for students who wish to pursue studies in mathematics, computer science, physics or engineering or who wish to be more competitive in the job market.

Total credit hours required for minor: 20

		Credits
A.	Required Courses	
	MAT 151 - Calculus I (Differential Calculus) *	4
	MAT 152 - Calculus II (Integral Calculus) *	4
B.	One Course from the following:	4
	MAT 225 - Applied Statistical Analysis	
	MAT 230 - Differential Equations	
	MAT 340 - Linear Algebra	
C.	Two Courses from the following:	8
	MAT 253 - Calculus III (Multivariate Calculus)	
	MAT 335 - Mathematical Modeling	
	† MAT 345 - Introduction to Graph Theory	
	MAT 370 - Applied Probability	
	† MAT 380 - Abstract Mathematics: An Introduction	
	† MAT 381 - Modern Algebra	
	MAT 401 - Series and Boundary Value Problems	
	MAT 413 - Discrete Mathematics for Computer Science	
	† MAT 420 - Complex Variables and Their Application	
	† MAT 423 - Vector and Tensor Calculus	
	† MAT 425 - Real Analysis	
	† MAT 430 - Number Theory and Its Applications	
	† MAT 440 - Linear Algebra II	
	† MAT 450 - Partial Differential Equations	

Specific selections of courses must be worked out with the mathematics faculty. The equivalent of up to three of the above courses that contribute to the minor can be used as transfer credit.

** MAT 121 may be substituted*
** MAT 122 may be substituted*
† Student should register for this course only after a consultation with a mathematics faculty teaching the course.

Physics Minor

The minor in physics would be useful for students who wish to pursue studies in physics or engineering, or who wish to be more competitive in the job market.

Total credit hours required for minor: 20

		Credits
A.	Required courses:	
	PHY 201 - Calculus Based Physics I	4
	PHY 202 - Calculus Based Physics II	4
B.	Three courses from the following options:	12
	1. PHY 203 - Calculus Based Physics III	
	2. PHY 325 - Geometrical Optics	
	3. PHY 326 - Physical Optics	
	4. PHY 401 - Electromagnetism	
	5. PHY 420 - Intermediate Mechanics	
	6. PHY 415 - Introductory Quantum Mechanics	
	7. PHY 490 - Special Topics in Physics	
	8. PHY 491 - Independent Study	
	9. A physics course approved by the Science Department	

A "C" grade or higher is required for each course of the minor.

The equivalent of up to three courses that contribute to the minor can be applied as transfer credit

Communication and Information Design Minor

The communication and information design program offers a minor in communication and information design. The minor is valuable to students pursuing studies in various disciplines, such as mathematics, engineering, computer science, business, or psychology, who wish to enhance their communication skills and make themselves more marketable.

Total credit hours required for minor: 20.

Students wishing to earn a minor in CID must complete:

A. Required courses (8 credits)
COM 306 or COM 350 or COM 400
COM 320

B. Electives (12 credits)
With guidance and prior approval from a faculty advisor, students pick three courses with a COM prefix.

Psychology Minor

The psychology program offers a minor for students in other disciplines. An understanding of psychology underlies all human activities. Consequently courses dealing, for instance, with human motivation, individual differences, childhood and aging, prejudice, stress, cognition, human/machine interaction, and learning would add depth to any major. A psychology minor might be especially useful to students planning careers in business, human services, criminology, and health sciences.

The course requirements for the minor are a minimum of 18 credits, eight of which have to be completed at SUNYIT. An introductory course in psychology does not count toward the 18 credits. Students are required to take History and Systems of Psychology (PSY 305), two intermediate courses and two advanced courses.

Intermediate Courses
Learning & Motivation - PSY 262
Abnormal Psychology - PSY 222
Psychology of Personality - PSY 331
Adult Development & Aging - PSY 218
Perception - PSY 360
Death, Dying & Bereavement - PSY 273
Psychology of Gender - PSY 325
Educational Psychology - PSY 365
Engineering Psychology & Human Performance - PSY 390
Health Psychology - PSY 377
Social Psychology - PSY 242
Industrial & Organizational Psych. - PSY 352
Child & Adolescent Development - PSY 216

Advanced Courses
Group Dynamics - PSY 445
Psychological Testing - PSY 470
Cognitive Psychology - PSY 425
Principles of Counseling - PSY 477
Applied Social Psychology - PSY 444
Aggression & Nonviolence - PSY 415
Neuropsychology - PSY 460
Advanced Health Psychology - PSY 555

Quality Engineering and System Technology Minor

For American Industry to remain competitive in a global economy, increasing attention needs to be given to issues of quality control. The purpose of the minor is to round out the student's background by providing exposure to the latest techniques in manufacturing and quality assurance technology. When combined with majors such as mechanical or electrical engineering technology, telecommunications, computer science or business, the minor in quality engineering and system technology should enhance the student's prospect for employment.

Total credit hours required for minor: 20

A. Required Courses (8 credits)
ITC 373 - Statistical Quality Control
MAT/STA 325 - Applied Statistical Analysis

B. Advanced Courses (at least 12 credits, with a minimum of 4 credits in ITC 400-level courses)
MAT 370 - Applied Probability
ITC 390 - ISO9000 and Total Quality Assurance
ITC 391 - ISO1400 Auditing and Implementation
ITC 392 - ISO9000 & QS9000: Implementing and Auditing
ITC 411 - Manufacturing Cost Estimation
ITC 475 - Economic Analysis in Technology
ITC 483 - Quality Improvement
ITC 485 - Concurrent Engineering and Design for Manufacturing
ITC 486 - Reliability for Design and Production

Specific selections of courses must be worked out with the Industrial Engineering Technology faculty. At least 12 credits must be taken in residence at SUNYIT. A maximum of two courses taken at other institutions may be applied to the minor.

Science, Technology, and Society Minor

Rapid developments in science and technology have stimulated a variety of concerns about the impacts of science and technology, as well as interest in the dissemination of science and technology. As a result, developments in science and technology have created a need for people who possess the skills to serve as liaisons among the different communities affected by these concerns. Such individuals would possess an understanding of the relationships among science, technology, and society that would enable them to serve as liaisons between 1) different communities of professionals (e.g., technologists and politicians); and 2) experts and various groups among the lay public. Students who possess such skills can be competitive for jobs in government agencies, businesses, private consulting companies, and labor unions. The STS minor should be of interest to majors in computer science, business, nursing, and the engineering technologies, and might also be of interest to majors in arts and sciences.

Total credit hours required for minor: 17

A. General Requirements

- the STS minor requires completion of at least 17 credit hours in the STS program, at least 8 of which must be taken at SUNYIT.
- a strong background in general science or technology courses and additional more specialized coursework. A basic understanding of science and technology is essential to enable students to understand basic explanations of science and technology incorporated into many of the texts used in the STS courses.

For many of the students who minor in STS, their major will encompass scientific or technological competence.

Students who are not majoring in a natural science or a technological discipline will be required to take at least 6 **additional credit hours** in a natural science or technological discipline beyond the general education requirement. They can count these two courses as electives to satisfy the requirements of the STS minor, provided they also take at least 1 course from the list of electives (e.g., to satisfy SUNYIT's general education requirements or as part of their program of study in their major).

B. Specific Requirements
Required courses:

- STS 300 - Introduction to Science, Technology, and Society
- STS 350 - Science and Technology Transfer and Assessment
- STS 360 - Science, Technology, and Politics
- STS 490 may be substituted for STS 350 or STS 360
- Electives - Choose two more courses in consultation with an STS faculty member.
  Among the offerings are:
  ANT 371 - People and Systems
  BUS 451 - Issues in Business and Society
  SOC 360 - Sociology of Work
  PHI 350 - Technology and Ethics
  HIS 306, 307 - History of Science
  NUR 344 - Ethical Issues in Nursing
  CSC 310 - Computers and Society
  POS 435 - American Politics and Communication Technology
  TEL 325 - Telecommunications and Social Issues
  TEL 490 - Telecommunications Policy/Issues
  ENV 300 - Ecology
  and other courses approved by the STS advisor

Sociology Minor

A minor in sociology is of value to students who wish to integrate interests in business, nursing, the technologies and computer science, or other arts and sciences disciplines with the broad conceptual and analytical framework provided by sociology.

A. General Requirements

A student desiring a minor in sociology must register with the program and take a minimum of 17 credits of sociology courses, at least 8 of which must be taken at the Institute of Technology.

B. Specific Requirements

1. SOC 100, 110, or an introductory sociology course.
2. a minimum of two courses at the 200-level or above (at least one of these must be at the 400-level).

C. Additional courses, to promote coherence, must be selected in consultation with a sociology advisor.

Telecommunications Minor

The pervasive influence of data and communications networks on our everyday lives makes the minor in Telecommunications a smart choice for all Engineering and Engineering Technology students. Even those in fields such as Business and Nursing will benefit from a better understanding of today's networks and how they affect our industries, workplaces, and lives.

The Telecommunications minor provides a broad understanding of information and communications networks and the rapid evolution currently underway. The core courses cover the technology, systems, and applications of both voice and data networks. The wide range of electives enables a customized program to be developed that serves the need of various academic majors. For example, students in engineering technology majors are encouraged to take TEL 310 and TEL 400 as electives. And students majoring in Business may benefit from taking TEL 330 and TEL 381 as electives.

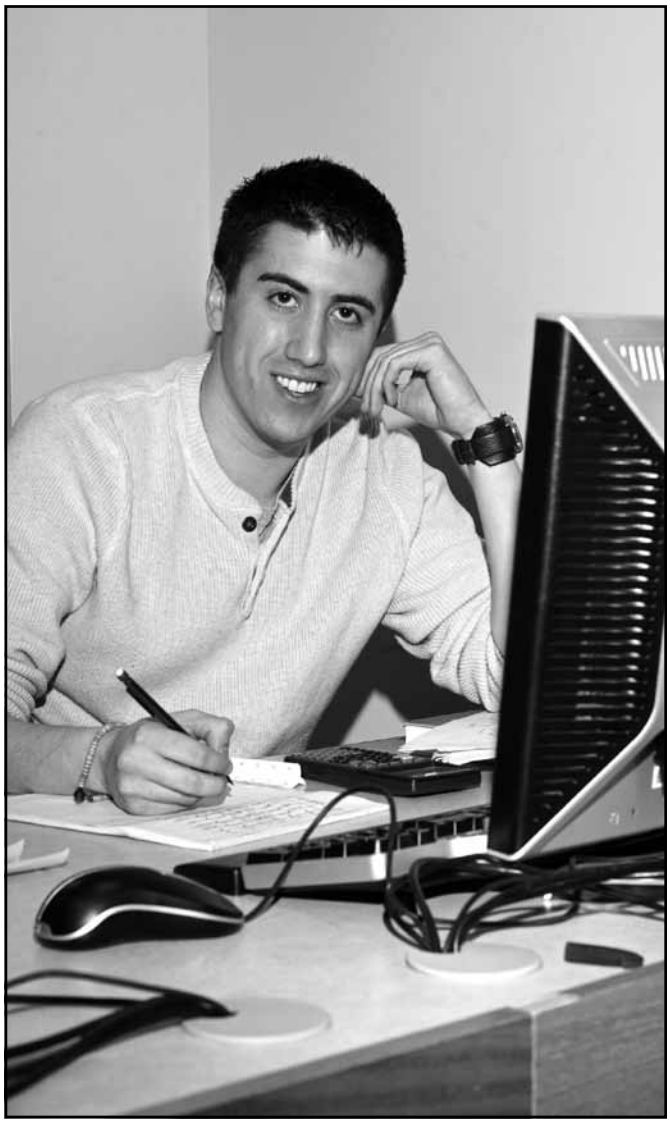
A minimum of 8 credits making up the requirements for the minor must be taken at SUNYIT. Total credit hours required for minor: 19

Required Courses (11 Credits):

TEL 100 Introduction to Telecommunications
TEL 205 Basic Data Communications
TEL 201 Basic Voice Communications

Elective Courses (at least 8 Credits):

TEL 310 Telecommunications Transmission Technology
TEL 316 Data Network Design
TEL 330 International Telecommunications
TEL 340 Network Standards & Protocols
TEL 381 Introduction to Information Assurance
TEL 382 Information Assurance Policies and Disaster Recovery
TEL 383 Network Firewalls
TEL 384 Network Intrusion Detection
TEL 400 Wireless Telecommunications
TEL 416 Digital and Internet Telephony
TEL 430 Local Area Networks
TEL 493 Special Topics in Telecommunications



Student Services

The faculty and staff of SUNYIT are committed to providing a full range of advising, counseling, tutorial, and other services to support the academic progress of students. On-campus health care, housing, career services, recreation/sports programs, and student activities programs are also provided by student services offices.

New Student Orientation Program

New student orientation, advisement and registration

New students are required to attend the Orientation/ Registration Program offered at the start of every term. Activities include:

- Orientation to college services, social life, residence life, athletics and recreation programs.
- Academic expectations, advisement and registration.

During Orientation students have the opportunity to begin making positive connections with peers, faculty and staff.

The Learning Center

The Learning Center offers academic help for students in several ways. Tutors are available for most subjects offered at SUNYIT, as well as for English as a Second Language. Special small group instruction is also available for selected courses. The Center offers workshops in areas such as study skills, writing and research, time management, and test taking.

The Learning Center has a computer lab, complete with educational software to help students with English, engineering, math and accounting.

Services of the Learning Center are free of charge and available to all SUNYIT students.

Health and Wellness Center

The Health and Wellness Center, conveniently located in the Campus Center, provides evaluation, treatment and prevention of health-related problems for full-time, part-time, undergraduate and graduate students. The Health and Wellness Center is staffed by a part-time physician, nurse practitioners, registered nurses, a health educator and support personnel. It is open daily Monday through Friday with the hours posted each semester.

SUNYIT is supported through a mandatory health fee each semester. This fee provides each student comprehensive, confidential health-related services by appointment or walk-in basis at the Health and Wellness Center. Not to be confused with the mandatory health insurance fee that covers off-campus health care services. Some services provided by the mandatory health fee include:

Clinical Services:

- Sick/Injury Care - medical evaluation, treatment & follow-up medical care
- Vaccinations - MMR, Influenza, etc.
- Women's and Men's Health - GYN examinations, birth control, STD testing, etc.
- Blood work/laboratory work - throat cultures, HIV, etc.
- Medications - prescription & over the counter
- Medical Equipment/Supplies/Other - crutches, band-aids, cough drops, etc.
- Referrals - to private practitioners, community agencies, etc.

Health Education:

- Free, confidential HIV testing & counseling
- Alcohol/substance abuse screening & counseling
- Current health-related educational literature/resources
- Appropriate health guidance with necessary referral
- Prevention focused programs
- Peer education programs
- Smoking cessation assistance & counseling
- Registered Dietician Services

Student Health Requirements for Attending SUNYIT:

All students are REQUIRED to provide the following health documents to the Health and Wellness Center before August 15 for Fall admission and January 15 for spring.

1. **Immunizations - Mandatory for all students registered for six (6) or more credits. Non-compliant students will be de-registered pursuant to the directives of the law.**

   a) **Measles, Mumps and Rubella (MMR)** - NYS Health Law § 2165 requires all on campus students provide documentation of immunity to MMR. Persons born prior to 1/1/57 are exempt.

   Required documentation:

   ✓ **Measles:** Two dates of immunization given after 1967 AND on/or no more than 4 days prior to the first birthday

   ✓ **Mumps:** One date of immunization given on/or no more than 4 days prior to the first birthday

   ✓ **Rubella:** One date of immunization given on/or no more than 4 days prior to the first birthday

   OR

   ✓ **Titers:** Date AND positive results of the measles titer, and/or mumps titer and/or rubella titer

   b) **Meningococcal Meningitis** - NYS Health Law § 2167 requires all on or off campus students provide the following documentation:

   ✓ One date of the meningococcal immunization given within the past 10 years

   OR

   ✓ Completion of the Meningococcal Information Response Form indicating acknowledgement of meningococcal disease risks and refusal of the meningococcal meningitis immunization signed by the student (or student's parent/guardian if under 18 years old). The Meningococcal Information Response Form is enclosed in the admission packet.

2. **Health History and Physical Examination within the last two (2) years - Mandatory for all students registered for twelve (12) or more credits.** The student may only receive clinical services at the Health & Wellness Center after the health history and physical examination have been submitted. Full-time students will not be permitted to register for another term until this health requirement has been met.

3. **Health Insurance - Mandatory for all students registered for twelve (12) or more credits.** All full-time students must possess some type of health insurance. SUNYIT provides a basic, economical health insurance plan for students who need coverage or wish to purchase additional coverage.

   a) Domestic Health Insurance Policy - EACH semester all domestic students taking twelve (12) or more credits are automatically billed for a health insurance policy as designated by SUNYIT. If a student has other health insurance coverage, i.e. under a parent or employer, and the student does not wish to purchase the SUNYIT designated health insurance, a waiver must be completed prior to attendance EACH semester. Automatic billing will occur, if a waiver is not completed EACH semester. The health insurance waiver e-mail address: http://healthwaiver.sunyit.edu.

   Students taking less than twelve (12) credits are not billed for the health insurance designated by SUNYIT but may purchase it at the Business Office each semester.

   b) International Health Insurance Policy - The State University of New York requires all international students entering the country for study or research, or any US student studying abroad in a SUNY sponsored program purchase a SUNY health insurance policy. Health insurance information is mailed upon admission and students are automatically billed.

For questions or more information, please contact the Health and Wellness Center, phone 315-792-7172 fax 315-792-7371.

Residential Life and Housing

Education is more than formal instruction in the classroom. Informal educational opportunities, including companionship with others are essential aspects of the total college experience. The residence halls are an important setting for this informal education. These student facilities are places for teaching responsible citizenship and for developing personal and social values. To that end, all freshmen and sophomores who are not eligible for an exemption are required to live on campus. Each resident living in SUNYIT housing is required to sign and submit a Request for Accommodations Form which is binding for the entire academic year. Exemptions from on-campus housing may be available to students who live with a parent/parents or legal guardian, reside within a 30-mile radius from campus, who have dependants, live with a spouse, have verification of prior military experience, or other special circumstances. Requests for exemptions are required in writing to the Director of College Housing.

Housing is available for 580 residents and, although most of the campus apartments contain single room accommodations, double rooms are also available. Each apartment is completely furnished and is comprised of a living room, bedrooms, bathroom, and storage space. Ethernet and cable service are provided for each resident student at no additional charge. Resident students also have access to laundry facilities, study and recreation lounges. The residence halls are staffed 24hours per day by student Resident Advisors as well as Residential Life and Housing professional staff. The Residential Life and Housing staff is committed to assisting students in fulfilling their diverse social needs.

Resident students are required to purchase a meal plan. For more information, please contact the Residential Life and Housing Office at (315) 792-7810.

Personal Safety and Security

A high priority is placed on campus safety and residence hall security. The residence halls are protected by smoke and heat detectors and exterior doors are secured by an electronic access system that is activated by the resident student's SUNYCard. The College's University Police Department maintains regular patrols in the residence hall areas on a 24-hour-a-day basis and also monitors the outside public areas with closed-circuit television. Information on campus crime statistics (Jean Cleary Act) is available in the Admissions Office or at the University Police Office.

Off-Campus Housing

Students are invited to contact the Campus Life Office to receive information about off-campus housing opportunities. Information on Utica-area rooms, apartments, and houses for rent is available.

Food Service

Campus food service is provided in four locations at SUNYIT. It is required that all resident students participate in the campus meal plan.

Meal plan participants are able to dine in the Campus Center Dining Hall. A nutritious menu is available with a variety of stations to choose from; there is a hotline, which also offers vegetarian choices, a grill to order, beverages, soup, deli, salad, and dessert stations. Operation hours are seven days a week, providing breakfast, lunch, and dinner menu, with continuous service during the week.

The Café Kunsela is a full-service café, open for breakfast and lunch. It features pastry, bagels, eggs, and beverages for breakfast. For lunch there are soups, sandwiches, salads, pizza and desserts available. Operation hours are Monday through Friday.

The 'Cats' Den in the Campus Center offers wings, sandwiches, subs, pizza, and beverages. It features a wide-screen TV, games, and frequent Campus Activities Board (CAB) events. Operation hours are in the evening seven days a week.

The Bistro in Donovan Hall offers brewed coffee, cappuccino, pretzels, snacks, soup, a variety of sandwiches, and salads to choose from. Operation hours are Monday through Friday during class sessions.

Student Organizations and Boards

There are 40 academic and social clubs and student organizations, a student-run publication, four governing boards, a student senate, Residence Hall Council, and a campus radio and cable TV station (Wildcat Media) providing students with a choice of extracurricular activities to make life outside of class more enjoyable both educationally and socially.

Performing Arts/Cultural Interests

The SUNYIT Campus Activities Board (CAB) sponsors musical and theatrical performances throughout the academic year. Students may purchase discount tickets to performances presented by internationally acclaimed artists in the Broadway Theatre League at the Stanley Performing Arts Center and the Great Artists Series of the Munson-Williams-Proctor Institute.

The Gannett Art Gallery, located in Kunsela Hall, hosts several art exhibitions a year, including SUNYIT's annual regional show.

SUNYIT's Cultural and Performing Arts Council funds fine arts, music and theater programs on campus throughout each academic year.

Culturally diverse programs are also available through programming by the SUNYIT Campus Activities Board and special interest groups (International Students Association and Black and Latino American Student Union). Black History Month, Hispanic Heritage Month, and other cultural programs provide the opportunity to celebrate the unique contributions of our culturally diverse world.

In addition, academic divisions sponsor lecture series, symposia on current research, demonstrations, and dramatic readings which are open to students and the SUNYIT community.

Students may also participate in performance ensembles in theatre and instrumental jazz.

Career Services and Student Transitions

The Office of Career Services and Student Transitions offers students a wide range of career planning services to include resume writing and interviewing workshops, mock interview sessions, job search and internship assistance, and individualized career counseling. Students are strongly encouraged to register with Career Services and Student Transitions as soon as they are admitted to the college. Registering upon admission allows students to take full advantage of these services and to gain access to the comprehensive web-based student/employer database, College Central Network. Students who create an account receive targeted e-mails regarding internship and employment opportunities available throughout the academic year. Information is available regarding graduate school admissions procedures and graduate school standardized testing through the Career Services Office.

Athletics and Recreation

The intercollegiate sports and recreation program offers a variety of activities for the experienced student-athlete, the fitness enthusiast, the intramural participant and the avid sports fan. The Department of Athletics and Recreation encourages active participation from all students, faculty and staff at SUNYIT.

Athletic Facilities

The Campus Center is equipped with a fitness center featuring a variety of treadmills, cross trainers, stair climbers and circuit training equipment. A free weight fitness room can benefit any fitness goals members of the SUNYIT community may have. The gym, swimming pool, running track and racquetball court comprise the rest of the indoor facilities; outside, facilities include the Roemer fitness trail, basketball courts, soccer, baseball and softball fields, and a golf practice area.

Intercollegiate Teams

Our intercollegiate sports program, a member of the NCAA III, the NEAC, and ECAC, includes competitive teams in men's baseball, men's and women's basketball, men's and women's cross country, golf, men's and women's soccer, women's softball, men's and women's volleyball, men's and women's swimming and bowling.

Intramurals and Recreation

Our recreation staff will help you to become involved in a myriad of single event or league intramural programs. Teams from the residence halls can take on teams of off-campus students in sports like volleyball, basketball and indoor soccer, or mix-and-match players with the help of the intramural director. We want you to become active and involved!

For Credit Courses

Athletics offers 1-credit courses in fitness and recreation. Learn how to utilize the fitness center equipment and how to manage a personalized strength training or aerobic training program. Begin playing or hone your skills in recreational sports like golf and racquetball. Classes are offered each semester.

Club Sports

Students interested in competing less formally have the opportunity to participate in a variety of club sports. The ski and snowboarding club, hockey club, scuba club, lacrosse club, bowling, indoor soccer, fencing, cricket, water polo and mountain biking/running club are examples of teams that the Student Association at SUNYIT has sponsored in the past.

Become Involved

When you come to campus, please visit with us and we'll get you involved! Athletics is located in the Campus Center. For more information, contact us at 315-792-7520 or refer to our website at www.sunyit.edu

Student Activities and Student Government

The SUNYIT Student Association (SUNYITSA) is the elected student government organization for the student body. Through student activity fees, SUNYITSA provides funding for a student publication, a student-run FM radio/TV cable station, and major campus programming and special events. Student organizations at SUNYIT provide students with leadership opportunities and with outlets for creative expression and campus involvement.

Professional, academic, and special interest clubs are open to all students. The Black and Latino American Student Union and the International Student Association provide peer support and multi-cultural activities for the campus. Academic honor societies, and academic clubs in every major, are also an important component of campus life at SUNYIT.

Wellness Committee

SUNYIT recognizes the importance of health education and prevention on the college campus as well as in the local community. This is why SUNYIT has established a Wellness Committee to promote these related issues. The purpose of the Wellness Committee is to provide the learner with valuable, current information that will prepare them to lead healthy lives long after leaving the learning environment. The committee is comprised of faculty, staff and students.

The committee schedules and holds programs on numerous health and wellness related topics for the campus community. The committee has held programs focusing on issues such as: nutrition/weight management, alcohol/substance abuse, stress management, and personal safety, among others. Some specific examples of programs include: "Study Break" massage sessions, Health Fair, Lifestyle Program, and the Fun Run/Walk.

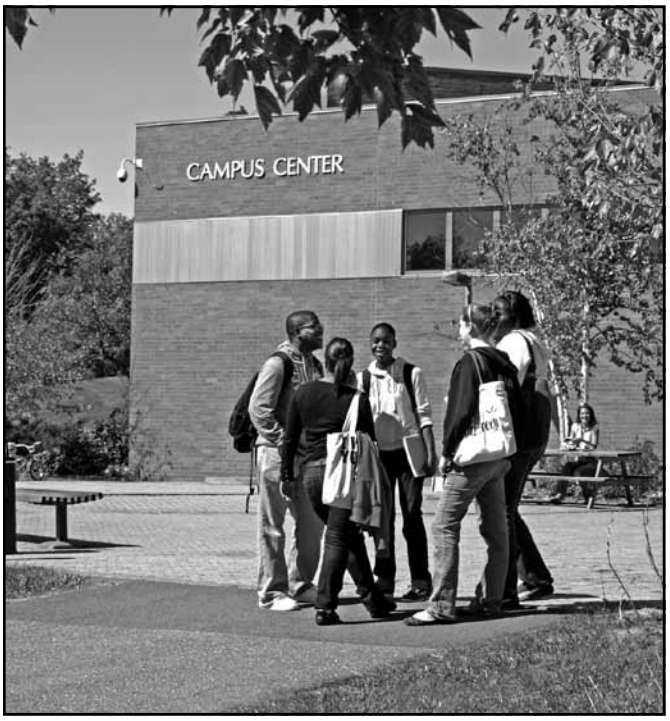
Anyone interested in membership on the Wellness Committee should contact the Health and Wellness Center (Room 217, Campus Center, x 7808).

Campus Center

The Campus Center contains a 400-seat dining area, student activities center, the 'Cats' Den snack bar, game and meeting rooms, a complete and up-to-date athletic complex, and student offices. Student services (campus life, student activities, health and wellness center, and athletics and recreation) are also located in this building.

Facilities include a six-lane swimming pool, fitness rooms, racquetball court, a weight room, an indoor running track, basketball and volleyball courts, saunas, and outside basketball/volleyball courts. Outdoor soccer and softball fields, a cross-country course, and a nature fitness trail are available on campus.

For hours of operation of the Campus Center, see the Student Handbook or campus website. (Hours are subject to change.)



Student Success Services

Collegiate Science and Technology Entry Program (CSTEP)

The CSTEP program is designed to increase the number of historically underrepresented students who enroll in and complete undergraduate or graduate programs leading to professional licensure or to careers in mathematics, science, technology, and health related fields.

The Collegiate Science and Technology Entry Program is funded by a grant issued from the New York State Department of Education. Participating CSTEP students must be full-time matriculated students in good academic standing and are required to participate in various program offerings such as tutoring, internships/job shadowing, career counseling and information about attending graduate school just to name a few. Additionally, workshops are offered to enhance career awareness—including resume writing, effective interviewing and networking skills.

For further information please contact us by visiting our office in the Campus Center Room 208 or call 315-792-7805.

Educational Opportunity Program (EOP)

The Educational Opportunity Program (EOP) is designed to help provide a broad range of academic and financial services to New York State residents who, because of academic and economic circumstances, would otherwise be unable to attend a postsecondary educational institution.

The Educational Opportunity Program is a New York State funded initiative that focuses on equity. Educational Opportunity Program provides structured support services including counseling, tutoring, and often times remedial/developmental coursework. In addition to academic support, program participants receive financial assistance toward their college expenses. As a whole the Educational Opportunity Program is often utilized to recruit prospective students and support the retention and graduation of participants.

For further information please contact us by visiting our office in the Campus Center Room 208 or call 315-792-7805.

Counseling Services

Students can visit the Counseling Center to discuss personal, vocational and educational concerns. Counselors are located in the Campus Center and appointments can be scheduled by calling 315-792-7805 or 315-792-7172. Office hours are Monday through Friday from 8 a.m. to 5 p.m. (additional times by appointment). The Counseling Center provides the following services:

- Personal counseling: individual counseling regarding personal/emotional concerns, relationship problems, conflict resolution, assertiveness, and managing stress.
- Educational counseling: individual counseling and workshops on setting goals and determining priorities, time management, overcoming procrastination, and motivation.

Services for International Students

The Office of International Student Services, located in Donovan Hall, Room 208, serves the international community of SUNYIT, including students, visiting scholars, and faculty. We provide immigration services, initial and on-going orientation programming and general support to the international population.

Through our immigration services, we help international students maintain their status in compliance with immigration regulations and apply for the immigration benefits for which they are eligible. The International Student Services Office provides assistance and advocacy for all international students with campus, community, state, and federal offices. We offer numerous workshops on immigration topics to international students and the campus community.

As part of our orientation programming, we provide extensive fall and spring orientation programs for incoming international students and workshops throughout the semester on topics relating to living and working in the U.S. The Office of International Student Services works with student groups to help provide activities to complement the educational experiences of international students.

We also assist our current students who are interested in developing skills and experience in full and part-time off-campus work related to their studies. There are two options for this: Curricular Practical Training and Optional Practical Training. There are a limited number of opportunities for international students to work on campus during the semester and over semester breaks.

Services for Students with Disabilities

SUNYIT's small size and friendly atmosphere allow for accommodation of special needs. A student with a disability should discuss individual needs with the Admissions Office and the Coordinator of Disabled Student Services in the Student Success Center prior to registration so that special arrangements can be made, where appropriate.

The Coordinator of Disabled Student Services coordinates the following services: counseling/orientation for new students, advance registration for mobility-impaired students, assistance in securing housing, and arrangements for transportation and parking.

The Coordinator of Disabled Student Services serves as liaison with the New York State Vocational Rehabilitation Service, the New York State Commission for the Blind and Visually Handicapped, and other agencies serving or sponsoring the student.

Students with disabilities seeking accessible suites in the residence halls should address inquiries to the Residential Life and Housing Office at 315/792-7810, and also the Student Success Center at 315/792-7805.

Earning College Credit by Examination

- College Level Examination Program: 34 examinations are offered to persons who wish to earn college credit by demonstrating that they possess knowledge equivalent to that acquired in the college courses. The College Level Examination Program offers computer-based testing. SUNYIT is a "limited" testing facility. SUNYIT awards appropriate college credit for each examination. Questions regarding CLEP should be directed to the Learning Center.
- Excelsior College Examinations (formerly Regents College) offers 31 examinations by which individuals can demonstrate competency.
- DANTES Subject Standardized Tests (DSST): Examinations that provide the opportunity to demonstrate learning acquired outside the traditional classroom. 37 Test Titles are available covering a broad range of college curricula.

Individuals interested in learning more about DANTES and Excelsior services should contact the Registrar's Office.

General Information

Physical Plant

The SUNYIT campus is situated on hundreds of acres and currently includes four academic buildings and two residential complexes. Construction is scheduled to begin in 2009-10 on a $20 million field house and a $13 million student center. In 2010, SUNYIT will begin construction on a new freshman residence hall. These buildings are part of a significant expansion plan that also includes a future center for advanced technology. The plan is designed to provide a state-of-the-art environment to meet both the educational and extracurricular needs of our students.

Kunsela Hall was the first and remains the largest campus building. Opened in February 1985, Kunsela is the center for admissions and several administrative offices, and a number of faculty offices. It also houses traditional and special-purpose classrooms, a computer center, and a 240-seat lecture hall. A major renovation on the building's east wing was completed in 2007 consolidating a number of administrative functions and making way for improved classrooms in some of the vacated spaces. The college bookstore and the Gannett Gallery, which hosts a variety of art exhibits, are both located in this wing.

Donovan Hall is the central academic building, having opened its doors to students in the fall of 1988. In addition to its many well-equipped laboratories, Donovan also features a variety of special purpose classrooms and small lecture halls, and is home to a number of academic administrative offices and faculty offices. The building architecture was intended to reflect SUNYIT's early days when the college operated in several former manufacturing buildings in west Utica.

Facing Kunsela Hall is the Cayan Library, which opened in March 2003. Housing the campus library collections and archives, the building offers private study rooms and a variety of comfortable settings for reading and studying; dozens of computer work stations in the first-floor reference area; a 30-seat instruction/ meeting room; a café; and a second-floor study room with a fireplace.

Just west of the academic campus core, and across a pedestrian bridge above a wooded ravine, lies the Campus Center. Opened in 1988, it houses a 400-seat student dining area, snack bar, and gymnasium. The Campus Center also features a six-lane swimming pool, racquetball court, saunas, and outdoor facilities: basketball, volleyball and tennis courts. An expansion to the first-floor fitness center included the addition of 12 cardio-training stations equipped with audio-video connections; a recently renovated student activity center includes a game room, student conference room and offices for student organizations. Student services, including counseling and the health center, are also located in the Campus Center.

Outdoor playing fields include soccer, softball, baseball, intramural and practice fields. A 1.1 mile nature/hiking exercise trail weaves its way through a wooded hillside and around two man-made ponds. A new 5-mile hiking/cross-county course stretching across the northern and western portions of the main campus has recently been developed.

To the west of the Campus Center across a second pedestrian bridge is the Adirondack Residence Hall complex. Opened in 1991, Adirondack Hall consists of 25 two-story townhouse style buildings, connected to form the borders of two triangular commons. Each building contains four, 4-person suites in a mix of one- and two-person bedrooms. To assist students in their studies, each bedroom is connected to the campus computer network with links to the entire campus and the Internet. A major exterior renovation in 2007 gives the buildings a more authentic "Adirondack"-style appearance.

The Mohawk Residence Hall complex opened in 1996, and consists of 12 two-story townhouses with a commons area and laundry facilities. In addition to being all single bedrooms, each living room suite at Mohawk is equipped with an air-conditioning unit. Ample parking is available in three parking lots.

SUNYIT Smoking Policy

Smoking is allowed in designated outdoor areas only. SUNYIT recognizes the hazards of smoking and fully acknowledges the rights of non-smokers as well as smokers. For complete details of the policy, please reference our website: www.sunyit.edu.

Library

Named after SUNYIT's third president, the Peter J. Cayan Library opened its doors on March 17, 2003. It is a new building facing Kunsela Hall. The building has over 45,000 net square feet of usable space, housing all of SUNYIT's library resources. The $14,000,000 project was designed by the Thomas Group and built by Murnane Construction Company. Cayan Library includes 10 group study rooms that students can use on a first come, first serve basis and a dedicated library instruction laboratory. Cayan Library has wireless and wired internet access throughout the building.

The current collection is over 200,000 volumes, of which 177,000 are books. In addition, Cayan Library has microfilm, bound periodicals, government documents, archives and special collections. The library is a selective U.S. government depository, receiving about 15% of the available documents. SUNYIT is a member of SUNYConnect which offers numerous electronic databases, unified Library Management System and a courier service.

During the spring and fall semesters, the library is open seven days a week for a total of 86 hours. There is always a librarian on duty when the library is open, to assist students with their informational needs. Using electronic library resources is not limited to coming into the building. All registered students have access to most of the electronic resources available in the library from off-campus with a valid SUNYIT email account. Currently, students have access to 12,000 on-line journals.

Instructional Resources Center

The instructional resources center, located in Kunsela Hall, provides all non-entertainment audiovisual and television services to SUNYIT. Studio facilities combined with trained staff enable on-campus production for both video and audio programs in a wide variety of formats for many different uses. Television as an educational aid is an active component. The instructional resources center also provides services to students. A computer graphics workstation provides students access to producing materials and presentations for the classroom. Digital cameras and camcorders are available to borrow for class projects. Students also have access to videotape editing equipment.

Academic Computing Facilities

The use of computers is widely integrated into almost all facets of life at SUNYIT. Every student receives a SUNYIT computer account for access to computer and network resources and an email account for college communications. All official electronic communications between students, faculty and campus offices are conducted through the campus email system.

Internet services are used extensively throughout the curriculum and students should expect that most of their classes will involve some use of computing. There are a large number of computer labs available on campus for student use. Students can also access software applications remotely using the Citrix server.

The campus network consists of a T-3 Internet connection, which is upgraded annually, fiber connections between buildings and Cat 5 (100 Mb/sec / 1000 Mb/sec) cabling within buildings. Wired network ports are available within buildings and wireless access points are available throughout the campus. Network Access Control systems protect the network from viruses, operating system vulnerabilities and unauthorized use. Symantec Antivirus software is available to all students at no charge. Information pertaining to computing resources and software downloads are available from the Information Technology Services website, http://its.sunyit.edu.

Automobiles

Convenient parking facilities adjacent to the SUNYIT's buildings are provided for students and personnel.

SUNYIT students and personnel are required to register with the University Police all motor vehicles using SUNYIT-controlled parking facilities. Vehicles parked in SUNYIT parking areas must have a current parking decal properly displayed. Parking fees shall be charged for motor vehicles parked within designated lots. SUNYIT, however, assumes no liability for the property or safety of those using the facilities.

SUNYIT Identification Card

The campus identification card at SUNYIT is known as the "SUNYIT Card." This card provides access to certain campus buildings and services. SUNYIT Card may be obtained at the bookstore in Kunsela Hall. Lost or damaged SUNYIT Cards may be obtained for a replacement fee by contacting the bookstore at 792-7257, or in person at the bookstore. (See SUNYIT Card policies in the Student Handbook for more information about regulations governing the use of the SUNYIT Card).

University Police

The University Police Department is a team of professionals working with the campus community. Its goal is to provide a safe environment in which the educational mission of SUNYIT can be fully realized.

The University Police Department is primarily service-oriented, and is tailored to meet the specialized needs of a campus community. The work of the department includes crime prevention and control, criminal investigations, traffic and parking supervision, building security, emergency first-aid treatment, the maintenance of public order, and other related activities.

The officers of the department are responsible for the enforcement of all state and local laws, as well as the rules and regulations of SUNYIT. The officers are police officers, and obtain their powers from the Criminal Procedure Law. The department's ability to function as an independent law enforcement agency enables it to provide a sensitive, measured approach to all situations requiring police officer assistance, while still maintaining the autonomy of SUNYIT.

The Advisory Committee on Campus Safety will provide upon request all campus crime statistics as reported to the United States Department of Education.

For more information: http://ope.ed.gov/security
SUNYIT University Police: 315-792-7106

College Association at Utica/Rome, Inc.

The College Association at Utica/Rome is a not-for-profit corporation which contracts with the State University to provide auxiliary services on the campus. Its general purposes are to establish, operate, manage, promote, and cultivate educational activities and relationships between and among students and faculty. It also aids students, faculty, and administration at SUNYIT in furthering their educational goals, work, living and co-curricular activities. Any surplus income must be used to advance and promote educational and benevolent purposes of the corporation and SUNYIT. The association's membership is composed of representatives of the student association, faculty, staff, and senior officers of SUNYIT. The policies of the association are established by its board of directors.

The association provides administrative and accounting services for many organizations, including student government. It also operates the SUNYIT bookstore, vending and food services.

Governance

The SUNYIT governance system incorporates administrative, academic, student affairs, and planning and budget committees structured to develop policy. It provides direct input for faculty and student organizations to the general policy making process. Additional information on the governance system is contained in faculty and student handbooks and are available in the Provost Office.

SUNYIT Foundation

Alumni and friends established the Institute of Technology Foundation at Utica/Rome, Inc. to help preserve and improve the unique features of SUNYIT's educational programs.

Chartered in 1974, the Institute of Technology Foundation at Utica/Rome, Inc. is a not-for-profit corporation, organized under New York State law and granted tax-exempt status by the Internal Revenue Service. The Foundation promotes, receives, invests, and disburses private gifts to SUNYIT. It exists solely to benefit SUNYIT and its students by providing financial assistance to students in the form of emergency student loans, scholarships, assistantships, and supplemental employment opportunities. It also enhances the learning environment through faculty research stipends, the acquisition of much needed equipment, and other purposes as may be directed by the board of trustees.

The Foundation is comprised of representatives of the local community, alumni, the college council, administration, faculty, staff, and the student body. A board of trustees manages the Foundation's property, business affairs and concerns.

The Institute of Technology Foundation plays an integral role in securing SUNYIT's fiscal stability while strengthening the academic, cultural, and research capabilities of SUNYIT and the community. The Foundation also contributes to the economic development of the Mohawk Valley.

Release of Student Information and Photographs

The public relations office routinely prepares news releases identifying students who have been accepted to SUNYIT, students named to the President's and Deans' lists, students who participate in regularly scheduled activities, and those who will graduate. In addition, feature stories are developed from time to time regarding special activities and noteworthy events.

Students not wishing to have their names appear in news releases may contact the director of public relations, ext. 7113.

"Directory information" is designated as the student's name, parent's name, address, telephone number, date and place of birth, major field of study, full- or part-time status, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, most recent previous school attended, e-mail address, and photograph.

Photographs of students, faculty and staff taken on campus may be used to illustrate official college publications and advertisements. Students who wish to restrict the release of directory information and/or photographs should follow procedures outlined in the Student Handbook or contact the director of public relations, ext. 7113.

Student Rights and Responsibilities

Students at SUNYIT are expected to conduct themselves in a manner which will not infringe on the freedom of others in the campus community, or bring discredit to themselves, SUNYIT, or to other students. Students are expected to know the code of conduct and other processes and procedures as outlined in the student handbook. Students who violate specified standards of good conduct may be subject to discipline in accordance with appropriate due process.

Student Records

The SUNYIT policy on access to and release of student records conforms to Public Law, Family Educational and Privacy Act of 1974 (refer to the "Student Handbook").

Affirmative Action/ Equal Opportunity Policy

Consistent with the policy of the State University of New York, SUNYIT does not discriminate on the basis of race, sex, color, creed, age, national origin, disability, marital status, status as a disabled veteran, veteran of the Vietnam Era, recruitment of students, recruitment and employment of faculty and staff, or the operation of any of its programs and activities as specified by federal and state laws and regulations.

Additionally, discrimination on the basis of sexual orientation and the provision of any services or benefits by state agencies and in any matter relating to employment is prohibited by the Governor's Executive Order No. 28. The Policies of the State University of New York Board of Trustees also requires that personal preferences of individuals which are unrelated to performance, such as sexual orientation, shall provide no basis for judgment of such individuals.

The Associate Vice President for Human Resources is designated coordinator in SUNYIT's continuing compliance with relevant federal and state laws and regulations with respect to non-discrimination. The Associate Vice President for Human Resources may be consulted during regular business hours in Kunsela Hall, or by calling (315) 792-7191. Questions concerning Section 504 of the Rehabilitation Act of 1973, as amended, should be directed to the 504 Coordinator in the student activities office in the Campus Center, or by calling (315) 792-7530.

Servicemembers Opportunity Colleges

SUNYIT has been designated as an institutional member of Servicemembers Opportunity Colleges (SOC), a group of over 400 colleges and universities providing voluntary postsecondary education to members of the military throughout the world. As a SOC member, SUNYIT recognizes the unique nature of the military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible academic residency requirements, and crediting learning from appropriate military training and experiences. SOC has been developed jointly by educational representatives of each of the Armed Services, the Office of the Secretary of Defense, and a consortium of 13 leading national higher education associations. It is sponsored by the American Association of State Colleges and Universities (AASCU) and the American Association of Community and Junior Colleges (AACJC).

Academic Programs—HEGIS Code

The Higher Education General Information System (HEGIS) Taxonomy is a nationally accepted classification scheme for assuring consistency in the curriculum content of courses leading to a degree within a given HEGIS discipline category. Thus, the concept of "information science" is the same for the person studying for a degree in computer and information science, classification number 0701, whether the degree is pursued at SUNYIT or at another institution. Enrollment in other than the following registered, or otherwise approved, programs may jeopardize eligibility for certain student aid awards.

HEGIS Classification		Degree
0502	Accounting	B.S. Bachelor of Science
0502	Accountancy	M.S. Master of Science
0504	Finance	B.S. Bachelor of Science B.B.A. Bachelor of Business Administration
0506	Business Administration	B.S. Bachelor of Science B.B.A. Bachelor of Business Administration
0601	Communication and Information Design	B.S. Bachelor of Science
0701	Applied Computing	B.S. Bachelor of Science
0701	Computer and Information Science	B.S. Bachelor of Science
0701	Computer and Information Science	M.S. Master of Science
0702	Computer Information Systems	B.S. Bachelor of Science
0799	Information Design and Technology	M.S. Master of Science
0599	Technology Management	M.B.A. Master of Business Administration
0799	Telecommunications	B.S. Bachelor of Science
0799	Telecommunications	M.S. Master of Science
0909	Electrical Engineering (Jointly registered with Binghamton University)	B.S. Bachelor of Science
0925	Computer Engineering Technology	B.S. Bachelor of Science
0925	Electrical Engineering Technology	B.S. Bachelor of Science
0925	Industrial Engineering Technology	B.S. Bachelor of Science
0925	Mechanical Engineering Technology	B.S. Bachelor of Science
0925	Civil Engineering Technology	B.S. Bachelor of Science
0925	Advanced Technology	M.S. Master of Science
1202	Health Services Management	B.S. Bachelor of Science
1202	Health Services Management	M.B.A. Master of Business Administration
1202	Health Services Administration	M.S. Master of Science
1203.10	Nursing	B.S. Bachelor of Science (For Registered Nurses)
1203.10	Nursing Administration	M.S. Master of Science (For B.S. Graduates in Nursing)
1203.12	Nursing Administration	Advanced Certificate
1203.10	Adult Nurse Practitioner	M.S. Master of Science
1203.10	Adult Nurse Practitioner	Advanced Certificate
1203.10	Family Nurse Practitioner	M.S. Master of Science
1203.10	Family Nurse Practitioner	Advanced Certificate
1203.10	Gerontological Nurse Practitioner	M.S. Master of Science
1203.12	Gerontological Nurse Practitioner	Advanced Certificate
1203.10	Nursing Education	M.S. Master of Science
1203.12	Nursing Education	Advanced Certificate
1215	Health Information Management	B.S. Bachelor of Science B.P.S. Bachelor of Professional Studies
1703	Applied Mathematics	B.S. Bachelor of Science
2001	Psychology	B.A. Bachelor of Arts
2105	Criminal Justice	B.S. Bachelor of Science
2208	Sociology	B.A. Bachelor of Arts
2208	Applied Sociology	M.S. Master of Science
4901	General Studies	B.A. Bachelor of Arts

Retention and Graduation of Undergraduate Transfer Students

Graduation statistics of full-time students entering in the successive fall semesters of 1996 through 2002 are as follows:

Date of Entry	% of Students Graduated
Fall 1996	73.97%
Fall 1997	75.59%
Fall 1998	70.23%
Fall 1999	71.31%
Fall 2000	73.16%
Fall 2001	72.20%
Fall 2002	69.18%

Course Number Changes

The courses listed below have been changed in correlation with the changes to the SUNYIT campus and current academic programs. Please note that changes may appear in both the course number and the course title.

COURSE NAME	OLD COURSE #	NEW COURSE #	NEW COURSE TITLE
Introduction to Financial Accounting	ACC 301	ACC 201	
Managerial Accounting	ACC 305	ACC 205	
Drawing	ART 335	ART 135	
Painting	ART 340	ART 140	
Astronomy	AST 322	AST 222	
Genetics	BIO 302	BIO 150	Introduction to Genetics
Biology of Aging	BIO 305	BIO 224	
Nutrition and Health	BIO 337	BIO 222	
Law of Business Transactions	BUS 305	BUS 105	
Projects in Business	BUS 477	BUS 492	
Essentials of Chemistry	CHE 300	CHE 110	
Writing for New Media	COM 340	COM 240	
Advanced Technical Communication	COM 406	COM 495	Senior Practicum in Communication
Digital Photography and Imaging	COM 412	COM 212	
Object-Oriented Programming	CS 109	CS 249	
Software Engineering Projects	CS 357	CS 371	
Computer Systems & COBOL Prog.	CSC 302	IS 305	Application Prog. with COBOL
Computer Systems & Pascal Prog.	CSC 304	CS 108	Computing Fundamentals
UNIX Programming Environment	CSC 307	CS 307	
Programming Methodology	CSC 309	CS 309	
Data Analysis	CSC 311I	CS 311	
Introduction to Internet Tools in Windows	CSC 324	CS 324	
Machine Structures	CSC 332	CS 220	Computer Organization
Data Structures	CSC 340	CS 240	Data Structures & Algorithms
Logic Design	CSC 345	CS 345	
LISP Programming	CSC 348	CS 348	
Database Management	CSC 350	IS 325	Database Mgmt Systems
Web Development and Internet Programming	CSC 351	CS 351	
Software Engineering	CSC 355	CS 370	
Decision Support Systems	CSC 360	IS 330	Decision Support & Intel. Sys.
E-Commerce	CSC 371	IS 340	
Introduction to the Theory of Computing	CSC 377	CS 377	
UNIX System Administration	CSC 407	CS 407	
Software Project Management	CSC 409	CS 409	
Numerical Computing	CSC 420	CS 420	
Computational Linear Algebra	CSC 421	CS 421	
Principles of Programming Languages	CSC 431	CS 431	
Computer Systems Architecture	CSC 441	CS 441	
UNIX Network Programming	CSC 445	CS 445	
Local Area Network Architecture	CSC 446	CS 446	
Computer Graphics	CSC 450	CS 450	
Distributed Systems	CSC 451	CS 451	
System Simulation	CSC 454	CS 454	
Techniques of Systems Analysis	CSC 465	IS 320	Systems Analysis & Design
Database Programming	CSC 470	IS 470	
Algorithms	CSC 477	CS 477	
Compiler Design	CSC 480	CS 480	
Cooperative Work-Study in Computer Science	CSC 489	CS 489	
Selected Topics in Computer Science	CSC 490	CS 490	
Independent Study	CSC 491	CS 491	
Introduction to Artificial Intelligence	CSC 495	CS 495	Artificial Intelligence
Microstation	CTC 312	CTC 212	
AutoCAD	CTC 313	CTC 213	
Construction Methods	CTC 375	CTC 275	
Theory of Price	ECO 310	ECO 110	Microeconomics
Theory of National Income and Employment	ECO 312	ECO 112	Macroeconomics
Digital Logic Design	EE 251	ECE 251	
Computer Organization and Microprocessors	EE 252	ECE 252	
Electric Circuits	EE 260	ECE 260	
Electrical Engineering Seminar I	EE 281	ECE 281	Electrical & Computer Engr Seminar I
Signals and Systems	EE 301	ECE 301	
Electronics I	EE 315	ECE 315	
Electromagnetics	EE 323	ECE 323	
Semiconductor Devices	EE 332	ECE 332	
Control Systems	EE 361	ECE 361	
Communications Systems	EE 377	ECE 377	
Electrical Engineering Seminar II	EE 382	ECE 382	Electrical & Computer Engr Seminar II

Junior Design Laboratory	EE 387	ECE 387	
Signal Processing	EE 402	ECE 402	
Control Systems II	EE 462	ECE 462	
Senior Project I	EE 487	ECE 487	
Senior Project II	EE 488	ECE 488	
Special Topics in Electrical Engineering	EE 490	ECE 490	Special Topics/Elec&Computer Engr
Independent Study	EE 491	ECE 491	Independent Study/Elec&Computer Eng
Creative Writing	ENG 305	ENG 205	
Ecology	ENV 100	BIO 105	Introduction to Ecology
Weather and Climate I	ENV 310	ENV 210	
Introduction to Physical Geology	ENV 315	ENV 115	
Electrical Theory & Design	ETC 301	ETC 101	
Electronics I	ETC 102	ETC 103	
Operational Amplifiers & Linear Electronics	ETC 104	ETC 203	Electronics II
Electrical Fundamentals	ETC 105	ETC 102	Electric Circuits
Digital Systems I	ETC 110	ETC 210	
Operational Amplifiers & Linear Electronics	ETC 304	ETC 104	
Electrical Fundamentals	ETC 305	ETC 105	
Digital Systems I	ETC 310	ETC 110	
Advanced Digital Systems	ETC 311	ETC 265	Digital Systems II
Digital Filters	ETC 493	ETC 437	
Perspectives on Knowledge	FRC 101	IDS 101	
Nature and Culture	FRC 102	IDS 102	Art and Culture
Science, Technology and Human Values	FRC 103	IDS 103	
Understanding Human Nature	GEN 304	GEN 204	
The Ocean World	GOG 300	GOG 200	
Intro to the Health Info Mgmt Field	HIM 300	HIM 100	
Medical Terminology	HIM 311	HIM 111	
Pathophysiology for HIM	HIM 312	HIM 212	
Data Analysis for Health Info	HIM 320	HIM 220	
Amer.His.- Colonies to Reconstruction	HIS 301	HIS 101	
Amer.His.- Reconstruction to Present	HIS 302	HIS 102	
Latin American Civilizations	HIS 340	HIS 240	
History of Modern Europe	HIS 350	HIS 150	
Health Care Delivery in the US	HSM 301	HSM 201	
Management for the Health Professions	HSM 411	HSM 311	
Manufacturing Processes	ITC 111	ITC 211	
Statics in Machinery	ITC 318	ITC 218	Statics
College Mathematics	MAT 311	MAT 111	
Elements of Calculus	MAT 312	MAT 112	
Finite Math for Computer Science	MAT 313	MAT 115	
Precalculus	MAT 320	MAT 120	
Calculus I	MAT 321	MAT 121	Calculus for Engr. Tech. I
Calculus II	MAT 322	MAT 122	Calculus for Engr. Tech. II
Calculus III	MAT 323	MAT 253	
Applied Statistical Analysis	MAT 325	MAT 225	
Differential Equations	MAT 330	MAT 230	
Manufacturing Processes	MTC 111	MTC 211	
Statics in Machinery	MTC 318	MTC 218	Statics
Strength of Materials	MTC 322	MTC 222	
World Religions	PHI 330	PHI 130	
General Physics I	PHY 301	PHY 101	
General Physics II	PHY 302	PHY 102	
Calculus Based Physics I	PHY 303	PHY 201	
Calculus Based Physics II	PHY 304	PHY 202	
Calculus Based Physics III	PHY 305	PHY 203	
Electromagnetism	PHY 401	PHY 371	
Introductory Quantum Mechanics	PHY 415	PHY 381	
Intermediate Mechanics	PHY 420	PHY 361	
American Public Policy	POS 310	POS 110	
The Politics of Life and Death	POS 352	POS 252	
Principles of Psychology	PSY 303	PSY 100	
Abnormal Psychology	PSY 322	PSY 222	
Social Psychology	PSY 342	PSY 242	
Learning and Motivation	PSY 362	PSY 262	
Dying, Death and Bereavement	PSY 373	PSY 273	
Introduction to Sociology	SOC 103	SOC 100	
Social Problems	SOC 300	SOC 110	
Sociology of the Family	SOC 322	SOC 210	
Elementary Spanish	SPA 301	SPA 101	
Statistical Methods	STA 300	STA 100	
Applied Statistical Analysis	STA 325	STA 225	
Introduction to Telecommunications	TEL 300	TEL 100	
Basic Voice Communications	TEL 301	TEL 201	
Basic Data Communications	TEL 305	TEL 205	

Courses

The courses described in this catalog are expected to be taught within the 2007-2009 academic years. SUNYIT reserves the right to cancel any course when the enrollment is insufficient to support it. The right is also reserved not to offer a course if resources become unavailable, or if the course has been dropped from the curriculum since the last printing of the catalog.

SUNYIT also reserves the right to change faculty assignments, and therefore cannot guarantee students the faculty of their choice.

Additional information can be secured by contacting the Registrar's Office, SUNY Institute of Technology, P.O. Box 3050, Utica, New York 13504-3050. Telephone 315-792-7265.

Courses approved to meet the new General Education requirements are so noted at the end of the course description. Students using old general education requirements should confer with either their advisor or the Registrar's Office for applicable courses.

Accounting

ACC 201 Introduction to Financial Accounting (4)
An accelerated introduction to accounting theory, including the nature and need for accounting principles and accounting concepts. Coverage includes financial statement preparation and analysis, internal control, and accounting systems.

ACC 205 Managerial Accounting (4)
Controller use of accounting data to assist with decisions on budgeting, factor and product combinations, pricing, and for performance evaluation of segments of the firm. Prerequisites: ACC 201, MAT 111 or equivalents, or permission of instructor.

ACC 310 Income Tax I (4)
Analysis of federal income tax legislation and IRS interpretations affecting individuals' returns. This includes analysis of accounting methods used to determine gross income, deductions, capital gains/losses, and business income. Also includes instruction on availability and use of tax services. Prerequisite: ACC 201 or equivalent.

ACC 311 Income Tax II (4)
Impact of federal tax legislation and IRS regulation on taxation of corporations, partnerships, estates and trusts. Special attention is given capital gains/losses, normal tax and surtax, income and deductions of domestic and international/multi-national organizations. Prerequisite: ACC 310 or equivalent.

ACC 312 Accounting Systems & Computer Applications (3)
Introduces students to topics in the area of accounting information systems. In addition to gaining exposure to commercially used accounting packages, students will gain an understanding of system documentation techniques including data flow diagrams, flowcharting, and E-R diagrams; internal control design and assessment; database design; information acquisition; and transactional accounting systems and accounting cycles. Prerequisite: ACC 201 or equivalent and computer literacy.

ACC 320 Accounting for Not-for-Profit Organizations (3)
Accounting principles and procedures as applied to not-for-profit entities. Accounting and financial management procedures for governments, health facilities, educational institutions, and charitable organizations. Prerequisite: ACC 201.

ACC 370 Cost Accounting (3)
Cost accounting and related analytical concepts. Topics include cost accumulation, variance analysis, joint costs, and standard costing. Prerequisite: ACC 201 or equivalent.

ACC 385 Intermediate Accounting I (4)
An advanced theory course in accounting, including problems in corporation accounting, evaluation of items on the balance sheet, and statement of income. The course emphasizes the opinions, statements, and other current publications of the American Institute of Certified Public Accountants and the Financial Accounting Standards Board. Prerequisite: ACC 201 or equivalent.

ACC 386 Intermediate Accounting II (4)
Continuation of Intermediate Accounting I. Topics include Stockholder's Equity and more complex accounting topics, including accounting for pensions, leases and income taxes, and the Statement of Cash Flows. Prerequisite: ACC 385 or equivalent.

ACC 430 Financial Management for Health Care Organizations (3)
Students will acquire a working knowledge of cash flow projections, budgeting, cost accounting and control and evaluation techniques for not-for-profit organizations. Case study analysis and presentations will be the primary instructional method. Students will learn to use an electronic spread sheet to assist in analyzing case studies. Cross listed with HSM 435. Prerequisite: ACC 201 or equivalent.

ACC 450 Auditing (4)
Auditing standards and techniques used in audit engagements; preparation of audit working papers and audit reports. Prerequisite: ACC 386 or equivalent.

ACC 471 Advanced Management Accounting (3)
Students will learn techniques for budgeting, cost-volume-profit analysis, segment evaluation and analyzing operating constraints. They will research and develop solutions to various advanced management accounting problems through case studies and problems from the CMA Exam. Finally, the students will present their analysis and recommendations orally and in writing. Cross listed with ACC 571. Prerequisite: ACC 205 or ACC 370 or equivalent.

ACC 475 Advanced Accounting Problems (4)
Advanced accounting problems cover partnerships, home office and branch relationships, fiduciary accounting, governmental and institutional units, consolidated financial statements, corporate mergers and acquisitions, and other advanced problems. Prerequisite: ACC 386 or equivalent.

ACC 480 CPA Problems I (4)
To assist students preparing for careers in public accounting, emphasis is placed on analysis required in examinations preliminary to expressing a professional opinion as to fairness; includes examination procedures and methods of reporting results. Prerequisite: Permission of instructor. Cross listed with ACC 580.

ACC 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

ACC 492 Accounting Internship (4)
Supervised, discipline related experience in a business organization. Emphasis is on application, process, and techniques used by business to sustain business and promote growth. Specific skills and competencies needed to be a successful decision-maker will be targeted. Oversight will be provided by the School internship coordinator and the sponsoring organization. Periodic meetings with the supervisor, mid-semester evaluation, and a final, comprehensive written report are required. Prerequisite: Permission of instructor.

Anthropology

ANT 301 General Anthropology (4)
Examines the general characteristics of a holistic cultural approach. Presents a general theory of human cultural development. Places specific anthropological issues, such as the origin of gender roles, inequality, and the nature of the state, in theoretical and cross-cultural perspective. Integrates data from cultural anthropology, linguistics, biological anthropology, archaeology, and applied anthropology research and practices where appropriate. Designed for upper division students with no previous background in anthropology. Meets new General Education Social Science requirement.

ANT 303 Cultural Diversity (4)
Examines the nature of social and cultural systems of diversity. Investigates cultural practices Relevant to the constitution of such social constructs as race, class, gender and sexuality. Emphasizes the processes through which such ideas, products and culturally and historically constructed social worlds, become parts of a taken-for-granted social universe. Integrates the relationship between conceptions of race, class and gender and sociological and anthropological practice. Meets new General Education Social Science requirement.

ANT 310 Introduction to Cultural Anthropology (4)
Provides an understanding of contemporary human issues through the study of diverse human cultures, with an emphasis on non-Western societies and practices. Basic concepts and ethnographic techniques practiced by cultural anthropologist are presented. Topics include family, language, kinship, health, gender, economics, politics, ecology, art and religion. Examination of issues such as globalization and the study of online communities and cultures.

ANT 320 Social Policy (4)
Examines various attempts to apply social science knowledge to address social problems and bring about appropriate change in human behavior. Explores the process by which social policy is developed and implemented. Examples taken from both the United States and other cultures. Among possible topics are social service, needs assessment, health and healing, work, education, and technological change. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

ANT 321 Distinction: Race, Class and Gender (4)
Examines the nature of social and cultural systems of distinction. Investigates cultural practices relevant to the constitution of such social constructs as race, class, gender and sexuality. Emphasizes the processes through which such ideas, products of culturally and historically constructed social worlds, become parts of a taken-for-granted social universe. Integrates the relationship between conceptions of race, class and gender and sociological and anthropological practice. Prerequisite: ANT 301 or SOC 110, or an introductory anthropology or sociology course. Restricted to Sociology and Criminal Justice majors.

ANT 371 People and Systems: Cultural Perspectives on Information Practice (4)
Presents the general concepts essential to a cultural perspective on information practice, including awareness of how information activities are mediated by cultural constructs and are developed within pre-existing socio-technical frameworks. Examines the results of research and reflection from a variety of relevant fields which document and illuminate the social and cultural dimensions of the evolving cyberspace and information applications like system development. Illustrates how to combine these results and reflections into analyses of why systems succeed or fail and how to incorporate into system development work specific tools which increase the likelihood of system success like participatory design. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

ANT 382 Cultures, Health and Healing (4)
Presents the essential elements of a cultural perspective through examination of health and illness-related behavior. Places disease and illness in holistic perspective. Explores specific issues in medical anthropology, such as the way various cultures conceive disease and illness, cross-cultural conflict in health care delivery, industrial and non-industrial approaches to therapeutic intervention, the relationship of disease and human evolution, and alternative approaches to the study of such issues. Assumes no previous study in anthropology, although this would be helpful. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

ANT 460 Ethnography (4)
Provides an intensive survey of ethnographic practice in anthropology, sociology, and other fields. Examines a wide range of ethnographic materials focusing on the actual production of ethnographic materials including the use of "participant observation," the collection and making of the ethnographic text, questions of ethics in field work practice, and recent relevant feminist and postmodern discussions. Provides students' with the skills and information required in fieldwork practice. Covers specific projects that require students to generate primary field data and complete an analysis of this data using one or several of the theoretical perspectives covered during the semester. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course. Cross listed with ANT 531.

ANT 490 Selected Topics in Anthropology (4)
An in-depth treatment of a selected topic in Anthropology. Provides students with the opportunity to investigate Anthropologial subject matter that will not be repeated in a future seminar. Prerequisities: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

ANT 491 Independent Study (Variable Credit 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisite: Matriculated student only, permission of instructor and dean of subject area.

Art

ART 120 Studio Art: Visual and/or Performing (2)
An introduction and hands-on experience with the style and techniques of a visiting artist. Suitable lecture/demonstration of background and personal approach to the work will be shared by the artist. Students in a studio/workshop type of environment will participate in sequential exercises designed to allow them adopt and adapt some of those stylistic elements and/or features in their own work (visual and/or performing). Meets new General Education Arts requirement.

ART 135 Drawing (2)
This is a beginning course in free-hand drawing for the layperson. The student will be guided through a sequence of lessons beginning with line quality, the vocabulary of lines, and proceed through drawing materials and techniques, foreshortening and shading. Emphasis will be placed on the representation of forms in drawing. Lessons will consist of lecture-demonstrations, class work, and homework. The expected result is to provide the student with more confidence in the self-expression and appreciation of drawing. Meets new General Education Arts requirement.

ART 140 Painting - Technique & Style (2)
An investigation of visual art forms and techniques that influence and express qualities of American culture. Aspects of design, color and style will be explored through studio experience, lecture, slides, and demonstrations, to enable the student to use the elements of line and color to create visual space on a flat surface. Meets new General Education Arts requirement.

ART 210 Principles of Two Dimensional Design (4)
A foundation studio course focusing on the visual dynamics of the two-dimensional picture plane, with special attention on the application of basic design principles to problem-solving in the fine and applied arts. Explores a variety of hands-on techniques pertaining to image creation,

manipulation, and construction including space, line, shape, value, texture, color, and their design relation to one another. Combining technical and artistic skills, students will create 5-8 portfolio pieces. It is strongly recommended that students have taken or are taking concurrently a studio drawing course. Meets new General Education Arts requirement.

ART 341 Painting II - Techniques & Style (2)
Continuation of the investigation of visual art forms and techniques for students who wish to improve visual literacy. Students will explore several major styles in the modern Western tradition, applying and experimenting with the brush and pigment techniques through which those styles are achieved. Meets new General Education Arts requirement.

ART 350 History of American Art (4)
A survey of important trends and significant styles of American painting and sculpture from colonial times, including works of Sargent, Whistler, Homer, Inness, Johns, and Pollock. Lectures, slides, and museum tours. Meets new General Education Humanities or Arts requirement.
Astronomy

Astronomy

AST 222 Astronomy (4)
A survey of the nature of celestial bodies within the solar system, as well as constellations and phenomena in and beyond our galaxy. Also covered are comets, meteoroids, asteroids, black holes, quasars, pulsars, supernovae, star clusters, and double stars. Meets new General Education Natural Sciences requirement, but does not meet the SUNYIT laboratory science requirement.

Biology

BIO 101 Introduction to Biology (4)
Biological issues are at the forefront of public attention, from cloning to climate change to conservation, and understanding these issues takes an increasing amount of scientific literacy as the issues become more complex. Covers the scientific knowledge base behind many of these issues, and also explores current areas of agreement and contention and applications of these data in technology and society. Meets new General Education Natural Science requirement or the SUNYIT Laboratory Science requirement.

BIO 105 Introduction to Ecology (4)
Study of interactions living organisms have with their physical and biological environments. Special attention is given to population dynamics, pollution control, and the consequences when ecological systems are disturbed. Meets new General Education Natural Science requirement, but does not meet the SUNYIT Laboratory Science requirement.

BIO 122 Insects and Society (4)
Examines the impact of insects on human society. Provides an overview of the biology and ecology of the major insect orders and addresses the influence of insects on history, beliefs, folklore, medicine, agriculture, art, music, literature, and the importance of insects in human well-being. Meets new General Education Natural Science requirement, but does not meet the SUNYIT Laboratory Science requirement.

BIO 130 Plant Biology (4)
Plants provide us with oxygen, food, and most of the raw materials we use; they form the very basis of life as we know it. Addresses current issues and technologies surrounding plants, including bioengineered food, botanical forensics, and the interaction of plants and climate change, and examines the structure, classification, and physiology of plants. Meets new General Education Natural Science requirement or SUNYIT Laboratory Science requirement.

BIO 215 Anatomy & Physiology I (4)
Covers the various systems of the human body. The first semester emphasizes the anatomy and physiology of cells, the integumentary, skeletal, muscular and nervous systems. Laboratory studies include the skeletal system using articulated and disarticulated human skeletons, tissues using prepared slides, and the nervous system using preserved specimens and physiological exercises. Three lecture hours and three laboratory hours per week. Prerequisites: BIO 101 and CHE 110 or permission of instructor. Meets the new General Education Natural Science requirement.

BIO 216 Anatomy & Physiology II (4)
Covers the various systems of the human body. The second semester emphasizes the anatomy and physiology of the autonomic nervous system, circulatory system, respiratory system, urinary system, acid-base balance, digestive system, endocrine system and reproductive system. Laboratory studies include the musculature of a cat, circulatory system, respiratory system, urinary system, digestive system and reproductive system. Dissections of a cat and cow hearts will be performed. Tissue studies will use prepared slides. Respiratory volumes will be measured and EKG's will be recorded using IWORX. Three lecture hours and three laboratory hours per week. Prerequisite: BIO 215. Meets the new General Education Natural Science requirement.

BIO 222 Nutrition and Health (4)
Examines the nature of nutrients, their metabolism and physiological function, and the factors that may influence the degrees to which these nutrients are required for healthy functioning. Nutritional health issues and the influence of drugs and environmental factors on nutrition and health will be emphasized. Meets new General Education Natural Science requirement.

BIO 224 Biology of Aging (4)
Introduces biological concepts with emphasis on the process of aging. Topics include demographics, concepts of aging, anatomy and physiology as well as general non-medical assessments of the elderly. Students cannot receive credit for both BIO 350 (Advanced Physiology) and BIO 305. Meets new General Education Natural Science requirement.

BIO 225 Biology of the Sexes (4)
Examines the genetic and physiological basis of male and female differentiation in different organisms, the evolution of reproduction as a genetic strategy, physical differences of the sexes and parenting in mammals. Addresses how societal constructs of gender have influenced the development of theories in various scientific disciplines and the roles of gender for scientists. Meets new General Education Natural Science requirement, but does not meet the SUNYIT Laboratory Science requirement.

BIO 275 Microbiology (4)
Covers the fundamentals of microbiology including the study of bacteria, viruses, fungi, algae and protozoa as well as microbial structure, metabolism, culturing, control and genetics. Basic laboratory skills and microscopy techniques are also included. Three hours of lecture and three hours of laboratory per week. Prerequisites: BIO 101 and CHE 110 or permission of instructor.

BIO 310 Evolution (4)
Introduction to evolutionary theory. Includes the historical development of components of evolutionary theory, population level microevolution, the fossil record and macroevolution, and current methods in evolutionary research including their application to genetic engineering. Meets new General Education Natural Science requirement, but does not meet the SUNYIT Laboratory Science requirement.

BIO 350 Advanced Physiology (4)
An integrated study of human physiology at the biochemical, cellular, tissue, and organ level. Designed primarily for upper division science and nursing majors. Emphasis will be on explanation of biochemical and cellular mechanism in the major organ systems of the human body. Prerequisite: BIO 216 or permission of instructor. Does not meet the SUNYIT Laboratory Science requirement.

Business

BUS 101 Introduction to Business (4)
A survey course that will provide an introduction to current business practices in a changing global economy. Includes an overview and introduction to the functional areas in American business such as accounting, finance, marketing, management, human resources, and production. Selected business topics will be covered to illustrate how the concepts, structures, and theories are related within business. Enrollment is restricted to freshmen/sophomore students or by permission of instructor.

BUS 105 Law of Business Transactions (4)
A case-approach analysis of business transactions in the legal environment. Coverage includes: court structure and processes, contracts, sales, commercial paper, secured transactions, and property transactions. Related local, state, and federal statutes and forms are also considered.

BUS 302 Web Analytics for Managers (2)
Focuses on the methods and concepts that today's business managers can use to effectively manage their electronic commerce site activity. Through gaining a better understanding of web analytics, managers become better informed of their company's online activities, enabling them to improve their marketing, sales and profit results. Examines the various ways that web activity is measured and analyzed, including the metrics that provide the essential data for analysis and the technologies that are used to track and report web activity.

BUS 306 Business Law II (3)
Designed to extend the student's legal knowledge of business transactions by stressing issue recognition and case analysis. Topics covered include agency, property, suretyship, legal liability, bankruptcy, and business organization. Prerequisite: BUS 105.

BUS 310 Principles of Insurance (4)
Introduction to basic principles of life, health, property, liability, and other forms of insurance from the viewpoint of the purchaser. Emphasis will be on universal insurance concepts and not specific policy provisions. Consideration is given to the importance of risk in personal and business transitions and various methods of handling risk with emphasis on insurance.

BUS 345 Real Estate Transaction (4)
The principal purpose is to develop an understanding of the legal framework and basic principles that apply to real estate transactions. Residential and commercial real estate transactions will be examined in detail. Specific legal issues are presented in a problem-solving format and may include: introduction to real estate, recording statutes, title abstracting and title insurance, survey and legal descriptions, mortgages, leases, deeds of conveyance, settlements and closings and Real Estate Settlement Procedures Act.

BUS 375 Entrepreneurial Functions (4)
A classroom opportunity to understand small business and become familiar with actual functions of entrepreneurship. The course is aimed at highlighting those responsibilities and challenges a college graduate will be exposed to when gaining employment. It will offer a more detailed understanding of operational functions to the average business person, and it will offer a new or potential entrepreneur an insight into the future.

BUS 385 E-Commerce Using the Internet (4)
E-commerce provides entrepreneurs with a vast, evolving medium for engaging in all phases of business activity. New business opportunities are literally evolving with the introduction of new technological developments. As pioneers in this exciting new dimension of business, students will study trends that have evolved, learn what methods and standards currently exist, learn how to analyze existing business web activity, and develop web business strategies for launching their own business activities on the net. Both classroom and computer laboratory are integrated providing a real-time learning by doing environment.

BUS 420 Employee Benefits (4)
Concepts of group life, health, retirement, and emerging employer sponsored benefit plans. Emphasis is on plan design and management with special attention to cost funding, regulation and tax considerations. The impact of government programs such as Social Security on individual insurance and employee benefit programs and potential impact of proposals such as national health insurance. Prerequisite: MGT 318.

BUS 451 Issues in Business and Society (4)
Analysis of forces external to the firm which influence its goals, structure and operation. Includes legal and regulatory constraints, primarily as they reflect the philosophical backgrounds of free enterprise and managerial enterprise, and managerial enterprise viewpoints current in American business. Also, the social, political, and technological factors which influence managerial/non-managerial behavior in the firm, and the firm's impact on society. Actual cases influencing the firm or industry objectives, and the philosophy of private enterprise will dominate the subject matter.

BUS 485 Management Policy (4)
Emphasis is placed upon analysis of the factors upon which ultimate business decisions are made; construction and review of business plans, and business strategies in domestic and foreign operations under varying political, economic and legal constraints. Special attention is given to actual situation analysis. Current functional and managerial techniques are applied to a variety of case problems. Prerequisites: Senior status and completion of all business core requirements.

BUS 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only; permission of instructor and dean of subject area.

BUS 492 Business Internship (4)
Supervised, discipline based experience in business organization. Emphasis on application, process, and techniques used by business to sustain and promote growth. Specific skills and competencies needed to be a successful decision-maker are targeted. Oversight provided by the School internship coordinator and the sponsoring organization. Periodic meetings with the internship coordinator, mid-semester evaluation and a final, comprehensive written report are required. Pre-requisite: Permission of Instructor. Only S/U grades are awarded for this course.

Chemistry

CHE 110 Essentials of Chemistry (4)
An introduction to chemistry for non-majors. The course will cover some key topics in chemistry, with emphasis on its impact on society. Course includes three hours of lecture and three hours of laboratory per week. Meets new General Education Natural Science requirement or the SUNYIT laboratory science requirement.

Chinese

CHI 101 Elementary Chinese (4)
Designed for students with no previous knowledge of Chinese. Introduces students to the official Chinese language called "Mandarin" by English speakers, putonghua in the People's Republic of China, and Kuo-yu in Taiwan. The course aims to help students obtain the four basic language skills of listening, speaking, reading and writing the Chinese language. Students will learn basic vocabulary and sentence structures for use in essential daily-life situations through various forms of oral practice. Pinyin (the most widely-used Chinese phonetic system) will be taught as a tool to learn the spoken language. Students will also learn Chinese characters. Approximately 200 words and expressions in both Pinyin and character forms will be taught. While linguistic aspects of the Chinese language are the primary focus, introduction to the social and cultural background of

the language will also form an important part of the course. Meets the new General Education Foreign Language requirement.

Civil Engineering Technology

CTC 101 Introduction to Engineering Technology (2)
Required for all freshmen in Civil Engineering Technology. Topics include academic requirements, advisement, software packages, career opportunities, and project management. Additional topics include professional, ethical and social responsibilities; respect for diversity and a knowledge of contemporary professional, societal and global issues; and a commitment to quality, timeliness and continuous improvement. Cross listed with ITC/MTC 101.

CTC 218 Statics (2)
Analysis of equivalent systems of forces, free body diagrams, equilibrium of particles and rigid bodies, centroids, friction, and forces in structures. Two hours of lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisites: PHY 101 and MAT 120. Cross listed with MTC 218 and ITC 218.

CTC 212 Microstation (2)
Basics of CAD as applied to civil engineering technology using Microstation software for typical civil technology applications such as: structures design drawings, highway layouts, detailing, etc. One hour of lecture and two hours of laboratory per week. Prerequisite: Basic understanding of geometry and trigonometry.

CTC 213 AutoCAD (2)
A refresher course in the basics of AutoCAD as applied to civil engineering technology using AutoCAD software for typical civil technology applications such as: structural design drawings and details, highway layouts, etc. One hour of lecture and two hours of laboratory per week.

CTC 222 Strength of Materials (2)
Effect of shape and composition on strength of materials. Moments of inertia, shear forces and bending moments in beams, torsion of shafts, thermal expansion, and pressure vessels. Two hours lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisites: PHY 101 and MAT 120 and MTC 218. Cross listed with MTC 222.

CTC 260 Hydrology (2)
Introductory course in surface water hydrology. Topics include watershed delineation, unit hydrographs, IDF curves, time of concentration and routing. The rational and TR-55 methods will be used to determine peak flows.

CTC 261 Hydraulics (2)
Introductory course in applied hydraulics. Topics include fluid statics, buoyancy, open channel flow, conduit flow, culvert hydraulics and design, storm water systems. Prerequisite: CTC 218.

CTC 275 Construction Methods (4)
Provides students with an overview of the methods and materials used in the construction industry. It will look at the equipment, materials, and methods used to construct buildings and roads. The lab will focus on field trips and small building projects to give students a hands-on feel for the construction industry. Three hours of lecture and two hours of laboratory per week. Students may not receive credit for both CTC 375 and CTC 413 or CTC 414.

CTC 301 Professionalism in the Work Place (2)
Topics include lifelong learning; professional, ethical and social responsibilities; respect for diversity and a knowledge of contemporary professional, societal and global issues; and a commitment to quality, timeliness, and continuous improvement. Cross listed with ITC 301 and MTC 301.

CTC 320 Structural Analysis (4)
An investigation of the analysis of both determinate and indeterminate structures. Emphasis is placed on application of the principles of mechanics on the analysis of structural systems. Three hours of lecture and two hours of laboratory per week. Lab hours will be used for experiments and problem solving using computer applications. Prerequisite: CTC 218 and CTC 222or equivalents.

CTC 340 Transportation Analysis (4)
Introductory course to Transportation Engineering. Topics include highway design, traffic analysis, capacity planning, and computer modeling. Three hours of lecture and two hours of laboratory per week. Prerequisite: 275. Pre/Corequisite: MAT 121.

CTC 415 Construction Estimating and Scheduling (4)
Teaches students the basic concepts of estimating and scheduling construction projects. Students will learn how to estimate quantities, determine project length, and determine labor and equipment needs. Group projects during lab times will allow students to gain practical experience. Three hours of lecture and two hours of laboratory per week. Students may not receive credit for both CTC 370 and CTC 415. Prerequisite: CTC 275 or equivalent or permission of instructor.

CTC 422 Design of Steel Structures (4)
The design of steel structures from conceptual design through the production of contract documents. Emphasis is placed on application of the AISC Code (Allowable Stress Design) and applicable building codes to steel structures using conventional and computer-aided methods. Course consists of three hours of lecture and two hours of laboratory per week. Prerequisite: CTC 320.

CTC 424 Design of Concrete Structures (4)
The design of reinforced concrete structures from conceptual design through the production of contract documents. Emphasis is placed on application of the ACI Code and applicable building codes to concrete structures using conventional and computer-aided methods. Course consists of three hours of lecture and two hours of laboratory per week. Prerequisite: CTC 320.

CTC 430 Engineering Dynamics (4)
Kinematics of particles and rigid bodies. Kinetics of particles and rigid bodies with translation, rotation and plane motion using the methods of force - mass - acceleration, work-energy, and impulse momentum. Three hours of lecture and two hours of laboratory per week. Cross listed with MTC 430 and ITC 430. Prerequisite: CTC 218 or equivalent. Pre/Corequisite: MAT 122 or equivalent.

CTC 440 Highway Design (4)
Course emphasizes the highway design process using conventional and computer methods. Industry standard design handbooks and software are used to complete a highway design project involving site planning, earthwork, geometric design, pavement design, cost estimating and project management. Three hours of lecture and two hours of laboratory per week. Prerequisites: Surveying and familiarity with CAD software.

CTC 450 Water and Wastewater Systems (4)
Topics include water quality, water supply systems, wastewater systems, solid waste management, and pollution control. Three hours of lecture and two hours of laboratory per week. Prerequisites: CTC 260 and CTC 261, or equivalent.

CTC 461 Fluid Mechanics and Systems (4)
Introduction to fluid mechanics. Study of the principles of statics and dynamics applied to fluids. Some of the topics covered are: Pressure variation in fluids, flow in conduits, flow measurements, special topics in fluid mechanics, etc. Three hours of lecture and two hours of laboratory per week. Students may not receive credit for both CTC 461 and MTC 461. Pre/Corequisite: MAT 122 or equivalent.

CTC 465 Special Topics in Civil Technology (Variable 1-4)
A study of a selected topic of interest to civil technologists which will enhance the student's ability to practice in his/her profession.

CTC 470 Construction Administration (4)
Advanced course in the responsibilities and risk associated with project management within the construction industry. Subjects addressed relate to special problems encountered in construction and the management

of those problems. Special emphasis is given to responsibilities, relationships between owners, contractors and labor, construction safety and construction contracts. Prerequisites: CTC 275 or permission of instructor.

CTC 475 Economic Analysis in Technology (4)
Methods for choosing between alternatives based on the time value of money. Replacement studies, depreciation and after-tax analysis, risk, uncertainty and sensitivity analysis. Cross listed with ITC 475 and MTC 475.

CTC 476 Finite Element Applications (4)
Concepts of Finite Element Analysis and their applications. Analysis of determinate and indeterminate structures, bar, truss, plate, and shell elements. Condition of plane stress and plane strain. Model generation to include fluid flow, combined elements and automatic meshing. Extensive use of ALGOR software. Three hours of lecture and two hours of laboratory per week. Cross listed with MTC 476. Prerequisite: CTC 218, CTC 222, MAT 122 and a formal course in computing or permission of instructor.

CTC 490 Capstone Design (3)
Provides students with the opportunity to work as part of a multi-disciplinary Civil Engineering Technology design team. The course will consist of a design project with presentations and reports. Lectures in professional practice and teaming will augment the design project. Two hours of lecture and two hours of laboratory per week. Prerequisites: Senior standing and at least 2 of the following: CTC 422, CTC 424, CTC 340, CTC 440, CTC 415, CTC 470, or permission of instructor.

CTC 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

CTC 492 Internship/Co-Op Assignment (2 or 4)
Provides part-time supervised experience in a professional atmosphere which supplements classroom instruction. Two written reports on the work experience and two supervisor's evaluations required. One site visit or conference call planned. Required contact hours min. 150. Prerequisite: Permission of instructor. Free elective; CANNOT be counted as a technical elective. Course is graded as satisfactory/unsatisfactory.

Communication

COM 106 Introduction to Technical Communication (4)
An introduction to the field of technical communication focusing on technical writing. Students will create technical documentation of a current project or concern on campus, usually in the form of a proposal for changes. The class is highly writing-intensive; students review and edit each other's work in class. Restricted to Professional and Technical Communication majors.

COM 206 Ethnographic Writing (4)
Uses writing to explore cultures. Students will study the observation and research of human behavior and will do field writing, reflective writing, and formal reports. A semester-long ethnographic project, conducted by small teams, will be presented to the class. Prerequisite: ENG 101 or equivalent.

COM 212 Digital Photography and Imaging (4)
Explores concepts and techniques in electronic photography and imaging. The class will build and reinforce critical digital imaging skills such as image manipulation, light effects, scanning, color correction and special effects. Combines design theory and hands-on work, introducing students to basic aesthetic issues in photography and image manipulation and the ethical concerns associated with the medium. Students will generate a portfolio of images based on specific themes. Meets the General Education Art requirement.

COM 213 Digital Animation (4)
Using a mix of theoretical and practical assignments, students will develop an understanding of the conceptual issues regarding animation while also producing an animation project. Students will create a set of storyboards, a simple animation with images, graphics, sound and special effects, and produce a video on various media, including a Web site. Students are expected to have a basic understanding of computer operating systems and will be expected to learn computer animation software while in the course. The animation software will be determined by the instructor at the time the course is taught.

COM 240 Writing for New Media (4)
The ability to write clearly and elegantly is a difficult skill to acquire, especially when new media such as the web and/or video are added in the mix. COM 240 is a writing course that covers both the practice of creating well-written and engaging text in a traditional format, as well as the art of shaping words that can harmoniously co-exist with evolving media. Students will learn to write effectively, to connect with their own inner voice, and to translate this voice into powerful and effective writing. This course will also place a strong emphasis on peer editing and will demand that students learn to not only make the distinction between good and mediocre writing but to formulate clear arguments that support their opinions. Assignments will cover the following types of writing: Hypertext, Web/Intranet writing, Video scripting, Non-linear creative writing, Weblog writing, Electronic literature, and Polymedia (digital environments that explore new ways to use language). Meets Upper Division Writing requirement.

COM 262 Online Politics (4)
The emergence of the Internet, and especially the Web, as a significant factor in American and global life has challenged traditional views of communication and politics. In this course, we use some core concepts of political communication, information design and technology, and deliberative democracy to examine the role of information technologies in candidate and issue campaigning, online voting, protest and advocacy movements, law-making and electronic governance. Students will be required to engage as participant-observers of a Web-based political activity using a methodological approach appropriate to their analysis. Cross listed with POS 262. Meets the General Education Social Sciences requirement.

COM 300 Oral Communication (4)
Designed to train students' capacity for oral communication, this course emphasizes research, organization, and presentation of speeches which inform, persuade, and entertain. Delivery, style, and audience analysis will be stressed. Small group discussions will aid the students to interact with others, and to apply the theories and techniques of debating. Extemporaneous speeches are also required and evaluated by the group.

COM 302 Presentational Speaking (4)
Students will submit a proposal and present a paper just as they would at a professional technical communication conference. Public speaking skills will be augmented with the latest graphic presentation skills and software. Students will research, write, and organize a talk to either persuade or inform an audience of technical communication professionals. This course is designated for technical communication majors; others on a space available basis. Students may not receive credit for both COM 302 and COM 300.

COM 303 Successful Library Research (1)
Research techniques for personal, professional and academic life. Develop skills and strategies for using Library tools to find and evaluate information for use in the classroom, home and job. Librarians will lead hands-on demonstrations of indexes, databases and search engines.

COM 305 Foundations of Communication/ESL (4)
Designed as a precursor to the core communication courses 300 & 306, the course gives students with ESL needs an opportunity to develop the language skills necessary for a complete technical education. Covers research-based technical writing and also develops fundamental

principles of effective oral communication and presentation. Purpose is to complement, not replace, other required communication courses. Eligibility to enroll will be determined by results of a placement test or by permission of the dean.

COM 306 Report Writing and Technical Communication (4)
Students will learn to communicate more effectively in a professional environment through ample practice with individual as well as group composed documents (i.e. memos, letters, instructions, proposals, and analytical reports) and the oral presentation of a formal report. Since the course is usually taught in a computer lab, word processing and computer graphics are used to enhance the reports. Meets Upper Division Writing requirement and new General Education Basic Communication requirement.

COM 307 Business Communications (4)
Business communication will give students preparation for effective writing in business and related fields. Because an understanding of persuasion is key to effective business communication, students will practice and master both audience and rhetorical analysis for all formal assignments, and the standards of formatting for various business documents. Specifically, students will write single and multiple audience routine and specialized correspondences using direct and indirect organization patterns, resumes and job letters, proposals, annotated bibliographies and multi-part research papers. Students will write graded and ungraded work individually and in teams, and part of the course will be devoted to self and team evaluation. A graded oral presentation will also be part of the class. Meets Upper Division Writing requirement.

COM 308 Analytical & Research Writing (4)
Students pursue a research project of their own design, using primary sources. Statistical and theoretical sources are analyzed in class and used in the research essay. Students keep a research log and practice a variety of research methods. Meets Upper Division Writing requirement and new General Education Basic Communication requirement.

COM 310 Technical Editing (4)
A study of the principles of editing and their application to a wide variety of documents. Students will complete two major projects, one in copyediting and one in comprehensive editing. For both projects, students work with documents and clients from off campus. Students edit many sample documents and review each other's work in class. Prerequisite: COM 306 or equivalent. Cross listed with IDT 531.

COM 311 Public Relations Writing (4)
Designed to teach students the basic concepts of effective public relations writing and to give them a solid foundation in the use of multiple communication tools that are used in the public relations industry. The emphasis is on media techniques, preparation of materials, and the dissemination of them through appropriate channels. Meets Upper Division writing requirement.

COM 316 Media and Communication (4)
The impact of the mass media (television, radio, journalism, film) upon American society is well-documented. Emerging technologies (computer-mediated communication, cable video, satellite communications) will further change the ways in which we communicate. Through study of communication theory, survey of traditional and new media, and creation of original media projects, students will explore the relevance of the new technologies to their own disciplines. Meets new General Education Humanities requirement.

COM 320 Information Design (4)
Students will be exposed to the nature of visual language and how designers use and readers process such information. Theories and research that relate to visual communication will be covered. Students will analyze and evaluate selected readings and examples; and students will use modern desktop publishing techniques to design and produce printed material. Additionally, the theory of design of online material will be discussed with particular emphasis on publication of World Wide Web home pages. Projects will include home page design and publication. Concepts covered earlier in the course will be applied to computer screen design. Prerequisite: Knowledge of basic computer skills.

COM 341 Video and Communication (4)
Examines the role of video in the new communication technologies through projects which use video for various applications: education, training, sales promotion, etc. Emphasis is placed on the design process and the many choices available to deliver a video-based message. The course will draw upon the Institute's Instructional Media studio capabilities. Pre/Corequisite: COM 342 is recommended, but not required.

COM 342 Field and Studio Video Production (4)
Covers the fundamentals of basic video and audio production. The student develops skills necessary to serve on production crews and operate a digital video camera. Also covers the fundamentals of video production with emphasis on direction, and operation of associated field equipment, developing the various skills necessary to produce quality video.

COM 350 Visual Thinking and Online Documentation (4)
Teaches students to evaluate, design, and develop online information. Students design an online tutorial that addresses human-computer interface and design issues covered in the course. Meets Upper Division Writing requirement.

COM 353 Newswriting (4)
Provides an introduction to the field of journalism. Students will participate in a group discussion about the newswriting process, from story ideas and development through to a close review of the final product. Students will develop story ideas and write articles suitable for publication. Prerequisite: Any Upper Division writing course.

COM 354 Newspaper Production (2)
Designed to help students develop insight and a better understanding of the role that newspapers play in society while providing hands-on experience in the production of a student newspaper. Students will discuss and write about such issues as news judgment and the impact of the media on public attitudes, government programs, and politics. Student discussions and papers will reflect, in part, their experiences managing, designing, writing, editing, and laying out a university-based publication. They will also read and discuss relevant literature. Both traditional and electronic (Web) publishing will be discussed. May be taken twice for a maximum of 4 credits.

COM 360 Product Design and Testing (4)
The only way to judge the usefulness of a document product or interface in the marketplace is by usability testing. Students will study various evaluation methodologies and practice the basics of test design and analysis for hypothetical or real products. Students will refine testing methodology and administration, in addition to understanding the factors affecting information and product quality.

COM 380 Communication Theory (4)
Exposes students to a range of communication theories, including those allied to systems theory, rhetoric, linguistics, psychology, philosophy, and anthropology. Students will explore a single theorist/theoretical position in depth.

COM 400 Computer Software Documentation (4)
Explains how to write professional computer documentation, from writing a proposal, to gathering data, to designing a document and related visuals, to running a usability test on the material, to revising style and polishing the final reference. Discusses the nature of visual language and considers the utilization of modern desktop publishing techniques to develop communication ideas and transfer them onto the printed page. Student teams develop a software documentation package using the school's desktop publishing hardware and software. Meets Upper Division Writing requirement.

COM 410 Communication Research Methods (4)
Gives an overview of the communication research process and provides training in research methods. Considers theory, underlying logic, and various quantitative and qualitative tools. Students apply principles and strategies by designing, conducting, and reporting on preliminary

communication research projects as time permits. Computers are used for statistical analysis of data. Prerequisites: Valid campus computer account and COM 306 or COM 308 or COM 400 or equivalent.

COM 411 Communicating on Computer Networks: Issues and Implications (4)
Examines the various facets of computer networks; their history, the reasons for their existence, their use, operation and design, collaborative issues, and concerns regarding copyright and intellectual property. Emphasis is placed on the nature of networks, how they can and will affect our world, and how they are best utilized. Although there will be hands-on training and use of the Internet throughout the semester, this is not a "tools" course on using the Internet. Rather, we will use our experiences on the network to write about and discuss the underlying social, political, legal, and educational aspects of networking. Students will become familiar with issues involved with networking as well as associated terminology and jargon.

COM 414 Advanced Digital Graphic Design (4)
Designed to increase the student's ability to creatively design within the digital domain. Major topics include: essentials for successful digital design, color and color accuracy in the digital world, symmetric and asymmetric layout techniques, creative use of shapes and space, large file management techniques, theoretical and applied typography, professional production methods to increase workflow, and stereographic imagery. Prerequisite: Basic Photoshop knowledge.

COM 415 Writing About Imagery (4)
Offers students a framework for studying images composed of both text and visuals. Each serves a variety of purposes and will explore the relationship between writing (creative nonfiction, i.e., the essay) and imagery (photography, sculpture, advertising, commercials, documentaries, Web sites, films, etc.) in its critical, creative, and practical dimensions. Through critical reading, analysis, interpretation, inquiry, field exploration, and composition, students will explore more thoroughly how to "read" and understand visual texts, how to write about visual texts, how to compose with visuals, and how to make their own writing more visually effective. Prerequisites: COM 306 and COM 320.

COM 418 New Media Theory and Digital Culture
Studies the meaning of "New Media" and its influence on culture. Through readings, discussions, analysis of cultural artifacts as well as a longer hands-on project, we will reveal the underlying ideas of our digital historical moment. As we analyze various modes of representation, we will investigate the impact electronic media have had on society and explore it implications for activities such as online learning and education. Using a series writings by pioneers in new media theory, we will place our current 21st century culture in a larger framework of established theoretical perspectives.

COM 420 Web Site Design (4)
Provides instruction in various processes that involve innovation, planning, analysis, design, implementation, and promotion of Internet-based information publishing, especially on the World Wide Web. Introduces students to the theoretical principles of visual language and also affords the practical opportunity to apply the principles using modern Internet publishing tools.

COM 460 Advanced Web Site Design (4)
This course builds on the design, layout, and development principles learned in previous courses by teaching students to approach web site design and structure in a new way. Where previous courses focus on designing the front end of a static web site, COM 460 focuses on developing the back end of a dynamic web site. Students will produce an interactive commercial web site, incorporating specific data structures, web elements, and web technologies, while employing the design principles learned in previous courses. Prerequisite: COM 420.

COM 490 Special Topics in Communications (Variable 1-4)
An in-depth treatment of a selected topic not normally treated extensively in other communication courses. The subject matter will be related to current trends in communication. Prerequisite: Permission of instructor.

COM 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area. Standard grading or S/U option at discretion of faculty supervisor. Options must be chosen no later than last day to add/drop.

COM 492 Technical Communication Internship (Variable 2-8)
The internship, for qualified senior Technical Communication majors, is designed to provide practical work in the field of computer documentation, editing, public relations, graphics, or Web design. Students either work on or off campus under the direction of a qualified communication specialist. Prerequisites: 3.0 GPA in major; permission of program faculty and internship corporate sponsor. Only S/U grades are awarded for this course.

COM 495 Senior Practicum in Communication (4)
Integrates academic and practical experience by placing students in an industrial, corporate or professional writing setting. Students will choose clients in various businesses and industries, and they will work either on and off site in completing their major projects. As students work through the documentation process, they will be given detailed classroom instruction about writing and editing in the corporate culture. This course is designed as a one semester practicum where students will meet with the instructor in the classroom and with their clients on a weekly basis. Prerequisites: COM 306 and COM 320, and permission of instructor.

COM 499 Portfolio Review and Professional Development (4)
Gives professional and technical communication majors a first-hand look at the job search process (professional development) and portfolio development. Students will be expected to research some aspect of the field, complete and write up an informational interview, submit a portfolio for review, and go on an actual interview. Prerequisite: COM 302, COM 306, COM 320, COM 380. Corequisite: COM 495.

Computer Engineering Technology

CET 101 Fundamentals of Electrical and Computer Engineering Technology (4)
Introduction to basic circuit laws and analysis, transient circuits and first order circuits. Introduction to electronic devices and linear electronics. Examine the concepts of power systems, programmable logic controllers, and transistor switches. May not be taken for credit by graduates of associate degree programs in electrical/electronic or computer engineering technology. Three hours of lecture and two hours of laboratory per week. Corequisite: MAT 120 or equivalent or permission of instructor. Cross-listed with ETC 101.

CET 102 Electric Circuits (4)
Units and definitions. Ohm's Law and Kirchhoff's Laws. Analysis of resistive circuits. Circuit analysis using superposition, nodal and mesh methods, Norton Thevenin theorems, and current and voltage divider rules. Transient and sinusoidal steady state response of circuits containing resistors, capacitors, and incutors. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 101 or equivalent or permission of instructor. Cross listed with ETC 102

CET 103 Electronics I (4)
Introduction to semiconductors, conductors, and insulators. Analysis of transistors, diodes, and their related application in rectifier and amplifier circuits. Wave-form interpretation, AC-DC load lines, biasing techniques, small signal amplifiers, and h parameters. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 102 or permission of instructor. All students who have an EET associate degree may not enroll in this course for credit. Cross listed with ETC 103.

CET 203 Electronics II (4)
Introduction to operational amplifier circuits incorporating feedback. Amplifier configurations, feedback amplifiers, applications of Op-Amps in analog computers, and active filters. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 103 or equivalent or permission of instructor. All students who have an EET associate degree may not enroll for this course for credit. Cross listed with ETC 203

CET 210 Digital Systems I (4)
Fundamentals and advanced concepts of digital logic. Boolean algebra and functions. Design and implementation of combinatorial and sequential logic, minimization techniques, number representation, basic binary arithmetic and finite state machines. Logic families and digital integrated circuits and use of CAD tools for logic design. Prerequisite: ETC 102 or equivalent or permission of instructor. All students who have an EET associate degree may not enroll in this course for credit. Cross listed with ETC 210 and ECE 251.

CET 265 Digital Systems II (4)
Study of Digital Systems Design using the Intel family of microprocessors and their peripheral support integrated circuits. Incorporate Intel assembly language to develop programs to run the Intel hardware. Devices studied include the 8255A PPI and 8251 PCI. Design and implementation of Intel hardware and software will be emphasized. Interfacing and testing of the computer's internal buses using logic analyzers and other test equipment will also be included. Three hours of lecture and two hours of laboratory. Prerequisite: ETC 210 or equivalent. Cross listed with ETC 265.

CET 299 Quality Control and Workplace Issues (2)
To provide a broad educational understanding of the impact of engineering solutions in a global and societal context along with a knowledge of contemporary issues and career opportunities. Also, focus will be placed on the process controls necessary for the practice of electrical and computer engineering. Cross listed with ETC 299.

CET 342 Microprocessor and Embedded Systems Programming and Design (4)
Programming the microprocessor for embedded systems application. Includes an introduction to interfacing components and hardware of the microprocessor. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 110 or permission of instructor. No prior microprocessor background needed. Cross listed with ETC 342 and ECE 252.

CET 416 Data Communication & Computer Network Technology (4)
The principles and techniques of data and computer communications are covered in detail in this course. Topics include principles of data transmissions, data encoding, digital communication techniques, transmission codes, error detection and correction, protocols, communication networks, interfacing and architecture. Three hours of lecture and two hours of laboratory per week. Cross listed with ETC 416.

CET 423 Microprocessor Interfacing (4)
Analysis of microprocessor interfacing with operational hardware. Three hours of lecture and two hours of laboratory per week. Prerequisites: ETC 110 or equivalent and ETC 342 or permission of instructor. Cross listed with ETC 423.

CET 429 Microprocessors, Microprogramming and Computer Architecture (4)
Design of microprocessor and computer central processing units. Stresses the architecture and microprogramming of the processor. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 110 or equivalent or permission of instructor. Cross listed with ETC 429.

CET 431 PC Integration and Maintenance (4)
This course stresses the architecture and design of personal computers and emphasizes the use of diagnostic hardware and software to evaluate PC systems in actual lab situations. Two hours of lecture and four hours of laboratory per week. Prerequisite: ETC 311 or ETC 342 or CS 220. Cross listed with ETC 431.

CET 444 Special Topics in Microprocessors/Digital (4)
Seminar on the state-of-the-art in microprocessor and digital techniques. Topics will vary as technology changes. May be taken more than once for credit provided topics are different. Prerequisite: ETC 110 or equivalent or permission of instructor. Cross listed with ETC 444.

Computer Science

CS 100 Introduction to Computing Seminar (4)
An introduction to computer information science and computer information systems to include topics such as: structure and organization of modern computers, data representation, abstraction, algorithmic thinking, problem solving, interaction with a computer without using a graphical user interface, operating system basics, and an introduction to programming.

CS 108 Computing Fundamentals (4)
Fundamental concepts of computing and programming. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging. The course also offers an introduction to the historical and social context of computing and an overview of computer science as a discipline. Course taught using the C programming language. Prerequisites: No programming or computer science experience is required.

CS 220 Computer Organization (4)
Introduces students to the organization and architecture of computer systems as a hierarchy of levels, beginning with the standard von Neumann model and then moving forward to more recent architectural concepts. Topics include digital logic, microprogramming, conventional machine and assembly language levels. Emphasis is given to those aspects of computer hardware that affect programming. Prerequisites: CS 108 and MAT 115.

CS 240 Data Structures and Algorithms (4)
Fundamental concepts of data structures and the algorithms that proceed from them. Topics include recursion, the underlying philosophy of object-oriented programming, fundamental data structures including stacks, queues, linked lists, hash tables, trees, and graphs. The basics of algorithmic analysis, and an introduction to the principles of language translation. Prerequisites: CS 108 and MAT 115.

CS 249 Object-Oriented Programming (4)
Problem-solving and program design using an object-oriented approach. Starts with a review of control structures and data types with emphasis on structured data types and array processing. It then moves on to introduce the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Other topics include an overview of programming language principles, simple analysis of algorithms, basic searching and sorting techniques, and an introduction to software engineering issues. Prerequisite: CS 240.

CS 307 UNIX Programming Environment (4)
Promotes effective use of the UNIX programming environment. Topics include: text editor, file system, utility programs, pipe and filter paradigm, construction and use of regular expressions, shell language programming, internet, and interprocess communication.

CS 311 Data Analysis (2)
A hands-on introduction to data analysis using a microcomputer-based statistical package such as SPSS PC+. Topics include descriptive statistics, measures of association, and hypothesis testing. Emphasis is placed upon data collection, data organization and report generation. Prior coursework in statistics is helpful, but not required. May not be taken by students who have received credit for CSC 323.

CS 324 Introduction to Internet Tools in Windows (2)
A hands-on introduction to the use of software Internet tools in Windows environments and the concepts and perspective in computing and communications essential to using them effectively. Topics include the Windows interface and environment, and tools for browsing, editing and Web site creation and maintenance available in the Windows environment.

At the conclusion of the course, the student will have an understanding of computing communication environments and the ability to use Web software tools to construct, configure, and maintain a Web site.

CS 330 Operating Systems and Networking (4)
Integrates the fundamental concepts of operating systems and networking with the purpose of realizing workable models of modules and constructs. Topics include concurrency, synchronization, processes, threads, long and short term scheduling, memory management, I/O, file systems, device management and multimedia systems. Networking topics include basic network models, layered architectures, network hardware and standard protocols. Within this framework, client-server microkernel design is also presented. Prerequisites: CS 220 and CS 240.

CS 345 Logic Design (4)
A concentration on the digital logic level of computer organization. The theoretical and practical concepts covered include: Boolean algebra, simplification of Boolean functions, and analysis and synthesis of digital circuits with emphasis on mixed logic. The most common combinatorial and sequential integrated circuits, and algorithmic state machines are highlighted. Prerequisites: CS 220 and MAT 115.

CS 348 LISP Programming (2)
An intensive survey of the LISP programming language. Topics include: expressions, data types and representations, control structures, and input/output functions. Prerequisite: CS 240.

CS 350 Information and Knowledge Management (4)
The concept of information as a unifying theme. Investigates a range of issues in computer science, including database systems, artificial intelligence, human-computer interaction, multimedia systems, and data communication. Prerequisites: CS 240 and MAT 115.

CS 351 Web Development and Internet (4)
This course teaches students to install, configure and maintain an Internet/Intranet Web Server. Topics include: developing Web pages, Hypertext Markup Language (HTML), Common Gateway Interface (CGI) scripting, and displaying information on the Web via a Database Management System (DBMS). Prerequisites: CS 108 and CS 307.

CS 370 Software Engineering (4)
Combines a range of topics integral to the design, implementation, and testing of a medium-scale software system with the practical experience of implementing such a project as a member of a programmer team. In addition, this course includes discussions on professionalism and ethical responsibilities in software development and human-computer interaction. Prerequisites: CS 220 and CS 249.

CS 371 Software Engineering Projects (4)
This course offers the student an opportunity to participate in a non-trivial software engineering team project and to apply the concepts studied in CS 370. The following will be emphasized throughout the project: documentation of projects; different roles in a project; corporate, academic and military software development standards; specification and requirements documents; configuration, quality assurance, test, verification, integration plans; post-development software support. Prerequisite: CS 370.

CS 377 Introduction to the Theory of Computing (4)
Introduction to theoretical computer science. Topics include: automata, formal languages, Turing machines, recursive function theory, computational complexity, and program correctness. Prerequisites: CS 240 and MAT 115.

CS 381 Principles of Computer Security and Cryptography
Focuses on general principles of computer security and cryptography. Topics covered include threat trees, threat taxonomies, malware, common attacks, cryptographic principles, block ciphers, hash functions and public-key cryptography. Prerequisites: MAT 115 or MAT 413, CS 249 and CS 330.

CS 407 UNIX System Administration (4)
Topics will include: concepts involving system administration and maintenance procedures to facilitate normal system operation; technical details regarding problems that could result from operating system malfunction as well as threats to system security that are inherent in a multiprogramming environment; techniques and tools for hardware and software configuration management. Prerequisite: CS 307; Corequisite: CS 330.

CS 409 Software Project Management (4)
This course presents different techniques for managing software projects and technical staff and familiarizes the student with artifacts of project management. The topics to be covered include: user specification; project proposal; contracts; software cost models and estimation techniques; project planning; implementation management; project delivery. Prerequisite: CS 370.

CS 420 Numerical Computing (4)
Basic techniques of numerical computation. Topics include: computer arithmetic and error control, solution of non-linear algebraic equations including some non-linear optimization, polynominal interpolations including splines, curve fitting, integration, and an introduction to differential equations. Emphasis will be on non-formal settings with a view toward applications. Prerequisites: Calculus and proficiency in a high-level programming language.

CS 421 Computational Linear Algebra (4)
Computational aspects of linear algebra, including linear optimization models, are explored. Topics include: different algorithms for solution of sets of linear algebraic equations, eigenvalue problems, linear programming, clustering techniques, and software requirements. Prerequisites: CS 240 and MAT 340 or equivalent.

CS 431 Principles of Programming Languages (4)
This course fosters a disciplined approach to the design of programs. Through carefully chosen assignments, the need for certain data structures and programming language features is made apparent. Several different programming languages are used. Topics include: structured programming, functional programming, recursion, and string processing. Prerequisite: CS 240.

CS 441 Computer Systems Architecture (4)
After a higher level review of current mainframe architecture and operating systems, advanced architectures, proposed and implemented for parallel computation, will be considered. The second half of the course will survey techniques for modeling and assessing performance of computer systems and networks, with emphasis on probabilistic models. Prerequisites: MAT 225 and CS 220.

CS 445 UNIX Network Programming (4)
The course explores computer networks from the implementation and programming point of view. The network architecture and communication protocols studied by the class allow connection of heterogeneous systems in an environment that may be geographically distributed. Prerequisites: CS 240 and knowledge of UNIX and C.

CS 446 Local Area Network Architecture (4)
An intensive study of LAN architecture models for Computer Science students. Topics include: contention-free and contention-based models, hybrid nets, HSLANs, integrated voice/video/data models. Prerequisites: CS 220 and CS 330.

CS 450 Computer Graphics (4)
A conceptual and programmatic introduction to raster and vector graphics. Topics include object-oriented graphics application programming interfaces, hierarchical modeling, concepts of scene graphs, geometric transformations and transform groups, behaviors for animation and interaction, interactive tools for geometries and behaviors, classical application programming interfaces, web-related graphics technologies, and graphics file formats. Prerequisites: CS 240 and MAT 115.

CS 451 Distributed Systems (4)
A study of distributed protocol and software frameworks. Synchronous and asynchronous networks will be covered. Protocols for leader election and distributed consensus will be presented synchronous networks. Fault-tolerant protocols will be discussed for synchronous systems as well as their adaptability in asynchronous models. The use of shared memory and message passing as well as Byzantine failures will be discussed. Prerequisites: CS 240 and CS 330.

CS 454 System Simulation (4)
An introduction to the basic techniques of systems modeling and analysis through system simulation. Discrete and continuous system simulation models, use of various simulation packages and analysis of simulation output are included for consideration. Prerequisites: C, C++, or JAVA and senior status or permission of instructor.

CS 477 Algorithms (4)
How good is it? Is there a better algorithm to solve it? This course aims at developing a toolbox of algorithms for solving real problems that arise frequently in computer applications and the principles and techniques for determining their time and space requirements and efficiency. In addition, the general complexity spectrum is discussed to give students a grounding in intractability and unsolvability. Prerequisites: MAT 115 and CS 240.

CS 480 Compiler Design (4)
Basic concepts of formal languages and automata theory and their applications in compiler writing. Several practical parsing methods are discussed. Prerequisite: CS 240.

CS 489 Cooperative Work-Study in Computer Science (Variable 1-4)
Student will be employed by a cooperating firm or agency. Periodic progress reports will be required. The department will provide a list of cooperating employers, and the student will be required to interview for the position. Students are paid by the employer. Prerequisites: Limited to Computer Science majors who have completed core courses and secured departmental approval. Additional restrictions are on file with the department. Only S/U grades are awarded for this course.

CS 490 Selected Topics in Computer Science (Variable 1-4)
Coverage of a specialized computer science topic, of current interest but not adequately treated in regular course offerings. The topic may, for example, be the theoretical and programmatic study of a methodology for a class of computational problems, an introduction to a research area of computing, or an in-depth examination of the usage and internals of a software artifact or framework. The same topic will not be repeated for at least two years. Prerequisites: CS 240 and MAT 115.

CS 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

CS 495 Artificial Intelligence (4)
An introduction to fundamental knowledge representation schemes and intelligent problem-solving techniques, and corresponding implementation software artifacts. Both symbol system and biology/society-based approaches are covered. Topics include state space heuristic search, constraint satisfaction, classical logic, fuzzy logic, Bayesian techniques, connectionism, genetic algorithms, swarm and multi-agent intelligence, and planning. Prerequisites: CS 240 and MAT 115.

CS 498 Capstone Project (2)
Offers students the opportunity to integrate their knowledge of computer science by completing a significant project. Periodic written and oral presentations are required. Most students will complete, report on, and present a project started while taking CS 370. Prerequisites: CS 330, CS 350, and CS 370.

CSC 300 Computer Systems and FORTRAN Programming (4)
Basic concepts of computer science and computer programming. An introduction to computer hardware and applications programming using FORTRAN. No prior knowledge of computers or computing expected. Computer Science or Computer Systems majors will not receive Computer Science credit for this course.

CSC 301J Introduction to Computing and JAVA Programming (4)
Basic concepts of computing and computer programming are covered. An introduction to computing environments, the internet and applications programming using JAVA. No prior knowledge of computers or computing is expected. Course is for non-majors. Computer Information Science/Systems majors will not receive Computer Science credit for this course.

CSC 301V Introduction to Computing and Visual Basic Programming (4)
Basic concepts of Computing and programming with object orientation using Visual Basic. Course is intended for beginners. Computer Science and Computer Systems majors will not receive credit for this course.

CSC 310 Computers and Society (2)
A half-semester course examining the impact of computers in contemporary society. Topics include: components of a computer system, uses of computers in various disciplines and professions, and problems of data security and privacy.

CSC 311B Word Processing (Windows) (1)
A hands-on introduction to word processing using Word for Windows or a similar Windows package. Topics include text entry, formatting, spell checking, search and replace, use of a thesaurus and grammar checker, printing, and merge printing. At the conclusion of this course, the student will have the skills necessary for the production of a term paper, resume, or similar prose document, and the ability to produce a customized form letter. Students who have received credit for CSC 311 or CSC 311A may not take this course. Only S/U grades are awarded for this course.

CSC 311C Spreadsheets I (1)
A hands-on introduction to spreadsheets. Topics include building, saving and printing a worksheet, simple formatting, functions, and sorting. At the conclusion of the course, the student should be able to design a spreadsheet for statistical or financial applications, and to answer what-if questions. Students who have received credit for CSC 311 may not take this course. Only S/U grades are awarded for this course.

CSC 311D Spreadsheets II (1)
A hands-on course on advanced spreadsheet features. Topics include print enhancements (fonts, borders, shading, etc.), hiding parts of the spreadsheet, macros, spreadsheet graphing, spreadsheet database functions. Prerequisite: CSC 311C or equivalent. Only S/U grades are awarded for this course.

CSC 311E Microcomputer Database (1)
A hands-on introduction to the use of a microcomputer database using Microsoft Access or a similar product. Topics include database creation, data entry, sorting and report preparation, modification of the database structure, adding/deleting records, form and report generation. Only S/U grades are awarded for this course.

CSC 311F Presentation Graphics (1)
A hands-on introduction to presentation graphics using Powerpoint or a similar package. Topics include text charts, bar/line charts, pie charts, slide shows and transition effects, and output to disk, monochrome and color hard copy, overhead transparencies, 35mm film recorder and videotape. At the conclusion of the course, the student will have the skills necessary to use a presentation graphics package to communicate effectively employing a variety of media. Students who have received credit for CSC 312 may not take this course. Only S/U grades are awarded for this course.

CSC 311G Introduction to Desktop Publishing (1)
A hands-on introduction to the use of a desktop publishing package for the creation of fliers, posters, newsletters, and similar short publications. Topics include page layout, style sheets, text formatting, and image handling. Output to monochrome and color printers is covered. At the conclusion of this course, the student will be able to design and create a short publication. Prerequisite: Ability to use a word processing program, or CSC 311A, CSC 311B, or its equivalent. This course may not be taken by students who have received credit for CSC 312. Only S/U grades are awarded for this course.

CSC 317 Computer Systems and C/C++ Programming (4)
The basic concepts of computer science and computer programming are covered. Computer hardware and applications programming using C are also introduced. No prior knowledge of computers or computing is required. This course is intended for non-majors. Computer Science or Computer Systems majors will not receive Computer Science credit for this course.

Computer Systems

IS 305 Application Programming with COBOL (4)
Problem solving, algorithm development, and application development using the COBOL programming language. Emphasizes user interface, calculations, data sorting, report writing, data manipulation, data validation, string operations, intrinsic functions, and file handling based on the structured/procedural paradigm. Programming tools that leverage the power of the COBOL programmer are included. Prerequisite: CS 240.

IS 310 Hardware and Network Infrastructure (4)
Conceptual and practical study of the computer hardware, connectivity devices, and other supporting artifacts that comprise enterprise internal information systems and external systems like the public Internet. Topics include: fundamental digital logic; common integrated chips and boards for computer organization; execution of processor instructions; device interfacing; peripheral devices; common abstractions for enabling software development; major functions of an operating system; common connectivity devices and their operation. Prerequisite: CS 108.

IS 315 Networking of Information Systems (4)
An integrated study of fundamental principles and representative technologies underlying computer and device networks. Topics include: key networking protocols and relevant implementation stacks; interconnection devices; sample distributed software frameworks; management issues in networked computers and peripherals; deployment requirements for distributed software applications; common tools for the management of networks and distributed software. Prerequisite: IS 310.

IS 320 Systems Analysis and Design (4)
Examines the process of logically developing information systems. Focuses on the analysis, planning, and logical design phases of the systems development life cycle that culminate in the specification of functional system requirements. Concentrates on methods, techniques, and tools used to determine information requirements and the documentation of these requirements in a thorough and unambiguous form. Topics include: data collection; risk and feasibility analysis; requirements analysis; process modeling; data modeling; prototyping; joint application development; rapid application development; structured walkthroughs; project management; presentations; report writing. Prerequisite: CS 240.

IS 324 SQL Programming (2)
Designed to develop SQL programming proficiency. Emphasis is placed on the Data Definition Language (DDL) and Data Manipulation Language (DML) of SQL. Upon completion, students should be able to write SQL statements which create, update, and maintain database tables as well as write SQL queries to manipulate data in database tables. Prerequisite: CS 108 or equivalent knowledge. Students may not receive degree credit for both IS 324 and IS 325.

IS 325 Database Management Systems (4)
Introduction to fundamentals of database management systems, techniques for database design, and principles of database administration. Emphasizes data modeling, database design, database application development, and database management. Topics include conceptual models; logical models; normalization; query languages; architectures such as centralized, distributed and client/server; database integrity; database security; error recovery; and concurrency control. Prerequisite: CS 240.

IS 330 Decision Support and Intelligent Systems (4)
An introduction to the fundamentals of Decision Support Systems (DSS). Focuses on the logical aspects of data processing and analysis. Topics to be discussed include historical review of computerized decision support, DSS architecture. Data Warehouses, Online Analytical Processing (OLAP), and Data Mining. The student is introduced to the principles of Intelligent Systems with an emphasis on Expert Systems (ES) and Artificial Neural Networks (ANN). The organizational and business implications of decision support systems are reviewed. Prerequisite: CS 240.

IS 340 E-Commerce (4)
An introduction to the fundamentals of e-business and e-commerce. Topics to be discussed include e-business models, principles of electronic business transactions, Electronic Data Interchange (EDI), electronic checks, and digital cash. The student is introduced to the protocols of secure e-commerce including the basics of cryptography, digital signatures. Secure Sockets Layer (SSL), Secure Electronic Transaction Protocol (SET). The languages and e-commerce technologies to be discussed include Java, JavaScript, XML, intelligent agents, and networking protocols. Prerequisite: CS 240.

IS 469 Information Technology Project Management (4)
Enables students in the information technology area to understand project management principles for IT programs and be able to apply these principles to successfully manage IT projects. Covers the essentials of IT project management which include attributes of projects, project integration management, project scope, time, and cost management, project quality and risk management, human resources and communications management, and procuring IT projects and services from outside agencies. Includes individual and group assignments and activities, including a group case study, where students can apply what they have learned to real-life situations. Prerequisite: IS 320.

IS 470 Database Programming (4)
Provides rigorous coverage of database programming using the Structured Query Language (SQL) and SQL coupled with other programming languages. Topics include: database management systems (DBMS); data definition; data manipulation; data control; database administration; report generation; DBMS built-in and programmer-created procedures, functions, packages, and triggers. Prerequisite: IS 325 or equivalent and SQL programming proficiency.

IS 490 Special Topics in Systems (Variable 1-4)
An in-depth treatment of a selected topic not normally treated extensively in other Information System courses. The subject matter covered in this course will not be repeated in a future semester.

IS 491 Independent Study/Information Systems (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean.

IS 495 Computer Information Systems Practicum (2)
Capstone course for Computer Information Systems (CIS) majors. Students form teams and each team spends an entire semester working to satisfy a set of requirements for a real-world organization. Teams will gain experience in all phases of the systems development life cycle (SDLC) and project management. Periodic written and oral presentations are

required. Success requires student teams to work as a cohesive unit which draws upon components of the entire CIS curriculum. Prerequisites: IS 310, IS 320, and IS 325.

Criminal Justice

CJ 100 Scope and Method of Criminal Justice (4)
An introductory seminar primarily for first-year Criminal Justice students to introduce them to the breadth and process involved in the study of Criminal Justice, including identification, interpretation, and synthesis of professional research; appropriate forms of presentation; and the role of higher education in the field. Co-requisite: CJ 101 or consent of instructor.

CJ 101 Introduction to Criminal Justice (4)
Provides an overview of the field of criminal justice, including the history, theory, and structure of the criminal justice system, with an emphasis on substantive and procedural criminal law, policing, prosecution/defense, the courts, and institutional and community corrections.

CJ 201 Laws of Evidence (4)
Examines the theories and practices associated with substantive and procedural criminal law, focusing on issues of evidence obtained by the police, used by the prosecution, objected to by the defense, and interpreted by the courts. Prerequisite: CJ 101.

CJ 203 Criminal Law (4)
Examines both theory and practice associated with substantive and procedural criminal law, focusing on fundamental descriptions of crime, including crimes against persons, property, and public order. Prerequisite: CJ 101.

CJ 204 Ethics in Criminal Justice (4)
Introduces the Criminal Justice student to ethical decision making in the criminal justice system. Explores ethical dilemmas and challenges in policing, criminal courts and corrections, using both philosophical principles/theories and hands-on criminal justice issues and applications. Prerequisite: CJ 101.

CJ 260 Gender, Crime, and Criminal Justice (4)
Explores the role of gender in crime and criminal justice, focusing on the construction of crimes as gendered activities, and the cultural, legal, and institutional responses to these behaviors. Attention is also paid to the effects of race, ethnicity, and social class on these practices. Prerequisite: CJ 101.

CJ 310 (4)
Presents an overview of the sociological study of crime and criminal justice, primarily in the contemporary United States. Material is broken down into four major topics: 1.) types and categories of contemporary criminal behavior; 2.) myths and facts about contemporary crime patterns; 3.) theories about why crimes are committed; 4.) how known crimes are dealt with by the U.S. criminal justice system. Prerequisite: CJ 101.

CJ 320 (4) Health and Mental Illness Issues in Criminal Justice Settings (4)
Focuses on the patterns of health and mental health needs as well as service delivery in the criminal justice system. Examines contemporary understandings of health and mental health, as well as the intersections of health with aspects of social structure, such as gender, race, and class. Explores how contemporary systems respond to and ameliorate (or exacerbate) health and mental health conditions. Implications for other social institutions and policy are discussed. Prerequisite: CJ 101.

CJ 332 Research Methods in Criminal Justice (4)
Provides experience in the design and implementation of social science research with an emphasis on Criminal Justice topics and settings. Topics covered include the philosophies of social science, development of theories and hypotheses, modes of observation, and methods of sampling. Students will conceptualize and design several research projects during the semester, and review and evaluate professional published literature.

CJ 333 Analysis and Reporting of Data (4)
Engages the theory and practice of data analysis and reporting, using both qualitative and quantitative data. Students will become familiar with common software packages used in the analysis of social scientific data, as well as the norms and expectations regarding the written presentation of research. Use of computers is required, though no prior experience is assumed. Prerequisite: CJ 332 and STA 100.

CJ 352 Juveniles and Justice (4)
Examines the social construction of juvenile delinquency in historical and cross-national terms. Reviews in detail the theories that seek to explain the causation of juvenile delinquency. Summarizes the salience of class, race, and gender in being labeled as juvenile delinquent and in being criminally sanctioned for juvenile delinquency. Compares and contrasts the American system of juvenile justice with cross-national alternatives. Prerequisite: CJ 101.

CJ 359 Sexual Offenders (4)
Introduces the criminal justice student to the causes and treatments of sexual offending behavior and the ways the criminal justice and mental health emerging issues of tracking monitoring persistent offenders. Prerequisite: CJ 101.

CJ 365 High Technology Crimes (4)
Examines the nature and scope of high technology crimes and the legal response to these activities, including the challenges of apprehension and prosecution. Topics include cell phone fraud, virus dissemination, hacking, internet scams, on-line gambling, on-line pornography, securities fraud, and terrorism. Also examines developing trends in cyber-crime and cyber-law. Prerequisite: CJ 101.

CJ 370 Technological Surveillance and Constitutional Rights (4)
Provides an intensive survey of surveillance technologies and their use in crime prevention and prosecution. Also examines the legal and ethical issues of privacy, and how changes in technology are changing privacy debates and laws. Prerequisite: CJ 101.

CJ 375 Psychology and the Law (4)
Explores the relationship that has developed between two very different disciplines in 21st century American society: 1.) the foundation and function of the law; 2.) the practice of law enforcement, litigation, jurisprudence, and incarceration. Investigates how contemporary psychology interfaces with these various functions of the legal establishment. Prerequisite: CJ 101.

CJ 450 Politics of Re-Entry (4)
Focuses on the demographics and dynamics of prisoner re-entry, i.e. the effects on individuals, families, and communities when former offenders are released from prison and attempt to integrate or be integrated into society. Has an applied and regional focus, with the goal of documenting the current status of prisoner re-entry in Central New York. Prerequisite: CJ 101; one 200- or 300-level CJ/SOC course.

CJ 456 Crime Mapping Technologies (4)
Examines geographic concepts and techniques as they apply to the study of crime. Uses sociological theories of spatial relations and urban studies (esp. social ecology) to examine patterns of offending and victimization. Uses a range of data sets and computer applications, such as Geographic Information Systems (GIS) to map criminal behavior at the local, regional, state, and national levels. Explores policy implications of crime mapping capabilities. Prerequisite: CJ 332.

CJ 490 Selected Topics in Criminal Justice (4)
Provides in-depth treatment of a selected topic in Criminal Justice. Investigates criminological/criminal justice subject matter outside of standard course offerings. Prerequisite: CJ 101; one 200- or 300- level CJ/SOC course.

CJ 491 Independent Study in Criminal Justice (1-4)
Provides a structure for extensive study and/or directed research (under faculty supervision) on a specific topic. The application form must include

a description of the project, its duration, educational goals, method for evaluation, and suggested number of credits. Prerequisite: Matriculated students only; permission of instructor and school Dean required. Prerequisites: CJ 101 and one 200- or 300-level CJ course.

CJ 492 Internship in Criminal Justice (4-16)
Internship placement in a Criminal Justice setting with co-occurring academic engagement. Placements to be determined by the student and advisor/supervisor. Prerequisite: CJ 101 and consent of instructor. Recommended for juniors and seniors.

CJ 493 Senior Seminar in Criminal Justice (4)
Designed to be the capstone course for the CJ Program. Explores in depth a particular topic in criminology/criminal justice chosen by the instructor. Emphasizes critical analysis of current literature and the development of original projects by students. Prerequisite: CJ 332.

Economics

ECO 110 Microeconomics (4)
An in-depth analysis of the operation of market forces in determining resource allocation in the private sector via the price system. Comprehensive theoretical models of the consumer, the producer, and market structure are developed. The student will become acquainted with the techniques whereby economists analyze, for purposes of public policy, such issues as environmental restrictions, public utility rate fixing and other price controls, commodity taxation, minimum wage laws, occupational licensing, and the economics of crime and punishment. Meets new General Education Social Science requirement.

ECO 112 Macroeconomics (4)
A study of both classical and modern theory focusing on the determination of national income, employment, and the rate of inflation. The major versions of the classical and Keynesian systems are developed, including a review of the consumption function and the behavior of investment. Specific modern problems, such as the effects of wage-price controls, the institutional difficulties surrounding monetary and fiscal policy-making, and the growth/no growth issue, are discussed.

ECO 330 Economics of Aging (4)
Covers a variety of economic problems related to aging, from the viewpoints of both the individual and society as a whole. The economic characteristics of older persons will be examined, including labor force participation, financial circumstances, consumption patterns, and health status. Major attention will be given to formal and informal economic security arrangements including individual saving programs, public and private pension systems, health insurance, and other legal and financial devices. Long-term projections of the aged population, and its impact on the American economy, will be reviewed. Meets new General Education Social Science requirement.

ECO 405 Economics of Health Care (3)
Providers and consumers of health care have historically been insulated from the classic economic market forces of supply and demand. However, recent and anticipated changes in health care financing and provider and consumer behaviors are expected to have profound effects on the supply and demand of health care. Examined in this course are: the products of health care, the demand for health care, the supply of health care, and government regulation and its influence on supply and demand. Cross listed with HSM 405.

ECO 425 Economics of the Environment (4)
An economic analysis of environmental protection. Topics include: the economic nature of environmental problems; a description of air, water, and land pollution; global environmental issues; the economics of natural resource use, conservation, and recycling; and an analysis of the history and evolution of environmental policies in the United States. Prerequisite: ECO 110 or equivalent.

ECO 450 Money and Banking (4)
A detailed examination of money, credit, and financial institutions, with emphasis on how the monetary system influences economic activity. Topics include: the nature and functions of money, the commercial banking system, non-bank financial institutions, the roles of the Federal Reserve System and the Treasury, monetary policy, and international money and banking. Prerequisite: ECO 112 or equivalent.

ECO 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisite: Matriculated students only, permission of instructor and dean of subject area.

Electrical Engineering

ECE 251 Digital Logic Design (4)
Fundamental and advanced concepts of digital logic. Boolean algebra and functions. Design and implementation of combinatorial and sequential logic, minimization techniques, number representation, and basic binary arithmetic. Logic families and digital integrated circuits and use of CAD tools for logic design. Three hours of lecture and two hours of laboratory per week. Cross listed with ETC 110.

ECE 252 Computer Organization and Microprocessors (4)
Organization of computer systems: processor, memory, I/O organization, instruction encoding and addressing modes. Introduction to microprocessors and microcontrollers. Design of hardware and software for microprocessor applications. Assembly language programming. Microprocessor system case studies. Three hours of lecture and two hours of laboratory per week. Prerequisite: ECE 251. Cross listed with ETC 342 and CET 342.

ECE 260 Electric Circuits (4)
Units and definitions. Ohm's Law and Kirchhoff's Laws. Analysis of resistive circuits. Circuit analysis using: Nodal and mesh methods, Norton and Thevenin theorems, and voltage divider. Transient and sinusoidal steady-state response of circuits containing resistors, capacitors, and inductors. Prerequiste: MAT 230 and PHY 201.

ECE 281 Electrical and Computer Engineering Seminar I (1)
Overview of the fields of electrical engineering and computer engineering. Various sub-fields within EE and CoE will be explored, with emphasis on how they are interrelated. Issues relevant to careers in EE and CoE (e.g., typical tasks performed by EEs and CoEs) will be explored.

ECE 301 Signals and Systems (4)
Provides an introduction to continuous-time and discrete-time signals and linear systems. Topics covered include time-domain descriptions (differential and difference equations, convolution) and frequency-domain descriptions (Fourier series and transforms, transfer function, frequency response, Z transforms, and Laplace transforms). Three hours of lecture and two hours of laboratory per week. Prerequisites: MAT 230 and ECE 260.

ECE 315 Electronics I (4)
Introduction to electronics concentrating on the fundamental devices (diode, transistor, operational amplifier, logic gate) and their basic applications; modeling techniques; elementary circuit design based on devices, laboratory exercises. Three hours of lecture and two hours of laboratory per week. Prerequisite: ECE 260, Corequisite: ECE 251.

ECE 323 Electromagnetics (3)
Fundamentals of electromagnetic fields, Maxwell's Equations, plane waves, reflections. Application to transmission lines, antennas, propagation, electromagnetic interference, electronics packaging, wireless communications. Prerequisite: ECE 301 and MAT 253.

ECE 332 Semiconductor Devices (3)
Basic theory of semiconductors, p-n junctions, bipolar junction transistors, junction and MOS field effect devices, device design and modeling, fabrication.

ECE 351 Digital Systems Design (4)
Synchronous sequential circuit design. Algorithmic state machine method; state reduction; control-datapath circuit partitioning. Design of sequential arithmetic circuits. Memory interfacing; bus-based design. Specification and synthesis of digital systems using hardware description language and implementation using programmable logic devices. Simulation, analysis, testing, and verification of digital systems. Three hours of lecture and two hours of laboratory per week. Prerequisite: ECE 251.

ECE 352 Computer Architecture (4)
RISC machines and instruction set architectures, computer arithmetic, performance evaluation, single cycle and multi-cycle datapaths, pipelined architecture, static and dynamic scheduling, instruction-level parallelism, advanced pipelining, superscalar and super-pipelined processors, memory hierarchy and organization, I/O, compiler issues. Cross-listed with CS 411. Three hours of lecture and two hours of laboratory per week. Prerequisite: ECE 351.

ECE 361 Control Systems (4)
Introduction to analysis, design and modeling of control systems. LaPlace transforms, transfer functions and transient analysis. Concepts of stability; polar and log-frequency plots. Numerical simulation and design of simple control systems. Three hours of lecture and two hours of laboratory per week. Prerequisite: ECE 301.

ECE 377 Communications Systems (3)
Fundamentals of communications systems. Modulation and demodulation methods. Characteristics of modern analog and digital communications methods. Prerequisite: ECE 301.

ECE 382 Seminar II (1)
Provides an overview of the professional aspects of the fields of Electrical Engineering and Computer Engineering. Topics to be covered include: typical career paths in ECE, engineering ethics, resume writing and job search techniques, preparing for graduate school, professional engineer license, etc.

ECE 387 Design Lab (3)
Students will complete a series of assigned design projects that rely on background in the areas of microprocessors, electronics, and signals & systems. Lecture will focus on various aspects of the design process as well as discussion of component characteristics. Prerequisite: ECE 315.

ECE 402 Signal Processing (3)
Discrete time and frequency analysis of linear systems. Random signals, correlation functions, power spectrum, and design of elementary digital filters. Prerequisite: ECE 301.

ECE 416 Analog Circuit Design (3)
Active and passive circuits, bias point and small signal analysis. Frequency response and transient characteristics of electronic circuits. Feedback and stability. Electronic circuit design and system applications (multistage amplifiers, active filters, etc.), numerical simulations. T

ECE 428 Computer Networks (4)
Introduce principles and practices in computer and communication networks. Emphasis is on the design, implementation, and management of IP backbone networks (the Internet), wired/wireless LAN's , and mobile communication networks. Topics include: major network implementations, Internet protocols, LAN standards, network elements (switches, routers, bridges, and gateway), EMS/NMS, network security, and other current research topics. Three hours of lecture and two hours of laboratory per week. Prerequisite: ECE 352.

ECE 462 Control Systems II (3)
Conventional and state variable techniques for the analysis and design of analog and digital control systems, z-transform, sampled data systems, discrete state variable techniques, numerical simulation, and computer-aided design of control systems. Prerequisite: ECE 361.

ECE 487 Senior Project I (4)
Design projects in cooperation with local industry and other external clients. Specifications, proposal, time schedule, paper design. Periodic design reviews with client, written and oral progress reports, final presentation. Prerequisite: ECE 387 and senior standing.

ECE 488 Senior Project II (4)
Continuation of EE 487. Prototype fabrication and test. Demonstration and documentation of functioning system delivered to client. Prerequisite: ECE 487.

ECE 490 Special Topics in Electrical and Computer Engineering (Variable 2-4)
An in-depth study of topics selected from and based on new developments in electrical engineering and related areas. Topics may include areas of signal processing, control theory, communication theory, electronics, electromagnetism, semiconductor devices or device technology, probability, or alternative topic related to the discipline.

ECE 491 Independent Study/Electrical and Computer Engineering (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

Electrical Engineering Technology

ETC 101 Fundamentals of Electrical and Computer Engineering Technology (4)
Introduction to basic circuit laws and analysis, transient circuits and first order circuits. Introduction to electronic devices and linear electronics. Examine the concepts of power systems, programmable logic controllers, and transistor switches. May not be taken for credit by graduates of associate degree programs in electrical/electronic or computer engineering technology. Three hours of lecture and two hours of laboratory per week. Corequisite: MAT 120 or equivalent or permission of instructor. Cross-listed with CET 101.

ETC 102 Electric Circuits (4)
Units and definitions. Ohm's Law and Kirchhoff's Laws. Analysis of resistive circuits. Circuit analysis using superposition, nodal and mesh methods, Norton Thevenin theorems, and current and voltage divider rules. Transient and sinusoidal steady state response of circuits containing resistors, capacitors, and incutors. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 101 or equivalent or permission of instructor. Cross listed with CET 102

ETC 103 Electronics I (4)
Introduction to semiconductors, conductors, and insulators. Analysis of transistors, diodes, and their related application in rectifier and amplifier circuits. Wave-form interpretation, AC-DC load lines, biasing techniques, small signal amplifiers, and h parameters. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 102 or permission of instructor. All students who have an EET associate degree may not enroll in this course for credit. Cross listed with CET 103.

ETC 203 Electronics II (4)
Introduction to operational amplifier circuits incorporating feedback. Amplifier configurations, feedback amplifiers, applications of Op-Amps in analog computers, and active filters. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 103 or equivalent or permission of instructor. All students who have an EET associate degree may not enroll for this course for credit. Cross listed with CET 203

ETC 210 Digital Systems I (4)
Fundamentals and advanced concepts of digital logic. Boolean algebra and functions. Design and implementation of combinatorial and sequential logic, minimization techniques, number representation, basic binary arithmetic and finite state machines. Logic families and digital integrated circuits and use of CAD tools for logic design. Prerequisite: ETC 102 or equivalent or permission of instructor. All students who have an EET associate degree may not enroll in this course for credit. Cross listed with CET 210 and ECE 251.

ETC 216 Electronic Communications I (4)
Introduction of analog electronic communication systems. Study of power measurements, signals, signal analysis, and signal generation. Focus on analog communication systems including amplitude modulation, frequency modulation, phase modulation and single sideband. Introduce the concepts of data communications and networking and study the public telephone network. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 102 or equivalent or permission of instructor.

ETC 265 Digital Systems II (4)
Study of Digital Systems Design using the Intel family of microprocessors and their peripheral support integrated circuits. Incorporate Intel assembly language to develop programs to run the Intel hardware. Devices studied include the 8255A PPI and 8251 PCI. Design and implementation of Intel hardware and software will be emphasized. Interfacing and testing of the computer's internal buses using logic analyzers and other test equipment will also be included. Three hours of lecture and two hours of laboratory. Prerequisite: ETC 210 or equivalent. Cross listed with CET 265.

ETC 288 Alternative Energy (2)
Principles and techniques associated with the methods of energy extraction from solar, wind, geothermal and biomass sources. Power management, economic development and environmental considerations will be discussed.

ETC 290 Introduction to Nanotechnology (2)
An introductory course covering fundamentals of nanotechnology, its applications and future challenges. Course content includes an introduction to nanodevices, fabrication, imaging and characterization of nanodevices, nanoelectronics building blocks, nanosensors and nanocomputing. Prerequisite: One course in physics or permission of instructor.

ETC 299 Quality Control and Workplace Issues (2)
To provide a broad educational understanding of the impact of engineering solutions in a global and societal context along with a knowledge of contemporary issues and career opportunities. Also, focus will be placed on the process controls necessary for the practice of electrical and computer engineering. Cross listed with CET 299.

ETC 300 Tools in Technology (2)
Introduction to the field of CAD (Computer Aided Design) in the electrical engineering technology field. Will cover the proper design of schematic drawings and the techniques of designing printed circuit boards. Prerequisites: ETC 102 and ETC 110 or equivalents.

ETC 308 Electrical Power Systems I (2)
Fundamentals of power system analysis and design will be studied. Both the theory and modeling of power systems will be covered. Topics include power transformers, transmission-line parameters, steady-state operation of transmission lines, power flow and power system controls. Two hours of lecture per week. Prerequisite: ETC 102 Corequisite: MAT 230.

ETC 316 Electronic Communications II (4)
Study of signals, digital modulation techniques, transmissions lines, microwave techniques and devices, and antennas. Optical fiber, RF and cellular communications are also introduced. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 216 or equivalent.

ETC 331 Control Systems (4)
Basic control systems studied using Laplace transforms. Principles of electro-mechanical control systems (electrical and mechanical), measuring means, components and their characteristics, and controller characteristics. Analysis of a control system by the frequency/phase responses and stability criteria. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 104 or equivalent.

ETC 342 Microprocessor and Embedded Systems Programming and Design (4)
Programming and microprocessor for embedded systems application. Includes an introduction to interfacing components and hardware of the microprocessor. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 110 or permission of instructor. No prior microprocessors background needed. Cross listed with CET 342 and ECE 252.

ETC 356 Programmable Controllers (2)
Use of programmable controllers to create relay logic ladder diagrams for the development of control systems.

ETC 360 Advanced Circuit Analysis (2)
Advanced circuit analysis stressing network theorems, solutions of time, and frequency domain problems. Prerequisites: MAT 121 and ETC 105.

ETC 391 Fiber Optics (4)
Principles and analysis of fiber optic components and systems, fiber optic sensors, integrated optoelectronics and applications of fiber optics in telecommunications and instrumentation. Three hours of lecture and two hours of laboratory per week. Prerequisite: One physics course with optics and/or permission of the instructor.

ETC 392 Microelectromechanical System (MEMS) Based Nanotechnology (2)
Introduces the student to the emerging field of microelectromechanical systems (MEMS) based nanotechnology. Topics will include introduction to nanonscale systems, methods of fabrications and packaging of MEMS, principle of microactuation, visualization and applications of nano and micro systems. Prerequisite: PHY101 or permission of the instructor.

ETC 416 Data Communication & Computer Network Technology (4)
The principles and techniques of data and computer communications are covered in detail in this course. Topics include principles of data transmission, data encoding, digital communication techniques, transmission codes, error detection and correction, protocols, communication networks, interfacing and architecture. Three hours of lecture and two hours of laboratory per week. Cross listed with CET 416.

ETC 419 Satellite Communication (2)
Principles of satellite communications, techniques of transmitting speech, data and video using satellites. Prerequisite: ETC 316 or permission of instructor.

ETC 421 Wireless Communication Systems (4)
Study of the theory and the techniques used in the implementation of wireless communication systems. Principle and analysis of mobile communication systems, wireless LAN, personal communication networks and Land-Mobile/satellite communications systems are also included. Prerequisite: ETC 316.

ETC 423 Microprocessor Interfacing (4)
Analysis of microprocessor interfacing with operational hardware. Three hours of lecture and two hours of laboratory per week. Prerequisites: ETC 110 or equivalent and ETC 342 or permission of instructor. Cross listed with CET 423.

ETC 429 Microprocessors, Microprogramming and Computer Architecture (4)
Design of microprocessor and computer central processing units. Stresses the architecture and microprogramming of the processor. Three hours of

lecture and two hours of laboratory per week. Prerequisite: ETC 110 or equivalent or permission of instructor. Cross listed with CET 429.

ETC 431 PC Integration and Maintenance (4)
This course stresses the architecture and design of personal computers and emphasizes the use of diagnostic hardware and software to evaluate PC systems in actual lab situations. Two hours of lecture and four hours of laboratory per week. Prerequisite: ETC 311 or ETC 342 or CS 220. Cross listed with CET 431.

ETC 433 Automatic Control Systems (4)
Transfer function approach to the analysis and design of feedback control systems. Use of Bode diagrams, and root locus plots to predict system performances. Analog and digital simulation of industrial control system problems. Prerequisite: ETC 331 or equivalent.

ETC 434 Servomechanism Design (2)
Servomechanism controls design. Mathematical modeling of AC & DC servosystems and study of their related stability, network compensation, performance, inertial damping, resonance. Tracking system design approaches. Analysis of scaling and non-linear performance. Two hours of lecture per week. Prerequisite: ETC 433.

ETC 435 Digital Control and Robotics (4)
Discrete time systems and transform sampling and reconstruction, state-space technique and digital stimulation, stability of digital control systems, digital filtering and digital compensator design, discrete-time optimal control, and applications in robotics. This course is the capstone for the control emphasis which requires working on a team project using a robot arm in place of the laboratory, with an oral and written presentation at the end. Three hours of lecture and two hours of laboratory per week. Prerequisites: ETC 331 and one course in computer programming.

ETC 437 Digital Filters (4)
Review of discrete-time linear systems and random processes, z-transforms, difference equations, and state-space formulations. Discrete Fourier analysis and FFT algorithms, including discussions of recursive and non-recursive filter transformations, FIR transversal and Kalman filters. Three hours of lecture and two hours of laboratory per week. Prerequisite: MAT 122.

ETC 444 Special Topics in Microprocessor/Digital (Variable 1-4)
Seminar on the state-of-the-art in microprocessor and digital techniques. Topics will vary as technology changes. May be taken more than once for credit provided topics are different. Prerequisite: ETC 110 or equivalent or permission of instructor. Cross listed with CET 444.

ETC 445 Microcontrollers (4)
Study the operation and design of systems using single chip microcontrollers and microcomputers. Current equipment will emphasize the MicroChip PIC series of microcontrollers. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 342 or ETC 311 or equivalent.

ETC 446 Programmable Logic Devices (4)
Synchronous sequential circuit design. Algorithmic state machine method; state reduction; control-data path circuit partitioning. Design of sequential arithmetic circuits. Memory interfacing; bus-based design. Specification and synthesis of digital systems using hardware description language and implementation using programmable logic devices. Simulation, analysis, testing, and verification of digital systems. Cross-listed with ECE 351. Prerequisite: ETC 210 or equivalent.

ETC 455 VLSI Design Fundamentals (4)
Very Large Scale Integration (VLSI) design fundamentals relating to cell design, layout, chip design tools for both NMOS and CMOS are covered. Emphasis on chip testability will be at the end of the course. The course is supplemented by state-of-the-art labs. Three hours of lecture and two hours of laboratory per week. Prerequisite: ETC 110 or equivalent, or permission of instructor.

ETC 475 Data Compression & Multimedia Technology (4)
Data compression techniques are covered in detail for video, audio and text compression leading to the standards. Sensors are interfaced and an integrated environment is created by the use of appropriate hardware and software. Prerequisite: ETC 316 or permission of instructor.

ETC 480 Electrical Technology Senior Project I (2)
This is the first of two two-credit courses which must be taken as a pair. Extensive investigation, preparation, and development of a design project incorporating concepts from senior level courses. A written report is required. At the end of first semester, student should have all information and material required to complete the project in the following semester.

ETC 481 Electrical Technology Senior Project II (2)
This course involves the full implementation, testing, troubleshooting, and final demonstration of the senior project as proposed in ETC 480. An updated final report shall also accompany the final project. Note: Credit given only if ETC 480 has been successfully completed. Prerequisite: ETC 480.

ETC 483 Optical Communications (4)
Principles and techniques associated with the transmission of optical radiation in waveguides (fibers) and free space, low and high power optical sources, internal (direct) and external (indirect) modulations. Fiber optical waveguide and characteristics of free space, homodyne and hetrodyne detection, and design of optical communication systems. Three hours of lecture and two hours of laboratory per week. This is the capstone course for the concentration in communications and requires working on a team project in place of laboratory assignments with oral and written presentation at the completion of the project. The written report will include analysis, design and management of the project. Prerequisite: ETC 391 or permission of instructor.

ETC 485 Microwave Communications and Radar Technology (4)
Provides a basic understanding of microwave communications and radar technology. Topics include fundamentals of microwave and radar technology, microwave devices, microwave wave-guides and antennas, types of radars and applications. Three hours of lecture and two hours of laboratory. Prerequisite: ETC 316.

ETC 488 Computer Control of Instrumentation (4)
Computer control of electronic instrumentation via the IEEE Standard 488 General Purpose Instrumentation BUS (GPIB) for the purposes of data acquisition and its presentation (tabular and graphic form). "C" programming is utilized as the control language. Two hours of lecture and four hours of laboratory per week. Prerequisites: ETC 331 and knowledge of a programming language or permission of the instructor.

ETC 490 Special Topics in Communication Technology (2)
An in-depth study of topics selected from and based on new developments in communications technology and related areas. Topics may include areas of secure communications, mobile communications, image transmission and optical signal processing, computer-aided design, analysis of communications links and networks and integrated services digital network standards. Prerequisites: ETC 316 and permission of instructor.

ETC 491 Independent Study (Variable 1-4)
Extensive study of a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, methods of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

ETC 494 CO-OP Assignment (Variable 2 or 4)
Provides 14 weeks of supervised experience in an industrial or government installation applying technology knowledge towards the solution of engineering technology problems and developing abilities required in the student's career. At least two reports and two supervisors' evaluations

are required. A minimum of 60 contact hours of industrial work is required per credit hour. May be taken repetitively up to a maximum of four credits. Prerequisite: Permission of employer and dean.

English

ENG 090 Introduction to College Writing
For students not meeting English 101 placement requirements. English 090 will prepare students for English 101 (Freshman Composition) by addressing fundamental writing issues at sentence, paragraph, and essay levels, with emphasis on student-generated writing and model essays. Only S/U grades are assigned for this course.

ENG 101 Freshman Composition (4)
An introductory expository writing course. Students will write a variety of short essays, culminating in a research essay. Emphasis is on close reading, discovering worthwhile topics, drafting and revising, and evaluation and presentation of evidence. Students will also be evaluated on the development and implementation of an oral presentation. Meets new General Education Basic Communication requirement. Prerequisite: COMPASS Placement Test score of 68 or higher or successful completion of ENG 090.

ENG 105 Critical Reading and Writing (4)
Students will write critical essays based on readings. The focus of this class will be critical reading and response. Students will be exposed to research methods including information gathering, source evaluation and analysis, synthesizing ideas and evidence and use of documentation. Readings for this class may be topical or organized around a theme. An oral presentation based on one of the course topics will be required and evaluated. Meets new General Education Basic Communication requirement. Prerequisites: ENG 101 or appropriate placement test score.

ENG 110 Introduction to Literature (4)
An introduction to the critical reading of various literary genres, with attention to the interpretation and evaluation of fiction, drama and creative non-fiction. Readings will represent a pan-historical approach to the study of literature and will include non-Western texts. The course will not be arranged by theme or topic; it is designed to cover a broad range of issues, themes, and topics through the study of various literary genres. This course provides a critical and aesthetic introduction to the major genres of literature.

ENG 205 Creative Writing (4)
Through writing prose fiction or poetry, students develop competency in narration, description, characterization, and other writing skills developing a personal "voice". As students write, critique, and re-write, they learn the skill of self-criticism which is a necessary part of all writing. Meets new General Education Arts requirement.

ENG 211 The Arts and Cultural Revolution (4)
A study of one non-Western culture with emphasis on how its beliefs and customs are represented in the arts, including literature and visual arts, during periods of rapid technological and cultural change. Comparisons to parallel Western works will be made to clarify cultural difference. The culture studied will vary; current subjects are modern Japan, revolutionary Mexico, Russia since the Bolshevik Revolution, and modern Israel.

ENG 310 Topics in American Literature (4)
A study of a major period, genre, figure, or theme in American literature. Typical topics include science fiction, twentieth century poetry, slavery and the Civil War, and the image of women in American literature. May be taken more than once as topics change. Meets new General Education Humanities requirement.

ENG 311 Topics in World Literature (4)
A study of a major period, genre, figure, or theme in world literature. Typical topics include the modern European novel, technology in literature, Shakespeare, modernism, and women and power. May be taken more than once as topics change. Meets new General Education Humanities requirement.

ENG 312 Studies in the Short Story (4)
Examines the short story as a literary genre. The emphasis is on interpretation, though selections may vary each semester. Literary questions provide the occasion for students to develop reading and writing skills and to explore how literature and composition interact. Meets new General Education Humanities requirement.

ENG 320 Recent American Poetry (4)
Begins with several major poets of the 1920's: W.C. Williams, T.S. Eliot, and Wallace Stevens. These poets serve as background for the study of poetry since World War II. Some of the poets studied will be chosen by the class. Meets new General Education Humanities requirement.

ENG 331 Black Voices (4)
Students will become acquainted with several major figures of African-American Literature and will examine their works in light of some of the political, cultural, and sociological influences evident within these works. Meets new General Education Humanities requirement.

ENG 350 Dramatic Literature (4)
The playwright is a shaper of events as well as a wordsmith. Plays from several cultural eras will be studied to clarify the dramatist's careful balance of plot, character, idea, language, and spectacle. Film and video versions of plays will supplement text study. Meets new General Education Humanities requirement.

ENG 360 Reading the Film (4)
By accepting film as a legitimate form of literary expression, we utilize the tools of literary analysis which allow us to "read" the images of the cinema. This course will review some of the components of the language of literature and will introduce the basic elements of film technique. Students will be asked to "read," understand, and critically evaluate the translation of literary elements into the language of film. Meets new General Education Humanities requirement.

ENG 361 Film Direction: Alfred Hitchcock (Variable 2-4)
Encourages students to critically examine the facets of the film image. Using Alfred Hitchcock as a model, students will be presented with the range of options available to a film director and shown some of the techniques employed to make a text (story) visual. Our focus will be on the rhetoric and style found in the language of the cinema as represented in the work of Alfred Hitchcock. Meets new General Education Humanities requirement.

ENG 375 The Novel (4)
A study of the nature and evolution of the novel, including the social conditions that stimulated its growth and the special characteristics and possibilities of the genre. Emphasis will fall on British and American novels from the 18th century to the present, including trends such as the novel of manners, realism, symbolic and impressionistic realism, and recent experiments ("fabulation," the non-fiction novel). Meets new General Education Humanities requirement.

ENG 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

Finance

FIN 302 Financial Management Principles (4)
General principles of corporate finance are presented. Topics include: the tax environment, an overview of financial planning and control, working capital management, and forms of long-term financing. Objectives include an analysis of responsibilities and functions performed by financial analysts, whether representing a firm, a financial institution, an investment officer, or financial/management consultant. Prerequisite: ACC 201 or equivalent or permission of instructor.

FIN 332 Fundamentals of Investments (4)
The investment of capital funds is a complex field and topics studied include: investment and risk, determination of investment policy, types of security investments, sources of investment information, the broker, the stock market, and portfolio management.

FIN 341 Financial Institutions (4)
Analysis of financial institutions with emphasis on their sources of funds and operating characteristics. Emphasis also is given to the role of commercial banks in the money market and the relationship of the other major financial institutions to the commercial banks.

FIN 343 Personal Finance (4)
This course provides the informational and decision-making tools needed for planning and implementing a successful personal financial plan. It provides an overview of personal and family financial planning with an emphasis on financial recordkeeping, planning your spending, tax planning, consumer credit, making buying decisions, purchasing insurance, selecting investments and retirement and estate planning.

FIN 411 Financial Management Problems (4)
An in-depth financial analysis of problems experienced by different firms is pursued using actual cases and outside reading to supplement text data. Studies will cover value of cash flow, capital planning, break-even analysis, inventory control, financial structure, cost of capital, external growth, failure, reorganization, and liquidation. Prerequisite: FIN 302.

FIN 420 Financial Planning and Control (4)
Analytical techniques and procedures for dealing with capital structure problems of business. Emphasis will be on capital budgeting techniques and methods of ranking investment alternatives available to business. The student should become familiar with different theories of probabilities to minimize risk in financial planning and control. Prerequisite: FIN 411 or equivalent.

FIN 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

FIN 492 Finance Internship (4)
Supervised, discipline related experience in a business organization. Emphasis is on application, process, and techniques used by business to sustain business and promote growth. Specific skills and competencies needed to be a successful decision-maker will be targeted. Oversight will be provided by the School internship coordinator and the sponsoring organization. Periodic meetings with the supervisor, mid-semester evaluation, and a final, comprehensive written report are required. Prerequisite: Permission of instructor.

Fitness

See Health and Physical Activity

French

FRE 101 Elementary French (4)
Introduces the basics of French language and culture. The student will develop the four language skills of listening, speaking, reading and writing through practice in pronunciation, listening comprehension and reading and writing of short passages. Integrated into the course is an introduction to the French way of life. Meets the new General Education Foreign Language requirement.

General Studies

GEN 204 Understanding Human Nature (4)
Examines human nature from a wide variety of disciplinary perspectives including philosophy, religion, psychology, sociology, biology, and literature. It also includes an examination of the implications of the relationships between humans and technology for our understanding of human nature. Meets new General Education Humanities requirement.

GEN 300 Academic Skills Enhancement (1)
To help students reinforce the universal foundations of academic success, including critical thinking, study skills and time management. Additionally, to help students discover and benefit from their own individual strengths and experience. Assignments include readings from a variety of sources, self-reflection papers, and model assignments from different academic disciplines. To use this course as a first step toward a more rewarding academic career, students will produce a personalized Learning Plan and design and participate in a community service project.

GEN 310 Critical Methods of Inquiry in the Humanities and Social Sciences (4)
Introduction to various modes of analyzing subjects in the humanities and social sciences. Students will gain an understanding of the techniques, methodologies, and vocabularies of research methods and will become familiar with debates regarding those research methods. Students will employ several research methods to assess their preferences for approaches to subject matter, and will design and carry out an interdisciplinary final project. Topics of study include: critical theory, film and visual arts criticism, historiography, literary criticism, and social science research issues.

GEN 400 Prominent Themes in Western Civilization Since the Renaissance (4)
A reading and writing intensive course that examines the central themes, issues, and ideas in western civilization in the modern and postmodern eras in an interdisciplinary fashion. It incorporates knowledge from a variety of intellectual fields, including physics, biology, social science, philosophy, political science, and literature. In this course, students will read primarily original sources as well as some secondary sources. Meets new General Education Western Civilization requirement.

GEN 401 Contemporary Worldviews (4)
A reading and writing intensive course that studies a dominant characteristic of Western thought in the twentieth century through interdisciplinary readings. Students will read primary sources in history, philosophy, science, literature, the visual arts, or social sciences, and will study and compare the nature of the core idea in each discipline. Possible issues to be examined include the crisis of authority, the ecological consciousness, technology and culture. Meets new General Education Western Civilization requirement.

GEN 492 General Studies Internship (2-4)
Intended for General Studies majors to gain practical and/or professional experience in an area related to their individual program of study. Student will work with a qualified specialist in the relevant area, and will be responsible for reporting to both the specialist and to a faculty supervisor. Students wishing to enroll must have filed their program of study and completed a minimum of 12 credits total in their chosen areas of concentration.

GEN 499 General Studies Project (4)
Each student will design and complete a project that combines two of their three program disciplines. The project must be approved by an advisor in each discipline. The project may take many forms, from a traditional research essay, to a computer program or marketing design. Students will discuss research issues in seminar meetings, and will make presentations based on their projects to the faculty advisors at the end of the course. Prerequisites: Senior status; GEN 310 or equivalent; General Studies majors only.

Geography

GOG 310 Economic Geography (4)
Surveys theories of the location of specific economic activities, such as agriculture, manufacturing, etc. Also considers theories of economic

interaction among locations, including transportation, trade, and the role of cities. The student will have a grasp of why particular economic activities are located where they are, and of the economic consequences of physical geography. The goal of the course is an understanding of land-use planning from the geographer's perspective.

Health and Physical Activity

FIT 100 Introduction to Fitness (1)
Learn concepts of cardio, weight and flexibility training for long-term cardiovascular health, strength and endurance. The basic principles of exercise and the proper utilization of fitness equipment will be demonstrated and applied.

FIT 101 Concepts of Aerobic Training (1)
Learn concepts of aerobic training for weight loss, increased flexibility and for long-term cardiovascular health, strength and endurance. The basic principles of exercise and the proper utilization of fitness equipment will be demonstrated and applied.

FIT 102 Athletic Conditioning (1)
Concepts of total athletic conditioning, including cardiovascular, strength and agility training, through application of dynamic warm-up, flexibility, plyometrics and interval training.

HLT 200 Peer Health Education I (2)
An introduction to the field of peer health education with an emphasis on the development of a wellness lifestyle and self responsibility. Communication and interpersonal skills needed to peer counsel will be introduced. Course topics include drug, tobacco and alcohol use/abuse as well as sexually transmitted diseases. Students will be involved in campus outreach activities such as informational displays and data collection.

REC 101 Introductory Racquetball (1)
Learn basic skills, strategies and rules for competitive recreational play; utilize racquetball as a primary or secondary source for cardiovascular health, flexibility and endurance.

REC 102 Introductory Golf (1)
Learn basic skills, strategies and rules for competitive recreational play; utilize golf as a primary or secondary source for cardiovascular health, flexibility and endurance.

Health Information Management

HIM 100 Introduction to the Health Information Management Field (3)
Introduction to the health information field and professional ethics. Regulatory requirements for content and maintenance. Numbering and filing systems. Retention and storage of records. Laboratory and lecture. Two hours of lecture and two hours of laboratory per week.

HIM 111 Medical Terminology (3)
The language of medicine including Latin/Greek prefixes, suffixes and root words. Diagnostic and procedural terms will be included.

HIM 212 Pathophysiology for Health Information Management (3)
A study of major disease processes including their symptoms, diagnosis, and treatment. Students will learn which diagnostic tests are used as well as the appropriate surgical techniques. Basic pharmacology and the most commonly used drugs will be discussed.

HIM 220 Data Management and Analysis for Health Information (3)
Use of database management software to manage and query health care data. Use of spreadsheet software to import data form health care databases. Data presentation principles. Calculation and use of special statistics related to the health care setting. These statistics are used for health facility planning and administration and for epidemiology. Pre/corequisite: CSC 311C.

HIM 305 Inpatient Coding and Classification (3)
Coding and classification schemes used for hospital inpatients will be discussed. Special emphasis will be placed on the International Classification of Disease-9th-Clinical Modification (ICD-9-CM) and diagnosis related groups (DRG's). Two hours of lecture and two hours of laboratory per week. Prerequisites: HIM 100 and HIM 111 and HIM 212 and completion of Human Anatomy & Physiology I. Corequisite: Concurrent enrollment in Human Anatomy and Physiology II or completion of that course.

HIM 306 Outpatient Coding and Classification (3)
Coding and classification schemes used for outpatients in hospitals, ambulatory care centers and physician offices will be discussed. Special emphasis will be placed on Current Procedural Terminology, 4th edition (CPT-4), and reimbursement classifications. Two hours lecture and two hours laboratory per week. Prerequisites: HIM 100 and HIM 111 and HIM 212 and completion of Human Anatomy and Physiology I. Corequisite: Concurrent enrollment in HIM 305 and Human Anatomy & Physiology II or completion of those courses.

HIM 392 Technical-Level Residency (3)
The student will complete a three-week practicum in a hospital health information management services area. Students will practice technical skills learned during the first year of the health information management curriculum. (Note: Students who transfer from a health information technology program will transfer the equivalent of this course.) Prerequisites: HIM 305 and HIM 306.

HIM 400 Non-Hospital Health Information Management Systems (2)
Non-hospital health care settings offer exciting employment alternatives for health information managers. Included in this course will be a study of health information systems for psychiatric, developmental, occupational, long term, home health, correctional, emergency medical services, and veterinary care. In addition, disease registries will be covered. Prerequisites: HIM 305 and HIM 392. Corequisite: HIM 494.

HIM 401 Systems for the Evaluation and Improvement of Health Care Systems (3)
A study of the historical basis for current trends in the evaluation of health care, and an explanation of the role of the health care manager in this process. Methods for assessing quality and appropriateness. Use of the system as a risk management tool. Two hours of lecture and two hours of laboratory per week.

HIM 410 Health Information Services Management (3)
Department management technique for health information management. Applications of systems analysis, computer science, budgeting, personnel management, and plant layout for the health information manager. Two hours lecture and two hours laboratory per week. Prerequisite: HIM 400.

HIM 425 Research in Health Information Management (3)
A study of the application of research techniques to the health information management field. Students will perform small research studies and will review published research in the field. Prerequisite: STA 100.

HIM 435 Health Care Management/Medical Information Systems (3)
This course is intended to expose hospital managers to the areas where computers can assist in the direct care of the patient and the management of hospitals. Emphasis will be placed on how to evaluate computers and information systems for hospitals, the unique problems involved in implementing computerized systems in the health care environment, and strategies for minimizing problems.

HIM 440 Electronic Health Records (3)
Addresses the definition, benefits, standards, functionality and confidentiality/security measures for the electronic health record. Case studies will be used to show how two health care organizations have developed their systems. Prerequisite: HIM 100 or permission of instructor.

HIM 490 Selected Topics in Health Information Management (Variable 1-4)
Courses offered as Selected Topics in Health Information Management supplement regularly offered courses. Such courses enhance the student's general knowledge of Health Information Management topics.

HIM 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, education goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

HIM 493 Senior Seminar (2)
Final summary course with discussion of current events in the health information management field and preparation to enter the job market. Includes a final comprehensive examination on the curriculum (a mock certification examination for the registered health information administrator). Pre/Corequisite: HIM 410.

HIM 494 Specialty Rotation (1)
Students will rotate through various non-hospital health information management service areas in facilities, such as those dealing with mental health, developmental disabilities, long-term care, hospice, home care, ambulatory care, disease registries, correctional health and occupational health. Corequisite: HIM 400.

HIM 495 Management-Level Residency (3)
The student will complete a three-week residency in the health information management services area of a type of health care facility of the student's choice. Students will practice management skills learned in the health information management curriculum. Prerequisites: HIM 410 and HIM 392.

Health Services Management

HSM 201 Health Care Delivery in the U. S. (3)
Health care delivery in the United States is a dynamic, evolving and extremely complex system; comprised of myriad providers and payers. The system is further complicated by significant government involvement in both delivery and payment. This course will address the multiple components of the health care delivery system and the rationale for its patterns and practices.

HSM 300 Introduction to Quantitative Methods in Health Services (3)
Health system utilization statistics are significant factors when assessing the population's use of the health care delivery system. This course is intended to introduce the student to these important statistics, their calculation and interpretation.

HSM 309 Health Care and the Law (3)
A study of the legal aspects of various areas of health care administration will be conducted. Specific applications and study will include the health care administrator, governing boards, hospital liability, consent, procedure, malpractice, and other related topics.

HSM 311 Management for the Health Professions (3)
Introduces students to six basic management functions (planning, organizing, staffing, directing, controlling and decision making) in the context of health care such as hospitals, long term care facilities and other health related organizations. Concepts of management and management responsibilities (such as ethics, leadership and motivation) are related to selected functions. Students lead case discussion groups or critique journal articles on each management function.

HSM 401 Introduction to Epidemiology (3)
Preventing the incidence of disease requires an understanding of the risk factors associated with its cause. This course will provide a foundation for understanding the dynamics of health and disease in society, and impart a grasp of the fundamentals of epidemiology.

HSM 405 Economics of Health Care (3)
Uses an economic framework to examine major components of the health care system. Topics covered include the principles of microeconomics and regression analysis, the production of health, the demand for medical care (consumer behavior), the theory of health insurance, the market for physician services, the market for hospital services, and the long-term care services market. Students will complete a major research paper on a health economics related topic. Cross listed with ECO 405.

HSM 410 Alternative Methods of Health Care Delivery (3)
Provides a framework for understanding the meaning of the term "alternative health care delivery" and explores applicable methods from several health care arenas including the evolution of managed care, the expansion of alternative and complimentary medicine modalities into mainstream medicine and the international health care scene. The course presents theories, principles and methods for investigating, evaluating and conducting business using the discussed methods of health care delivery. It is designed to introduce students as current and future health care administrators to the concepts and dynamics of alternative health care delivery methods as a basis for monitoring organizational, legislative and reimbursement changes – be it in acute care, long term care, physician practice management or some similar field. Prerequisite: HSM 201.

HSM 422 Nursing Home Administration (3)
Aging of the United States population has expanded the need for long-term care services. This course will examine the nursing home as an integral part of the long-term care continuum. This course is intended to provide the foundation necessary for students preparing for an internship and subsequent career as a nursing home administrator. It is a requirement for placement in a nursing home internship. Prerequisites: HSM 201, HSM 311.

HSM 425 Health Care Marketing and Strategic Planning (4)
Decision making, relative to facility planning and financial integrity, has become extremely complex in the health care field. Health care marketing is one of the tools available to the health professional which provides guidance and support to these efforts. This course will address many of the planning and marketing variables that should be addressed, as well as how to coordinate these activities. This is a capstone course. Prerequisites: HSM 300 and HSM 435 or ACC 430.

HSM 431 Financial Management for Ambulatory Care Organizations (3)
This course is designed for the health care administrator who will work primarily in ambulatory care facilities. The course will focus on financial reimbursement issues which the administrator must understand in providing strategic financial and operational direction to his/her facility. Prerequisites: HSM 435 or permission of instructor.

HSM 435 Financial Management for Health Care Organizations (3)
Students will acquire a working knowledge of cash flow projections, budgeting, cost accounting and control and evaluation techniques for not-for-profit organizations. Case study analysis and presentations will be the primary instructional methods. Students will learn to use an electronic spreadsheet to assist in analyzing case studies. Cross listed with ACC 430. Prerequisite: ACC 201 or equivalent.

HSM 436 Financial Management for Health Care Organizations – Case Study (1)
An extensive accounting case analysis problem involving a not-for-profit entity will be assigned. Students will be required to submit a written report. Students must be registered currently in ACC 430 or HSM 435; case study will be arranged by instructor on an independent study basis. Prerequisites: ACC 201 or equivalent and currently enrolled in or having completed HSM 435 or ACC 430.

HSM 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its

duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

HSM 492 Internship (Variable 3-16)
Students work off-campus under the direction of a qualified preceptor in one of the many types of organizations involved in health care in New York or other states. Students are exposed to the various components of the organization and may prepare special reports or studies on behalf of the organization. To be eligible for an internship, students must achieve a C in all HSM core and elective courses and a 2.3 overall grade point average in these courses. Only S/U grades are awarded for this course. May be taken more than once for credit. Prerequisite: Permission of instructor.

History

HIS 101 American History: Colonies to Reconstruction (4)
A description and analysis of the major factors accounting for the transformation of the earliest settlements into a sovereign national power. Emphasis will be placed on the role of immigration, changing institutional values and structures, and the interplay between economic and political forces. Meets new General Education American History requirement.

HIS 102 American History: Reconstruction to the Present (4)
A description and analysis of the principal forces involved in the growth of the U.S. from a society on the eve of massive industrialization into a technological consumer society. Features stressed will include the rise of the corporation, the development of an urban labor force, the changing role of government, and the integration of the United States into a global political and economic system. Meets new General Education American History requirement.

HIS 150 History of Modern Europe (4)
A political and social survey of the period 1815-present. Primary attention is given to the major Western European states and Russia. Central themes of the course include: the decline of aristocratic dominance and the attempts of first the middle, and then the lower classes, to gain control of society, the origins of World War I, the war itself and its aftermath, the rise of totalitarianism and the coming of World War II, the Cold War, new prosperity, and the global age. Meets new General Education Western Civilization or Humanities requirement.

HIS 240 Latin American Civilizations (4)
A one-semester overview of Latin America, from the first encounters of European, African, and Native American cultures to the diverse and complex societies of the present. Study of the region's indigenous and colonial past will help explain contemporary politics, economics, social relations, and cultural movements. Repercussions of the independence movements and subsequent democracies, monarchies, dictatorships and reform movements will be tracked. Students will evaluate demographic changes, social upheaval and revolution, industrialization and development, environmental degradation, and foreign intervention. Throughout the course, changes and continuities in race, class, gender, and other social roles will be identified and analyzed. Meets new General Education Other World Civilizations requirement.

HIS 306 History of Science and Technology (4)
An analysis of the histories of science and technology in the context of the broad outlines of world history and the history of western civilization. As such, this course is an exploration of the interrelationships and interactions among technology, different forms of knowledge about nature, and their political, economic, social, intellectual, and cultural contexts. That exploration will lay the foundation for a cross-cultural comparison of science and technology in the West and in other civilizations to analyze the significance of western science and technology's dominance. Lectures will supplement the text, and will cover themes and issues important to understand the changes that occurred in the histories of science and technology. May not be taken for credit by students who previously took and passed HIS 307. Meets new General Education Western Civilization and Other World Civilizations requirements, or can be used to meet Humanities requirement.

HIS 308 Latinos in American History (4)
A review and analysis of the major historical developments explaining the presence of the United States' largest emergent minority group, the Hispanics, or Latinos. Major themes include the colonial activities of the Spanish and Portuguese; subsequent historical developments involving Mexico, Puerto Rico, Cuba, and other areas of Central and South America; the experience of Latinos in the U.S. in the past 200 years; and the current status and culture of Latino groups in American society. Meets new General Education American History requirement. Only students scoring about 84 on the NYS Regents in American History.

HIS 317 Topics in Black History (4)
Deals with a variety of periods in Black History which have contributed to American life as it exists today. Topics will change each semester and may deal with such diverse matters as the African cultural roots of Afro-American life, views of Black family life and institutions during slavery. Meets new General Education Western Civilization or Humanities requirement.

HIS 330 American Women's History: U.S. Historical Experiences in Hemispheric Perspective (4)
An examination of the history of women in the United States from European colonization (ca. 1600) to the present, plus the opportunity to compare American women's experiences with those of their peers throughout the Western Hemisphere. Themes addressed will include: race and ethnicity in colonization and coexistence, labor (paid and unpaid) and class issues, health and sexuality, religion and spirituality, and legal and political struggles. Meets new General Education American History requirement.

HIS 360 Environmental History (4)
The constantly changing relationship between Americans and the land has been a continuing theme in American history, beginning with the ideas and attitudes the colonists brought with them from Europe and continuing to the current environmental movement and its opposition. This course deals with American attitudes toward land, natural resources, and nature from the roots of our ideas in Western civilization to the present. This course will focus on Native American and European ideas about nature, explore the impact of the ideas of Thoreau, Muir, and Leopold, and analyze how science has changed our understanding of the relationship between Americans and nature. Meets new General Education Western Civilization requirement.

HIS 370 Western Civilization and the World (4)
A historical analysis of Western and other world civilizations. Explores the broad outlines of world history by comparing, contrasting, and relating the distinctive features of Western civilization to other world civilizations. Topics covered include the origins and varieties of civilizations, the divergent traditions in world civilizations, European hegemony and the end of European dominance, and globalization. This is a reading-intensive course in which lectures and discussions supplement the assigned reading. Meets new General Education Western Civilization and Other World Civilizations requirements.

HIS 375 Gender Issues in World History (4)
An examination of how gender roles have shaped the experiences of diverse men and women in a range of human societies worldwide, and how those roles have affected experiences of cultural interaction among societies in modern and recent history. Using historical monographs and primary sources, students will employ critical reading and writing skills to gain in-depth knowledge of these experiences and of trends in the field of gender history that can guide independent inquiry. Fulfills the SUNY General Education requirement in Other World Civilizations.

HIS 390 Topics in History (4)
An in-depth examination of particular topics in history. Topics might include World War II, the history of women in America, the Sixties and

the Vietnam War, history of presidential elections. Each course will use one or two general textbooks; in addition, every student will be required to perform research on a particular issue related to the topic of the course. May be taken more than once as topics change.

HIS 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, education, educational goals, methods of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject matter.

Humanities

HUM 110 Humanities and the Postmodern World (4)
The twenty-first century world is being shaped by an array of technological, social, and economic forces ranging from the ubiquity of media and information technologies to the globalization of economic processes. The role of humanities in interpreting and understanding the reshaped landscape of this postmodern world is examined by exploring various modes of human expression (for example, art, architecture, film, literature, philosophy) and studying how these try to make sense of this dynamic and sometimes disorientating social and cultural environment.

HUM 220 Introduction to Social and Political Thought (4)
An introduction to major ideas, themes and thinkers in social and political thought. While providing an overview of the western tradition, the course will also focus on recurring themes such as questions of power and authority, relations between the individual and the state, concepts of justice, equality, rights, and ideas of individualism, democracy, and community. Attention will be given to the development of ideas within their larger social, cultural and historical contexts.

Industrial Engineering Technology

ITC 101 Introduction to Engineering Technology (2)
Required for all freshmen in Industrial Engineering Technology. Topics include academic requirements, advisement, software packages, career opportunities, and project management. Additional topics include professional, ethical and social responsibilities; respect for diversity and a knowledge of contemporary professional, societal and global issues; and a commitment to quality, timeliness and continuous improvement. Cross listed with CTC/MTC 101.

ITC 162 Computer Aided Design (4)
Students will develop basic skills in using AutoCAD software to develop mechanical drawings. Blue print reading and basic drawing fundamentals will be covered. Students will become proficient in using 2D AutoCAD software. Geometric tolerancing and dimensioning will be covered. Students cannot receive credit for both ITC 162 and ITC 362. Cross listed with MTC 162.

ITC 198 Industrial Instrumentation (2)
A freshman-level course that teaches the fundamentals of devices and methods used to instrument industrial processes and commercial products. Focuses on conventional instruments, electro-mechanical transducers, and computer-based data acquisition equipment and techniques. Two hours of lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisite: Introductory Physics, Algebra, and Trigonometry. Students completing this course cannot take MTC 398 for credit. Cross listed with MTC 198.

ITC 211 Manufacturing Processes (4)
Machining and non-machining methods of processing materials into manufactured components will be discussed. Both traditional and non-traditional machining processes are covered. Machine shop equipment and practices, along with different types of tooling, will be reviewed. Cross listed with MTC 111. Two hours of lecture and four hours of laboratory per week. Prerequisite: ITC 162

ITC 218 Statics (2)
Analysis of equivalent systems of forces, free body diagrams, equilibrium of particles and rigid bodies, centroids, friction, and forces in structures. Two hours of lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisites: PHY 101 and MAT 120. Cross listed with MTC 218 and CTC 218.

ITC 261 Introductory Fluid Mechanics (4)
Introduction to fluid mechanics, fluid properties, fluid statics and dynamics, pressure variation in flowing fluids, drag and lift, applications of fluid mechanics. Three hours of lecture and two hours of laboratory per week. Students may not receive credit for both ITC 261 and MTC 461. Cross listed with MTC 261.

ITC 301 Professionalism in the Work Place (2)
Topics include lifelong learning; professional, ethical and social responsibilities; respect for diversity and a knowledge of contemporary professional, societal and global issues; and a commitment to quality, timeliness, and continuous improvement. Cross listed with CTC 301 and MTC 301.

ITC 311 Manufacturing Operations (4)
Manufacturing concepts which relate to operation selection. A limited number of topics are covered each semester, such as casting, machining, joining, forming, chipless machining, and surface finishing.

ITC 320 Applications Project I (2)
Individual student designed project in a major field, includes: written specifications of project requirements, project plan, milestone identification, implementation, and descriptive report. An oral presentation regarding the project is required. Course includes a one-hour lecture per week. Students will work on an independent basis for the other hour.

ITC 321 Applications Project II (2)
Individual student designed project in a major field, includes: written specifications of project requirements, project plan, milestone identification, implementation, and descriptive report. An oral presentation regarding the project is required. Course includes a one-hour lecture per week. Students will work on an independent basis for the other hour.

ITC 327 Production & Operations Management (4)
Modern production and operations management in an industrial setting. Planning, organizing, and controlling using the relevant qualitative and quantitative approaches. Covers topics such as forecasting, capacity requirement, planning, work standards, scheduling, fundamentals of inventory control, and material requirement planning. Cross listed with MTC 327.

ITC 330 Assistive Technology (2)
Introduction to the fundamentals of assistive technology for people with physical disabilities. Rehabilitation engineering with an emphasis on mechanical devices used to enhance mobility and manipulation, improving physical interaction with the environment. Topics include prosthetics, manual wheelchairs, power wheelchairs, and alternative methods for computer access. Two hours of lecture per week. Cross listed with MTC 330.

ITC 336 Material Science Applications (2)
Composition, structure, and behavior of metallic and non-metallic materials, and their effect on the physical, mechanical, and electrical properties of that material. Analysis of crystalline structure, physical properties, and service analysis of materials for physical, mechanical, and electrical properties. Cross listed with MTC 336.

ITC 358 Plant Layout and Material Handling (4)
Analysis and design of layouts used in manufacturing industries. The analysis and selection of the optimal material handling system. Appropriate laboratory experiments will be assigned.

ITC 362 Computer-Aided Design for Industrial Engineering Technology (4)
Basics of CAD as applied to Industrial Engineering Technology. AUTOCAD software used for typical Industrial Engineering Technology applications such as: part prints, process prints, tooling layouts, NC prints, office layouts and plant layouts.

ITC 366 Introduction to Robotics (2)
Introduction to robot classification, justification, and application characters in different environments. Hands-on operational experience, including motion control, safety, tooling, and industrial application project. One hour lecture and two hours of laboratory per week.

ITC 373 Statistical Quality Control (4)
Modeling and inferences about process quality. Philosophy and methods of statistical process control. Quality improvement in the modern business environment. Techniques for quality trouble-shooting, decision-making, and implementation. Review of basic concepts for statistics. Prerequisite: STA 225 or STA 100 or permission of instructor.

ITC 390 ISO 9000 and Total Quality Assurance (2)
An introduction to quality regulations - ISO 9000 and elements of total quality assurance: Deming's points, quality problem solving tools, control charts, inspection policy trade-offs, product reliability and its life cycle cost.

ITC 391 ISO14000 - Auditing and Implementation (4)
An introduction to environmental management systems (EMS) - IS014000 series topics include: ISO14000 series overview; labeling; EAE; LCA; environmental auditing; conformity assessment; legal and regulatory concerns; global status; preparing for, planning and implementing IS014000; and different implementation approaches.

ITC 392 ISO9000 & TS16949 Implementing and Auditing (4)
Contains the information that an organization needs to understand the ISO9000 series, initiate the process of implementing the standards, and auditing the quality systems. Included also is information about TS16949, the American auto industry producers and additional quality system requirements on their suppliers.

ITC 405 Solid Modeling and Rapid Prototyping (2)
The fundamentals of feature based 3D Solid Modeling CAD software is explained and used. The software utilized will be "Solid Works". Appropriate parts will be assigned for the students to create 3D CAD models. Rapid Prototyping will also be covered and parts will also be assigned as appropriate. Prerequisite: ITC 362 or basic understanding of AutoCAD.

ITC 411 Manufacturing Cost Estimation (4)
Methods for estimating the cost of manufacturing a newly designed product. Cost of various production processes. Cost-quantity relationships. Postproduction review of production methods and product design improvements. Prerequisites: ITC 311 or consent of instructor.

ITC 422 Applied Project Thesis (2)
Students, either individually or in groups, will work on a current engineering technology problem related to their specialty. Scope includes: specification of requirements, project plan, milestone identification, implementation, and description report. An oral presentation on the thesis will be required. Course includes one hour of lecture per week. Students will work on an independent basis for the other hour.

ITC 452 Environmental Engineering Technology (3)
Introductory course in environmental science and engineering. An understanding of the basic nature of natural systems: the atmosphere, aquatic and terrestrial systems, and how technology affects these systems and can be used to minimize damaging impacts. Cross listed with CTC 450.

ITC 462 Computer-Aided Manufacturing (4)
Basic concepts of computer-assisted manufacturing. Computer-aided process planning, materials requirement planning, machinability data bases, computer numerical control systems, group technology, and integrated manufacturing systems. Two hours of lecture and four hours of laboratory per week. Prerequisite: ITC 311 or permission of instructor. Cross listed with MTC 442.

ITC 467 Industrial Safety & Environmental Impact (2)
Occupational Safety and Health Act (OSHA) standards in industrial safety management. The impact of industry on the environment.

ITC 475 Economic Analysis in Technology (4)
Methods for choosing between alternatives based on the time value of money. Replacement studies, depreciation and after-tax analysis, risk, uncertainty and sensitivity analysis. Cross listed with CTC 475 and MTC 475.

ITC 483 Quality Improvement (4)
A thorough study of process improvement with designed experiment, Taguchi's Technique, and modeling & inferences about process quality. Discussion of IS09000 and total quality management. Prerequisite: ITC 373 or STA 100/225 or permission of instructor.

ITC 484 Advanced Topics in Statistical Process Control (2)
In-depth study of Statistical process control in topics such as: Rational sampling and rational subgrouping. The power of charts for locations, control charts and correlated data, slopping control limits, process control for the short run production, difference charts, X-nomial charts, Z-charts, and other charts that are widely used in industry for controlling processes.

ITC 485 Concurrent Engineering and Design for Manufacture (4)
This course introduces and familiarizes design, production, quality, and process with latest methods in Concurrent Engineering and Design for Manufacture of new products. Here students will find most of the techniques of world class design and manufacture, detailed and illustrated with actual data and case studies from leading manufacturing firms. Prerequisite: ITC 373 or STA 100 or permission of instructor.

ITC 486 Reliability for Design and Production (4)
Study of reliability-related probability distributions, reliability testing methods, FMEA, reliability assurance, confidence limits for testing as well as manufacturing process control, reliability design, MIL-STD, maintainability, and availability. Prerequisite: ITC 373 or STA 100 or permission of instructor.

ITC 487 Lean Design of Products and Processes (4)
Systematic in-depth study and presentation of current best practices in the design and development of products and processes. The student will develop an understanding of product delivery systems and become knowledgeable in the corresponding best practices such as: integrated product development, lean concepts, quality practices, and the application of ISO 9000 standards. In addition, the students will learn how to apply system thinking to an entire organization. Cross listed with MTC 487.

ITC 488 Introduction to Ergonomics (4)
A scientific study of work. Ergonomics focuses upon human capabilities and limitations with respect to the appropriate design of living and working environments. Students will learn how to design for minimizing human operator stress and fatigue, and also for promoting work output as well as productivity. Laboratory work substituted for lectures as appropriate. Prerequisites: Calculus I and Calculus II and Physics I. Cross listed with MTC 488.

ITC 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

ITC 492 Technology Internship (4)
This course provides the student with work experience in a professional atmosphere which supplements classroom instruction. Two written reports and one oral report on the work experience are required. A minimum of 240 contact hours of industrial work is required. Prerequisite: Permission of dean.

ITC 494 CO-OP Assignment (2 or 4)
This course provides 14 weeks of supervised experience in an industrial or government installation, applying technology knowledge towards the solution of engineering technology problems, and developing abilities in the student's career. At least three reports, two written and one oral, and two supervisors' evaluations are required. May be taken repetitively up to a maximum of four credits. Permission of employer and Dean of Engineering Technology.

Interdisciplinary Studies

IDS 101 Perspectives on Knowledge (4)
A critical, comparative, cross-cultural analysis of different ways of knowing. Begins by analyzing different ways humans have sought to know the truth, and by comparing and contrasting formal, universal ways of knowing with practical, experience based, problem oriented ways of knowing. The resulting understanding of knowledge provides the foundation to explore: 1) the relationship between morality and knowledge; 2) aesthetics and knowledge; and 3) a comparative analysis of knowledge and information. Reading and writing intensive.

IDS 102 Art and Culture (4)
A study of the concepts and representations of nature in Eastern and Western cultures. Several art forms (literature, performing, or visual arts) will be studied from their beginnings to the present time. Students will create their own versions of several of these arts, such as poems, short plays, drawings, or stories. Emphasis falls on the appreciation of each art and its cultural context, with some comparison of the traditions of East and West. Specific topics may vary.

IDS 103 Science, Technology, and Human Values (4)
Scientific and technological changes occur in the context of a full psycho-social, political, cultural and physical environment. Focusing on specific topics, such as health and illness, food, transportation, or information, etc. Students analyze specific scientific and technological changes in those contexts. Examines some of the major changes that transpired over the course of time for health and illness practices. Students will have the opportunity to study the technological developments in the Western and non-Western worlds as well as the effects those developments have had on the nature of research and on the well-being of the individual.

IDS 104 Technology in American History (4)
A lecture and reading and writing intensive course in American history organized around the theme of technology. History is the understanding of change over time. As such, this course focuses on technology as a central organizing theme to study the changes that have happened in America. We will do so by exploring the interrelationship and interactions among technology and the changing political, economic, social, intellectual and cultural contexts in America. As a result, students can become thoughtful analysts of technology in context.

Japanese

JPN 101 Elementary Japanese (4)
Elementary Japanese is designed for students with little or no background knowledge of the Japanese language and culture. Will provide students with basic language and cultural knowledge, strategies and skills to help them interact in real and social situations they are most likely to encounter in Japan. Students will learn basic Japanese language structures that will serve as a base for further Japanese language acquisition. Meets SUNY General Education Foreign Language requirement.

Management

MGT 307 Organization Behavior (4)
Managerial practices will be studied using a strong emphasis on the importance of individuals' behaviors influencing the effectiveness of organizational performance. The course combines a review of organizational behavior, based upon theory and research in the social sciences, and a variety of individual and small group activities intended to aid students in applying theory to the management of varied organizations. Subject matter includes key topics such as organization-structures, motivation, perception, conflict, communication, leadership, decision making, cultural diversity, and multinational perspectives for managers.

MGT 318 Human Resources Management (4)
Current managerial thought recognizes the importance of human resource contributions to organizational effectiveness and goal achievement. A key aspect of this course is the focus on state-of-the-art systems which support basic business objectives as well as foster good working relations between employees and managers. Topics include: human resource planning; legislative and legal requirements; staffing; performance evaluation; employee relations; and compensation. Personal computer projects are included.

MGT 320 Appraisal, Compensation & Motivation (4)
The use of compensation as a motivator is a complex issue, but of paramount importance in all organizations. Key topics include motivation theory, performance appraisal, government regulation and internal and external pay equity. Students design a pay system for a hypothetical company. Prerequisite: MGT 318. Cross listed with HRM 620.

MGT 415 Industrial and Labor Relations (4)
Managerial success in many human resource-oriented work environments demand competency in the labor relations area. Labor relations extends beyond the traditional boundaries of contracts and grievances. This course provides the necessary background to enable the student to appreciate how the labor relations environment has developed; to function both formally and informally within that environment; and to understand economic, cultural and legal factors which may affect that environment in the future. Prerequisite: MGT 318 or permission of instructor.

MGT 425 Human Resource Selection & Staffing (4)
A systematic framework for understanding the process of recruitment, selection, and retention in organizations. This framework begins with planning, job analysis, and the analysis of external factors such as the legal environment. Presents recruitment sources, selection methods (e.g., structured interviews, written testing, work performance samples, validation), and staffing decision making criteria, and concludes with the issue of retention (how to keep the good employees hired). Topics include job analysis, recruitment, internal selection, external selection, testing, checking references, legal compliance, decision making, final match, and retention of employees. Prerequisite: MGT 318.

MGT 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

MGT 492 Management Internship (4)
Supervised, discipline related experience in a business organization. Emphasis is on application, process, and techniques used by business to sustain business and promote growth. Specific skills and competencies needed to be a successful decision-maker will be targeted. Oversight will be provided by the School internship coordinator and the sponsoring organization. Periodic meetings with the supervisor, mid-semester evaluation, and a final, comprehensive written report are required. Prerequisite: Permission of instructor.

Management Science

MGS 411 Introduction to Management Science (4)
A broad range of quantitative techniques and their applications in business are included in this course. Microcomputers and/or calculators are used extensively. The topics covered will be: cost-volume-profit analysis, linear programming-graphical and simplex methods, transportation method, probability concepts and applications, decision theory, inventory and production models, and game theory. Prerequisites: MAT 111, STA 100 or equivalents.

Marketing

MKT 301 Marketing Management Principles (4)
Topics covered include: marketing's role in society and the firm, the marketing concept, product planning, consumer behavior, marketing research, channels of distribution, retailing, wholesaling, pricing, promotion, and planning and evaluating marketing strategy. Group discussions, case studies, and spreadsheet software are utilized.

MKT 312 Marketing Management Problems (4)
Analysis of problems encountered by firms in marketing goods and services. Emphasis is placed on the formation of strategies to integrate product planning, pricing, distribution, promotion, and service within the existing legal framework. Prerequisite: MKT 301 or equivalent.

MKT 321 Advertising Management (4)
Issues in the development and management of creative strategies to accomplish marketing objectives in a competitive economy. Includes the role, scope, and organization of advertising, the use of agencies, media investigations and campaigns, personal selling, and legal, regulatory, and ethical constraints. Prerequisite: MKT 301 or equivalent.

MKT 345 Retail Management (4)
Explores retail management from a theoretical and applied perspective. Surveys the structure and operation of various kinds of retail firms and the competitive environments in which they operate. Topics include: merchandising and promotional practice, buying and control procedures, pricing decisions, financial planning, evaluation of store operations, and retail strategy formulation. Prerequisites: MKT 301 and ACC 201 or equivalents.

MKT 365 Personal Selling (4)
The fundamentals of personal selling are discussed and applied throughout the course. Emphasis is placed on developing, within the individual, the ability to sell either products or services. A comprehensive sales presentation is developed by each student for the product or service of an organization of his/her choice.

MKT 444 Direct Marketing (4)
An introduction to the fundamentals of effective direct marketing. Topics covered will include: direct mail, telemarketing, interactive TV, and print campaigns. Emphasis will be on a pragmatic approach, with frequent use of cases and outside speakers, as well as field trips and an assignment to conduct an actual direct marketing campaign. Prerequisite: MKT 312.

MKT 465 Consumer Behavior (4)
Behavior science theories are examined for practical application in developing marketing strategies: motivation theory, consumer perception, attitude theory, and social referents. Case studies, class discussion, and projects are used to examine consumer behavior. Prerequisites: MKT 301 or equivalent.

MKT 470 Marketing Research (4)
Through the use of cases, exercises, and projects, the course reviews the application of research methods to gather marketing information. Applied marketing research studies are examined in steps: plan, design, execution, and interpretation. Prerequisites: MKT 301 and STA 100 or equivalents.

MKT 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

MKT 492 Marketing Internship (4)
Supervised, discipline related experience in a business organization. Emphasis is on application, process, and techniques used by business to sustain business and promote growth. Specific skills and competencies needed to be a successful decision-maker will be targeted. Oversight will be provided by the School internship coordinator and the sponsoring organization. Periodic meetings with the supervisor, mid-semester evaluation, and a final, comprehensive written report are required. Prerequisite: Permission of instructor.

Mathematics

MAT 090 Preparation for College Mathematics (0)
A mathematics skills course designed for the student who needs to develop basic arithmetic, geometry and pre-algebra skills. Only S/U grades are assigned for this course.

MAT 110 College Algebra (4)
Techniques of algebra manipulation needed for success in the Calculus courses will be introduced and developed. Topics will include: sets, polynomials, factoring, rational expressions, exponents, radicals, coordinate geometry, inequalities, simultaneous equations, quadratic equations, and partial fractions. Applications with word problems will be included.

MAT 111 College Mathematics (4)
The course provides a basic background in critical thinking and problem solving through the language and methods of mathematics. Topics include a review and extension of algebra, geometry, quantitative reasoning and data analysis. An emphasis is placed upon logic and reasoning in a mathematical context. Students who have previously completed MAT 112 or higher may not enroll in this course for degree credit. Prerequisite: High school algebra and geometry. A terminal college course in mathematics for students who will not take other mathematics courses (such as Precalculus, Elements of Calculus, etc.). Meets new General Education Mathematics requirement.

MAT 112 Elements of Calculus (4)
This is a terminal introductory course in calculus suitable for business, computer science, and telecommunications majors. Topics in both the differential and the integral calculus are covered. These include: functions and graphs, the derivative, differentiation rules, optimization problems, rates of change, exponential and logarithmic functions, the antiderivative, the definite integral, and integration by substitution and by parts. Applications will be drawn from diverse areas such as business, economics, and the life sciences. Students who have previously completed MAT 121 or higher may not enroll in this course for degree credit. Prerequisite: MAT 110 College Algebra or equivalent. Meets new General Education Mathematics requirement.

MAT 115 Finite Mathematics for CS (4)
A rigorous introduction to discrete mathematics as it is used in computer science. Topics include functions, relations, sets, propositional and predicate logic, simple circuit logic, proof techniques, elementary combinatorics, and discrete probability. Prerequisite: MAT 111 or equivalent. Meets new General Education Mathematics requirement.

MAT 120 Precalculus (4)
Introduces the student to some of the fundamental concepts needed to be able to study calculus. Topics include: algebra review, functions, graphing, exponential, logarithmic, and circular functions, trigonometry, complex numbers, and vectors. Students who have previously completed MAT 121 or higher may not enroll in this course for degree credit. Prerequisite: MAT 111 or equivalent. Meets new General Education Mathematics requirement.

MAT 121 Calculus for Engineering Technology I (4)
Introduces the student to the differential calculus. Topics include: analytic geometry in a plane, functions, limits, the derivative and differentiation rules, partial derivatives, related rates, extrema, curve sketching, mean value theorem, linear approximations and parametric equations. Prerequisite: MAT 120 or equivalent. Meets new General Education Mathematics requirement.

MAT 122 Calculus for Engineering Technology II (4)
Introduces the student to the integral calculus. Topics include: the indefinite and definite integrals, areas, volumes, work, the exponential, logarithmic, inverse trigonometric, and hyperbolic functions, integration techniques, improper integrals, L'Hopital's rule, Taylor polynomials and polar co-ordinates. Prerequisite: MAT 121 or equivalent.

MAT 151 Calculus I (4)
More advanced than MAT 121, this course is required for mathematics and engineering majors, and is recommended for mathematics minors. Covers the concept of the derivative and begins the study of integration. Topics include: functions, limits, continuity, the derivative, differentiation rules, mean value theorem, related rates, extrema, curve sketching, Newton's method, linear approximations, definite and indefinite integrals, the fundamental theorem of calculus and parametric equations. Meets new General Education Mathematics requirement. Prerequisite: MAT 120 or equivalent. MAT 121 and MAT 151 cannot both be taken for credit. Restricted to Applied Mathematics and Electrical Engineering Majors only.

MAT 152 Calculus II (4)
More advanced than MAT 122, this course is required for mathematics and engineering majors, and is recommended for mathematics minors. Continues the study of integration and also includes infinite series. Topics include: integration techniques, transcendental functions, applications of integration, conic sections, L'Hopital's rule, improper integrals, sequences and series, and polar co-ordinates. Meets new General Education Mathematics requirement. Prerequisite: MAT 151 or equivalent or MAT 121 with permission of instructor. MAT 152 and MAT 122 cannot both be taken for credit. Restricted to Applied Mathematics and Electrical Engineering Majors only.

MAT 225 Applied Statistical Analysis (4)
(Cross Listed with STA 225)
Deals in depth with statistical methods used to analyze data. Applications are drawn from many diverse areas. Topics include: measures of location and scale for frequency distributions, addition and multiplication laws for probability, the binomial, Poisson, and normal distributions, inferences about proportions and location parameters in one-sample and two-sample problems, analysis of completely randomized and randomized blocks designs, simple linear regression and correlation, sign test, median test, rank sum test, and signed rank test. Prerequisites: Calculus II (MAT 152) or Calculus II for Engineering Technologies (MAT 122).

MAT 230 Differential Equations (4)
An introduction to the theory of ordinary differential equations and matrices. The emphasis is on the development of methods important in engineering and the physical sciences. Topics include: theory and applications of first order and second order differential equations, Laplace transform method, matrix algebra, determinants, Cramer's rule, eigenvalues, and systems of linear differential equations. Prerequisite: MAT 122 or equivalent.

MAT 253 Calculus III (4)
Many properties of systems studied in applied science are functions of several variables or vector valued functions. This course develops the calculus of such functions. Topics include: vectors and vector valued functions, analytic geometry in space, functions of several variables, partial differentiation, the gradient, maxima and minima, Lagrange multipliers, and multiple integrals, line and surface integrals, Stokes and Divergence theorems. Prerequisite: MAT 122 or equivalent.

MAT 290 Topics in Mathematics (1-4)
An introductory course in selected topics in Mathematics not currently covered in any of the listed classes. Topics are chosen to illustrate different fields and applications which are all part of mathematics.

MAT 335 Mathematical Modeling (4)
Designed to teach the student some of the skills necessary to construct and critique mathematical models of physical and industrial processes. The student will apply skills acquired in MAT 230 to the models presented. Topics include: applications of first and second order ordinary differential equations, systems of nonlinear ordinary differential equations, stability, phase plane analysis, optimization, conservation laws and finite differences. Prerequisite: MAT 230 and familiarity with a computer language, or permission of instructor.

MAT 340 Linear Algebra (4)
Many systems studied in science, engineering, and computer science involve a linear relationship among many variables. Linear algebra is the mathematical description of such problems. Topics include: systems of linear equations, Gaussian elimination, matrices, determinants, Cramer's rule, vector spaces, linear transformations, eigenvalues and eigenvectors. Prerequisite: MAT 121 or permission of instructor.

MAT 345 Introduction to Graph Theory (4)
Provides students with an introduction to graphs and their properties. Topics include graphs and digraphs, eulerian and hamiltonian graphs, connectivity, planarity, shortest path problems, trees, and coloring. Attention will be paid to theorems and their proofs. Applications will be given throughout the course. Prerequisite: MAT 122 or MAT 413.

MAT 370 Applied Probability (4)
An introduction to the theory of probability and its applications. Topics include: basic set theory, elementary probability, counting arguments, conditional probability and independence, random variables and their properties, functions of random variables, distribution functions, probability models and applications such as stochastic processes. Prerequisite: MAT 122.

MAT 380 Abstract Mathematics: An Introduction (4)
An introduction to rigorous mathematics. Students will be exposed to the building blocks of mathematical theory – axioms, definitions, theorems, and proofs. The emphasis will be on constructing proofs and writing clear mathematics. The language and methods of mathematics will be explored while introducing students to the basics of set theory, number theory, topology on the real line, and functions. Prerequisite: MAT 122.

MAT 381 Modern Algebra (4)
An introductory course in Abstract/Modern Algebra. Topics will include elementary theory of groups, rings and fields: Groups, Subgroups, Quotient Groups, Symmetry, Rings, Fields, and Extension Fields. We will explore connections between Modern Algebra, Number Theory and Linear Algebra. SUNYIT mathematics course at 200 level or higher excluding MAT 225 or, permission of the instructor.

MAT 401 Series and Boundary Value Problems (4)
Introduces advanced mathematical methods used to solve certain problems in engineering and the physical sciences. Topics include: sequences and series, Fourier series and transforms, series solutions of ordinary differential equations, partial differential equations, and solution of some boundary value problems. Prerequisite: MAT 230 or equivalent.

MAT 413 Discrete Mathematics for Computer Science (4)
Background to understanding computer science as the science of clear and concise descriptions of computable, discrete sets. Provides conceptual tools useful for any advanced study in computer science. Topics include: review of set theory, logic and relational calculus, algebraic structures (lattices, Boolean algebra, semi-groups, groups, rings, etc.) and morphisms and their application in computer science (automata theory, coding, switching theory, etc.), formal languages and their acceptors, and elements of information theory and of the theory of computability. Prerequisite: MAT 115.

MAT 420 Complex Variables and their Applications (4)
An introductory study of functions involving complex numbers. Subjects are selected based upon their importance in physical and engineering applications. Included are complex numbers, complex functions, analytic functions, complex integration, infinite series, residue theorem, contour integration, conformal mapping and application of harmonic functions. Prerequisite: MAT 122 or equivalent.

MAT 423 Vector and Tensor Calculus (4)
Vector and tensor calculus is a fundamental area of mathematics, and is used extensively in science, engineering, and technology. The methods developed in this course include: the gradient, curl, and divergence, the del operator in general curvilinear coordinates, covariant differentiation, line integrals, surface integrals, Gauss's theorem, Stoke's theorem, Green's theorem, and the divergence theorem. Selected applications will be included from fluid and continuum mechanics, and from electromagnetism. Prerequisite: MAT 253 or equivalent.

MAT 425 Real Analysis (4)
Introduces the student to a rigorous development of the real number system and the theory of Calculus on the real number line. Topics include: basic set theory, the real number system, sequences and series, limits and continuity, the derivative, the Riemann Integral, the Fundamental Theorem of Calculus, and sequences and series of functions. Prerequisite: MAT 381.

MAT 430 Number Theory and Its Applications (4)
Introductory course in Number Theory that will introduce students to the basic concepts as well as some modern applications. Topics include: prime numbers, Greatest Common Divisors, The Euclidean Algorithm, congruences, Fermat's Little Theorem, primality testing, etc. Applications of Number Theory: cryptography, pseudorandom numbers, etc. Prerequisite: MAT 380 or MAT 381 or MAT 413 or permission of the instructor. Cross listed with 530.

MAT 440 Linear Algebra II (4)
A thorough treatment of linear algebra. The emphasis in on the mathematical structure found in the study of linear systems. Extensive development of key mathematical concepts will be emphasized through mathematical proofs and examples. Topics include: systems of linear equations, determinants, proofs and their structure, vector spaces and their properties, the geometry of solutions, linear transformations and mappings, eigenvalues and eigenvectors, and Banach spaces. Prerequisite: MAT 253.

MAT 450 Partial Differential Equations (4)
A study of Partial Differential Equations, or Pde's, and their applications in science and engineering. The basic development of physical models leading to partial differential equations is discussed. Solution methods and basic theory are presented. Topics include: first order Pde's, method of characteristics, the canonical second order Pde's, separation of variables, Hilbert space methods, finite difference methods. Prerequisites: MAT 253 and MAT 401.

MAT 460 Numerical Differential Equations (4)
Fundamental mathematical methods associated with the numerical solution of ordinary and partial differential equations are investigated. Algorithms emphasizing both standard and newly developed methodologies are developed in the context of theoretical and practical considerations. Mathematical questions such as convergence, accuracy, and appropriateness of method are developed in a systematic manner. A variety of mathematical models and problems of current interest are used to emphasize many of the core results. Students will learn to develop their own algorithms and to use algorithms from existing high quality numerical libraries. Many of the models studied in this course will come from both standard mathematical models and topics related to current faculty research interests. Topics include: Runge-Kutta methods, finite difference techniques, finite element techniques, approximation methods, error estimation, and accuracy. Prerequisites: MAT 335 and MAT 450 and familiarity with a programming language.

MAT 490 Selected Topics in Mathematics (Variable 1-4)
An in-depth treatment of a selected topic not normally treated extensively in other mathematics courses. Prerequisite: Permission of instructor.

MAT 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

MAT 492 Applied Mathematics Internship (4)
The internship is available to qualified Applied Mathematics majors. It is designed to provide students with an opportunity to integrate academic and practical experience in an industrial setting in a field related to mathematics. Before the internship is approved, the student, the employer, and a Mathematics faculty member develop a contract concerning the nature of the internship. Weekly reports and a final presentation are required for the internship. Prerequisites: 3.0 or better GPA in major and approval of Applied Mathematics faculty.

Mechanical Engineering Technology

MTC 101 Introduction to Engineering Technology (2)
Required for all freshmen in Mechanical Engineering Technology. Topics include academic requirements, advisement, software packages, career opportunities, and project management. Additional topics include professional, ethical and social responsibilities; respect for diversity and a knowledge of contemporary professional, societal and global issues; and a commitment to quality, timeliness and continuous improvement. Cross listed with CTC/ITC 101.

MTC 162 Computer Aided Design (4)
Students will develop basic skills in using AutoCAD software to develop mechanical drawings. Blue print reading and basic drawing fundamentals will be covered. Students will become proficient in using 2D AutoCAD software. Geometric tolerancing and dimensioning will be covered. Cross listed with ITC 162.

MTC 198 Industrial Instrumentation (2)
A freshman-level course that teaches the fundamentals of devices and methods used to instrument industrial processes and commercial products. Focuses on conventional instruments, electro-mechanical transducers, and computer-based data acquisition equipment and techniques. Two hours of lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisite: Introductory Physics, Algebra, and Trigonometry. Students who completed this course cannot take MTC 398 for credit. Cross listed with ITC 198.

MTC 210 Introductory Heating, Ventilating and Air Conditioning (HVAC) (2)
Topics include principles of fluid mechanics, thermodynamics and heat transfer relevant to HVAC, concepts of air conditioning, principles of mechanical refrigeration, psychrometrics and load estimating. Two hours of lecture per week.

MTC 211 Manufacturing Processes (4)
Machining and non-machining methods of processing materials into manufactured components will be discussed. Both traditional and non-traditional machining processes are covered. Machine shop equipment and practices, along with different types of tooling, will be reviewed. Cross listed with ITC 111. Two hours of lecture and four hours of laboratory per week. Prerequisite: MTC 162.

MTC 215 Sustainable Energy Systems (2)
Introduction to Sustainable Energy Systems. Topics include: Solar energy, Wind energy, Hydrogen and Fuel Cell Technology, Biomass energy, Geothermal energy, Clean Coal Technology, Ocean energy, Hydroelectric Power and Nuclear Power. Two hours lecture per week.

MTC 218 Statics (2)
Analysis of equivalent systems of forces, free body diagrams, equilibrium of particles and rigid bodies, centroids, friction, and forces in structures. Two hours of lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisites: PHY 101 and MAT 120. Cross listed with ITC 218 and CTC 218.

MTC 220 Introductory Hydrogen and Fuel Cell Technology (2)
Topics include working principles of fuel cells, types of fuel cells, hydrogen production, hydrogen safety, hydrogen engines and vehicles, hybrid solar hydrogen car and hydrogen economy. Two hours of lecture per week.

MTC 222 Strength of Materials (2)
Effect of shape and composition on strength of materials. Moments of inertia, shear forces and bending moments in beams, torsion of shafts, thermal expansion, and pressure vessels. Two hours lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisites: PHY 101 and MAT 120 and MTC 218. Cross listed with CTC 222.

MTC 261 Introductory Fluid Mechanics (4)
Introduction to fluid mechanics, fluid properties, fluid statics and dynamics, pressure variation in flowing fluids, drag and lift, applications of fluid mechanics. Three hours of lecture and two hours of laboratory per week. Students may not receive credit for both MTC 261 and MTC 461. Cross listed with ITC 261.

MTC 301 Professionalism in the Work Place (2)
Topics include lifelong learning; professional, ethical and social responsibilities; respect for diversity and a knowledge of contemporary professional, societal and global issues; and a commitment to quality, timeliness, and continuous improvement. Cross listed with ITC 301 and CTC 301.

MTC 308 Mechanical Components (4)
Fundamental principles of design, working stresses, analysis and design of mechanical components such as shafting, springs, screws, belts, and chains. Four hours of lecture per week, with laboratory work substituted for lecture as appropriate. Prerequisites: MTC 218 and MTC 222 or equivalent, or permission of instructor.

MTC 320 Applications Project I (2)
Individual student designed project in a major field, includes: written specifications of project requirements, project plan, milestone identification, implementation, and descriptive report. An oral presentation regarding the project is required. Course includes a one-hour lecture per week. Students will work on an independent basis for the other hour.

MTC 321 Applications Project II (2)
Individual student designed project in a major field, includes: written specifications of project requirements, project plan, milestone identification, implementation, and descriptive report. An oral presentation regarding the project is required. Course includes a one-hour lecture per week. Students will work on an independent basis for the other hour.

MTC 327 Production & Operations Management (4)
Modern production and operations management in an industrial setting. Planning, organizing, and controlling using the relevant qualitative and quantitative approaches. Covers topics such as forecasting, capacity requirement, planning, work standards, scheduling, fundamentals of inventory control, and material requirement planning. Cross listed with ITC 327.

MTC 330 Assistive Technology (2)
Introduction to the fundamentals of assistive technology for people with physical disabilities. Rehabilitation engineering with an emphasis on mechanical devices used to enhance mobility and manipulation, improving physical interaction with the environment. Topics include prosthetics, manual wheelchairs, power wheelchairs, and alternative methods for computer access. Two hours of lecture per week. Cross listed with ITC 330.

MTC 336 Material Science Applications (2)
Composition, structure, and behavior of metallic and non-metallic materials, and their effect on the physical, mechanical, and electrical properties of that material. Analysis of crystalline structure, physical properties, and service analysis of materials for physical, mechanical, and electrical properties.

MTC 350 Solar Energy Technology (2)
Introduction to solar energy, insolation, fundamental principles of thermodynamics and heat transfer relevant to solar energy applications. Study of the working principles of solar collectors, heating and cooling systems. Application of solar energy for power generation in space. One hour of lecture and two hours of laboratory per week.

MTC 352 Thermodynamics (2)
Energy determination science for fluids systems. Enthalpy, entropy, and internal energy properties. Problems in energy state change, steady flow within elementary mechanical systems, and the measurement of energy.

MTC 362 Experimental Stress Analysis (4)
Empirical determination of stresses in mechanical components. Static and dynamic stress analysis of combined tension, torsion, and bending loads. Use of commercial instrumentation. Three hours of lecture and two hours of laboratory per week.

MTC 363 Mechanisms Analysis and Design (4)
The kinematic study of mechanisms, including velocity and acceleration analysis of linkages, cams, and gears in mechanical systems. Introduction to inertia forces in uniform motion machinery. Prerequistes: MTC 218 and MAT 122 or equivalents.

MTC 373 Statistical Quality Control (4)
Modeling and inferences of process quality. Philosophy and methods of statistical process control and quality improvement in the modern business environment. Techniques for quality troubleshooting, decision-making, and implementation. Review of basic concepts or statistics will be included. Prerequisite: STA 100 or STA 225 or permission of instructor. Cross listed with ITC 373.

MTC 388 Fundamentals of Solid Modeling with Pro/Engineer (2)
Detailed study of creating three-dimensional solid models of mechanical components using Pro/Engineer. Topics include feature-based modeling, protrusion, sweeps, blends, and assembly drawings. One hour of lecture and two hours of laboratory per week.

MTC 398 Mechanical Measurements (4)
A junior-level course on devices and methods for measuring mechanical phenomena such as temperature, pressure, speed, displacement, acceleration, and force. Uncertainty, accuracy, and precision of measurements are presented. Focuses on electro-mechanical transducers and computer-based data acquisition techniques, experimental methods, analysis of collected data, and computer generation of technical reports. Laboratory activity will be substituted for lecture as appropriate. Students who have taken ITC/MTC 198 may not register and receive credit for MTC 398. Prerequisites: Introductory Physics, Algebra, Trigonometry.

MTC 405 Solid Modeling and Rapid Prototyping (2)
The fundamentals of feature based 3D Solid Modeling CAD software is explained and used. The software utilized will be "Solid Works". Appropriate parts will be assigned for the students to create 3D CAD models. Rapid Prototyping will also be covered and parts will also be assigned as appropriate. Prerequisite: ITC/MTC 162 or basic understanding of AutoCAD.

MTC 420 Capstone Experience (2)
Student-designed project in a focused mechanical area. Includes written specifications of project requirements, literature review, planning, milestone identification, implementation, and a comprehensive written report. Projects must have a well-documented teamwork component. An oral presentation of the complete project is required. Course includes a

one-hour lecture per week; students work on an independent basis for the other hour. Student must have senior status.

MTC 430 Engineering Dynamics (4)
Kinematics of particles, lines, and bodies, and the kinetics of particles and of rigid bodies with translation, rotation, and plane motion using the methods of force-mass- acceleration, work-energy, and impulse-momentum. Three hours of lecture and two hours of laboratory per week. Prerequisite: MAT 122 or equivalent.

MTC 442 Computer-Aided Manufacturing (4)
Basic concepts of Computer Assisted Manufacturing. Computer aided process planning, material requirement planning, machinability data bases, computer numerical control systems, group technology, and integrated manufacturing systems. Requires two hours of lecture and four hours of laboratory per week. Prerequisites: MTC 111 or permission of instructor. Cross listed with ITC 462.

MTC 450 Solar Energy Concepts (4)
Energy resources, energy consumption patterns, and future energy supplies. Physical, technical, and economical aspects of solar energy as a present and future source of energy. State-of-the-art applications of solar energy to domestic household applications. Four-hour lecture per week, with laboratory work substituted for lectures as appropriate.

MTC 454 Engineering Heat Transfer (4)
Introduction to heat transfer, steady state conduction-one & multi dimensions, unsteady state conduction, principles of convection, heat exchangers, condensation and boiling heat transfer, mass transfer, radiation heat transfer, special topics in heat transfer. Three hours of lecture and two hours of laboratory per week. Prerequisites: MTC 352 or equivalent, or permission of instructor. Students who have taken MTC 451 and/or MTC 452 may not register for MTC 454 for additional degree credit.

MTC 455 Laser Technology (2)
Analysis of basic laser fundamentals, including optics and laser hardware. Operational characteristics of specific laser systems. Two-hour lecture per week, with laboratory work substituted appropriately.

MTC 461 Fluid Mechanics and Systems (4)
Introduction to fluid mechanics. Study of the principles of statics and dynamics applied to fluids. Some of the topics covered are: Pressure variation in fluids, flow in conduits, flow measurements, special topics in fluid mechanics, etc. Three hours of lecture and two hours of laboratory per week. Students may not receive credit for both CTC 461 and MTC 461.

MTC 462 Turbomachinery (4)
Application of the laws of thermodynamics and fluid mechanics to cascades, axial flow turbines and compressors, centrifugal pumps, fans and compressors, and radial flow turbines. Four-hour lecture per week with laboratory work substituted for lecture as appropriate. Prerequisites: MTC 352 and MTC 461 or permission of instructor.

MTC 464 Vibration Analysis (4)
Methods for computing natural frequency of mechanical vibrations in machinery. Damped and forced vibrations of two dimensional, linear, or linearized systems, using both theoretical and instrumental investigations. Analysis of absorbers and isolators. Prerequisites: MTC 218, MTC 222, and MAT 230.

MTC 465 Advanced Machine Design (4)
In-depth study of major mechanical elements. Topics include: steady loading, variable loading, flexible elements, clutches, brakes, failure prevention theories, and metal fatigue. Students are expected to integrate course material as well as previous experience into a major mechanical design project. Prerequisites: MTC 218 and MTC 222, MTC 308 or MTC 362, and Calculus II, or permission of instructor.

MTC 467 Computer-Aided Design and Drafting (4)
Topics included for study are displaying equations, vector presentation of curves, creating a mathematical formulation, splines, and parametric techniques. Engineering geometry on the computer and basics of three-dimensional geometry are included. Engineering applications on totally supported and independent interactive computer graphics system is presented. Requires two hours of lecture and four hours of laboratory per week. Prerequisites: CSC 300 and MTC 306 or equivalent or permission of instructor.

MTC 470 Mechanisms of Flow and Fractures in Machine Components (4)
The nature of plastic flow and the fracture in solids, applications to the propagation of cracks and failures in machine components. Roles of strengthening mechanisms to reduce failure will be emphasized. Laboratory exercises my be substituted for lecture when appropriate. Prerequisites: MTC 218, MTC 222 and MTC 336 or equivalents.

MTC 471 Space Technology (2)
The course addresses the application of some of the well-known principles of science and engineering in space technology. The particular topics covered are: spacecraft structure, power systems, propulsion systems, fundamentals of spacecraft dynamics, orbital maneuvers, attitude maneuvers and control systems, spacecraft testing. Students will research an individually selected topic on space technology and make written and oral presentations on it. Prerequisite: PHY 101 or equivalent or permission of instructor.

MTC 475 Economic Analysis in Technology (4)
Methods for choosing between alternatives based on the time value of money. Replacement studies, depreciation and after-tax analysis, risk, uncertainty and sensitivity analysis. Cross listed with ITC 475 and CTC 475.

MTC 476 Finite Element Applications (4)
Concepts of finite element analysis and their applications. Analysis of structure, plate, shell, pipes, plane stress and plane strains. Extensive use of FEA software package ALGOR. Three hours of lecture and two hours of laboratory per week. Prerequisites: MAT 122, MTC 218 and MTC 222, and a formal course in computing or permission of instructor.

MTC 478 Computational Fluid Dynamics (CFD) (4)
The course addresses some of the fundamental aspects of computational Fluid Dynamics (CFD). The specific topics covered in the course are: The Governing Equations of fluid Dynamics, Mathematical Behavior of Partial Differential Equations, Basic Aspects of Discretization, Grids with appropriate Transformations, CFD Techniques: The Lax-Wendroff technique, MacCormack's technique, some applications: One-dimensional Nozzle Flows, Two-Dimensional Supersonic Flow-Prandtl-Meyer Expansion Wave, Incompressible Couette Flow, Navier-Stokes equations. Prerequisites: MTC 352 and 461 and MAT 230 or equivalent or permission of instructor.

MTC 487 Lean Design of Products and Processes (4)
Systematic in-depth study and presentation of current best practices in the design and development of products and processes. The student will develop an understanding of product delivery systems and become knowledgeable in the corresponding best practices such as: integrated product development, lean concepts, quality practices, and the application of ISO 9000 standards. In addition, the students will learn how to apply system thinking to an entire organization. Cross listed with ITC 487.

MTC 488 Introduction to Ergonomics (4)
A scientific study of work. Ergonomics focuses upon human capabilities and limitations with respect to the appropriate design of living and working environments. Students will learn how to design for minimizing human operator stress and fatigue, also for promoting work output as well as productivity. Laboratory work substituted for lecture as appropriate. Prerequisites: Calculus I and Calculus II and Physics I. Cross listed with ITC 488.

MTC 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its

duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

MTC 493 Computer Integrated Manufacturing (4)
This course addresses some of the fundamental aspects of computer integrated manufacturing. The specific topics include: CIM units: computers, input/output, the robot, material handling, computer-aided functions; system design, design of the data base, material requirements planning (MRP), manufacturing resource planning (MRP II), the human factors of CIM. Requires two hours of lecture and four hours of laboratory per week. Prerequisite: MTC 467 or equivalent or permission of instructor.

MTC 494 CO-OP Assignment (2 or 4)
This course provides 14 weeks of supervised experience in an industrial or government installation, applying technology knowledge towards the solution of engineering technology problems, and developing abilities required in the student's career. At least three reports, two written and one oral, and two supervisors' evaluations are required. May be taken repetitively up to a maximum of four credits. Prerequisite: Permission of employer and Dean of Engineering Technology.

Music

MUS 301 SUNY Jazz (1)
Introduces students to the performance of jazz in an ensemble. Study of basic jazz theory and improvisational techniques. Analysis of musical styles and performers. Students will rehearse ensemble works and perform in a public setting. Prerequisite: Instructor's permission, based on student's ability to perform a musical instrument appropriate to jazz performances. Meets new General Education Arts requirement.

Nursing

NUR 303 Transition in Professional Nursing Practice (2)
An empirical foundation within the discipline of nursing is essential to the development of professional nursing practice. Critical reflection, caring, independent judgment, collaboration, research, and lifelong learning are fostered to enhance the development of professional excellence in nursing. Professional role development in nursing and a synthesis of practical approached to facilitate the nursing student's transition form the basic preparation to baccalaureate nursing education are examined within this course. Reflection and articulation of values and ideals within the self and profession are encouraged and described within personal philosophies of nursing and meaningful nursing practice.

NUR 313 Theoretical Bases for Professional Nursing Practice (4)
A theoretical and empirical foundation within the discipline of nursing is essential to the development of professional nursing practice. Selected nursing theories and standards of practice described in the New York State Education Law and the American Nurses' Association (ANA) Standards of Nursing Practice are introduced to guide the development of professional nursing practice. Critical reflection, caring, independent judgment, collaboration, research, and lifelong learning are fostered to enhance the development of professional excellence in nursing. Theories of nursing, models of caring, principles of teaching/learning, role theory and development, and health promotion and wellness are explored to develop understanding of the mutual and interactive relationship of nursing to people, health, communities, and health care delivery environments. Reflection and articulation of values and ideals within the profession and self are encouraged and described within personal philosophies of nursing and meaningful nursing practice.

NUR 314 Comprehensive Health Assessment (4)
Assessment of individuals across the life span is addressed as they experience wellness and illness. The focus is on the interrelatedness of the physical, psychological, social, cultural, spiritual, and environmental components of health assessment of people as they interact with their environment. Utilizing the framework of selected nursing theories, an analytical and comprehensive assessment of the individual's health is emphasized. The relationship of health assessment knowledge, skill, and disposition fostered by the Standards of Nursing Practice and the New York State Education Law is explored within the context of accountability and responsibility of professional nursing practice. Critical thinking skills are enhanced as the student develops a beginning level of competency in physical and psychological assessments within faculty supervised laboratory settings with well individuals. Therapeutic communication skills are also facilitated throughout the obtainment of personal health data and the formulation of nursing diagnoses. Prerequisites: Microbiology, Human Anatomy & Physiology I & II. Pre/Corequisites: BIO 350.

NUR 320A Nursing Theory for Professional Nursing Practice (2)
Provides the theoretical and empirical foundation of beginning professional nursing practice for students in the accelerated, BS/MS program. Focus is on the examination of nursing theories and models as the theoretical framework for the discipline of nursing. Standards of practice described in the New York State Education Law and the American Nurses' Association (ANA) Standards of Nursing Practice are examined as a guide for the professional practice of nursing. One's personal belief about nursing theory and practice is also explored as students continue their professional development. Prerequisite: Matriculated into the Accelerated BS/MS program.

NUR 325 Epidemiology in Nursing (2)
The concepts and methods of descriptive epidemiology are introduced and applied to health care delivery and professional nursing practice. Patterns of acute and chronic disease occurrences and progression are studied. The discovery of unusual disease patterns is also critically examined across culturally diverse communities. Methods to uncover epidemiological causes, frequency, and the distribution of disease; and the critical appraisal of the literature and screening programs are explored to promote a theoretical and empirical foundation for practice. The utilization of epidemiological information and evidenced-based data will be applied across populations to reduce risk, prevent disease, and optimize health among communities.

NUR 330A Nursing Research for Professional Nursing Practice (2)
Provides the basis for the examination of nursing research within culturally diverse populations for students in the accelerated BS/MS program. Focus is on the development of research skills as students develop a literature review of selected research topics and explore nursing research studies. Emphasis is placed on professional standards of practice and the safeguard of human subject rights within a context of care. The application of research findings to practice is discussed as it relates to the quality of care and the development of the nursing profession. Prerequisite: Matriculated into the Accelerated BS/MS program.

NUR 340A Nursing Leadership (1)
Designed for the accelerated RN to BS/MS program of study, students learn to evaluate and integrate communication, management, change and leadership within the microsystems of the healthcare institution. This course focuses on developing the leadership and management function of the professional nurse through a synthesis of knowledge from previous nursing courses, and leadership and management theories. Through the leadership project, the student will further develop and refine skills necessary to coordinate, manage and deliver nursing care.

NUR 344 Ethical Issues in Nursing (2)
Models of caring and traditional frameworks of ethical decision making are introduced as a guide to understand ethical decisions within diverse environments of health care systems, among providers and consumers, and within personal interactions. The synthesis of theoretical knowledge from nursing theories, the arts and sciences, and humanities are applied to ethical issues to develop knowledge, skill, and disposition essential for values-based behaviors and professional nursing practice. The ANA Code of Ethics for Nurses is examined to clarify the ideals and values of the nursing profession. Reflection of one's values and ideals through

the values clarification process is examined and discussed as it interacts within the nurse-patient relationship. Positions held by others within selected ethical issues and personal conflicting experiences are also critically examined.

NUR 381 Nursing Education and Instruction for Long Term Care (2)
Students will examine nurse educator competencies and apply principles of teaching and learning, adult learning theory, critical reflection, and active learning strategies to teach nurses and other health care personnel in clinical and classroom settings. A variety of informational sources such as lecture, discussions groups, and web enhanced instruction will be explored and related to personal experiences in service and academic learning environments. Research, literature, and case studies supporting these techniques with plans for assessment of learning outcomes will be explored throughout this course to enhance one's teaching practice.

NUR 382 Reminiscent Therapy (2)
The origin, theoretical basis, and practice of reminiscent therapy will be studied during this course. Various approaches to reminiscent therapy will be discussed, applied and evaluated by the students throughout the semester as they read related literature and research. An integrative approach to assignments will facilitate the students' ability to clarify concepts, look introspectively at their own memories and value reminiscence as a therapeutic nursing intervention.

NUR 383 Palliative Care (2)
In recognition of the universal need for humane end-of-life care, it is essential that nurses appreciate their unique opportunity and responsibility for insuring that individuals at the end of life experience a peaceful death. Recognition of the limits and inappropriate use of technological resources and apprehensions of the public about suffering and expenses associated with dying contribute to a renewed interest in humane end-of-life care. Precepts underlying palliative care principles are crucially examined and include the assumptions that individuals live until the moment of death; that care is sensitive to diversity, and gives attention to the physical, psychological, and spiritual concern of the patient and the patient's family. By stimulating scholarly discourse on this important reality, this course serves as a catalyst for integrating palliative care into traditional models of care delivery.

NUR 384 Evidence-based Practice in Nursing (2)
The exploration and application of evidence-based practice (EBP) is the emphasis of this course. Students will learn how to solve practice problems by formulating and EBP question and answer it using the best evidence available. An in-depth look at performing literature searches and utilizing practice guidelines will be presented. EBP implementation models will help students learn the best way to explore practice questions and present change. Students will have the opportunity to exercise these skills through a written assignment and examination of internet resources (e.g. Cochrane Library).

NUR 385 Transformational Leadership for Nurses (2)
The exploration and application of transformational leadership for Nurses is the emphasis of this course. Students explore leadership styles and an innovation model to investigate the significance and application of transformational leadership. Profiles of leaders and analysis of team approaches are explored within a variety of practice arenas. Critical reflection of the individual nurse's role as a leader and the student's personal leadership development will be explored as it relates to transforming others.

NUR 386 The Nurse Practice Act (2)
The course provides an overview of the nurse practice act from its' past to the present. It will assist the professional nurse in designing the nurse practice act of the future. The practice act and the influences affecting nursing practice and the health care delivery system will be discussed.

NUR 387 History of Nursing (2)
Awareness of historical events in the discipline of nursing fosters socialization within the profession, facilitates comprehension of current nursing issues and prepares the nurse for future trends in the discipline. Critical reflection of the historical roots in nursing enhances the development of professional nursing roles. Exploration of nursing history promotes critical thinking skills and allows for understanding of the impact of historical events on practice today.

NUR 390 Nursing Research (3)
Professional standards of practice, the moral obligation to safeguard human subjects, and the ethic of care are emphasized as professional nurses participate in research activities. Students learn to critically review qualitative and quantitative research designs and explore their relevance within culturally diverse populations. The integration of knowledge from nursing, the arts, and sciences provides a basis for the development of critical reflection, decision making, and clinical judgment. The application of these studies as it relates to the foundation of practice, research utilization, and evidence based nursing is examined. Pre/Corequisites: NUR 313, Statistics.

NUR 444 Nursing Leadership (4)
As designer, coordinator, and manager within today's health care delivery system(s), the student examines and utilizes the professional nurse roles of leader, manager, collaborator, teacher, change agent, and advocate. Synthesis of knowledge from the arts and sciences and previous nursing courses, standards of practice and ethical codes, leadership and management theory, and research are emphasized in management and leadership skill development. Leadership approaches, principles of management, decision-making, communication and information management are utilized to evaluate the systems needed to care for groups of clients. Opportunities for collaboration with nurse mentors/leaders, and critical reflection of one's ongoing professional development and changing practice are provided in clinical experiences with practicing nurse leaders and in peer group discussions. Prerequisites: Matriculated status, NUR 313, NUR 390, current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file. Clinical clearance must be validated prior to first scheduled clinical agency experience. Attendance at clinical activity without prior clinical clearance will result in clinical failure. Pre/Corequisites: NUR 324, NUR 344.

NUR 455 Public Health Nursing Science I (4)
The basic concepts of community health and their interrelationship with people, nursing, and the environment are examined. Structure, function, and programs of the health care system are explored. Critical thinking and research are used to assess and analyze culturally diverse populations and community resources as they impact health of populations at risk. The professional role and standards of community health nurses, as they provide care in community based settings, are examined within a nursing and public health theoretical framework. Principles of teaching and learning, decision making, leadership, and management within the larger social system are analyzed for their impact on health care. Prerequisites: NUR 313, NUR 325. Pre/Corerequisite: NUR 324, NUR 390..

NUR 474 Public Health Nursing Science II (4)
Building on nursing theory and clinical practice as essential to community health nursing, focus is on health teaching and health care opportunities that are available in a variety of culturally diverse community settings. Health promotion for individuals, families, and communities across the life span is emphasized. Family systems theory, development theory, and caring are applied to community health nursing. Incorporating a multifaceted approach, levels of prevention, communication skills, transcultural assessment, public health and home health standards of practice, and community health regulatory requirements are examined and applied. Opportunities for critical reflection, collaboration, professional growth, and lifelong learning are also integrated within clinical experiences. Community health experiences are provided through scheduled clinical days one day per week (M-F) based on agency availability. Students must provide their own transportation. Prerequisites: NUR 324, NUR 444, NUR 455, current New York State Registered Professional Nurse license, current CPR certification, complete health clearance on file. Clinical clearance must be validated prior to first scheduled clinical agency experience. Attendance at clinical activity without prior clinical clearance will result in clinical failure. Pre/Corequisite: Sociology elective.

NUR 480 Special Topics in Nursing (Variable 1-4)
A study of a selected topic of interest to professional nurses which will enhance the student's ability to practice professional nursing. Topics may be repeated in future semesters or may change from semester to semester.

NUR 490 Culminating Seminar (2)
The connections of nursing theory, research, and practice are the emphasis of this culminating experience. Opportunity for collaboration with peers and faculty is provided as students develop and participate in research and scholarly activities. Inquiry into scholarly works is explored to further enhance nursing knowledge, research utilization, and professional practice. Personal values and beliefs are reexamined as the student describes one's transformed view of self and practice as a maturing professional in nursing. Critical reflection of one's personal growth and commitment to ongoing professional development is examined within the context of achieving professional excellence. Pre/Corequisites: NUR 474; Student must be within 4 credits of graduation at completion of culminating seminar.

NUR 491 Independent Study (Variable 1-4)
This is an independent study of selected contemporary problems within the nursing discipline. The student is required to submit a written proposal which includes a description of the project, its duration, education goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

Philosophy

PHI 130 World Religions (4)
An examination of the origins, philosophies and development of the major religions of the world. Ways of knowing other than western, science-oriented ones will be explored, and a fundamental knowledge of religious answers to questions about ultimate meaning will be pursued. Religions to be studied include Hinduism, Buddhism, Judaism, Christianity, Islam, Confucianism, Jainism, Sikhism, Shinto, Taoism, and Zoroastrianism. Meets new General Education Other World Civilizations requirement.

PHI 350 Technology and Ethics (4)
Traditional ethical theory and the problems in applying theory to contemporary technological situations. Ethics in communication receives special emphasis. Meets new General Education Humanities requirement.

Physics

PHY 101 General Physics I (4)
Algebra-based introduction to mechanics, wave phenomena and thermodynamics. Topics include kinematics, dynamics of linear and circular motion, gravitation, conservation of energy and momentum, fluids oscillations, sound, thermal physics and the laws of thermodynamics. Includes three hours of lecture and three hours of laboratory per week. Recommended for all Telecommunications majors with appropriate placement scores. Prerequisite: MAT 111 or equivalent. Meets new General Education Natural Science requirement or the SUNYIT Laboratory Science requirement.

PHY 102 General Physics II (4)
Algebra-based introduction to electromagnetism, optics, and modern physics. Topics include electric forces and fields, electric potential, DC circuits, magnetic forces and fields, electromagnetic induction, AC circuits, electromagnetic waves, geometrical and physical optics and an introduction to modern physics. Includes three hours of lecture and three hours of laboratory per week. Recommended for all Telecommunications majors with appropriate placement scores. Prerequisite: PHY 101 or equivalent. Meets new General Education Natural Science requirement or the SUNYIT Laboratory Science requirement.

PHY 201 Calculus Based Physics I (4)
The first course in a three course calculus based physics sequence. Covers topics in mechanics including motion in one, two and three dimensions, Newton's laws of motion, work and kinetic energy, motion of rigid bodies, and simple harmonic motion. Also wave motion is briefly covered. Includes three hours of lecture and three hours of laboratory per week. This course and PHY 101 cannot both be taken for credit. Prerequisite: MAT 152 or equivalent. Meets new General Education Natural Science requirement or the SUNYIT Laboratory Science requirement.

PHY 202 Calculus Based Physics II (4)
The second course in a three course calculus based physics sequence. Covers topics on electricity and magnetism, and some topics on optics and electromagnetic waves. Includes three hours of lecture and three hours of laboratory per week. This course and PHY 102 cannot both be taken for credit. Prerequisite: PHY 201 or equivalent. Meets the SUNYIT Laboratory Science requirement.

PHY 203 Calculus Based Physics III (4)
The third course in a three course calculus based physics sequence. Covers selected topics from thermodynamics (temperature and heat, thermal properties of matter and laws of thermodynamics), waves (mechanical waves, wave interference and normal modes), optics (the nature of light, geometric optics, interference, diffraction), and modern physics (relativity, wave nature of particles and an introduction to quantum mechanics). Includes lecture and laboratory. Prerequisite: PHY 202 or equivalent.

PHY 290 Topics in Physics (1-4)
An introductory course in selected topics in Physics not currently covered in any of the listed classes. Topics are chosen to illustrate different fields and applications which are all part of Physics.

PHY 325 Geometrical Optics (4)
Covers the topic of classical optics with both lecture and laboratory. The nature of light, the laws of reflection and refraction, mirrors, lenses, image formation as well as aberrations will be covered using geometric techniques. The structure and operation of specific optical instruments will be explored in detail. Prerequisite: PHY 202 or equivalent.

PHY 326 Physical Optics (4)
Introduces the student via lecture and laboratory to the wave properties of light as observed in such phenomena as interference, diffraction and polarization. Topics also include a review of harmonic wave motion, the principle of superposition of waves, Fraunhofer and Fresnal diffraction, interferometry, coherence, diffraction gratings, multiple reflection interference and optical boundaries. Prerequisite: PHY 325 or equivalent.

PHY 361 Intermediate Mechanics (4)
Newtonian theory is used to describe the mechanical behavior of objects. Topics include: Newton's laws of motion, momentum and energy, motion of a particle in one or more dimensions, motion of a system of particles, rigid body motion, introduction to Lagrange and Hamilton's equations. Prerequisites: MAT 230, MAT 253, and PHY 201 or equivalents.

PHY 371 Electromagnetism (4)
The laws of electricity and magnetism are developed using the language of vector calculus. Topics include: Coulomb's Law, the electrostatic field and potential, Gauss' Law, dielectrics, capacitors, electric current, the steady magnetic field, Biot-Savart Law, Ampere's Law, magnetic materials, Faraday's Law, the displacement current, Maxwell's Equations, and plane electromagnetic waves. Prerequisites: MAT 230, MAT 253, and PHY 202 or equivalents.

PHY 380 Laser Principles and Systems (4)
Through lectures and laboratory experiences, the properties of laser radiation, general operational principles, the modification of laser outputs and specific laser systems and their applications are introduced. Three hours of lecture and two hours of laboratory per week. Prerequisites: Optics course and Calculus II.

PHY 381 Introductory Quantum Mechanics (4)
An introduction to the theory and applications of Quantum Mechanics. Topics will include: wave-particle duality, Heisenberg uncertainty principle, quantum states and operators, Schroedinger equation and quantum statistics. Applications will be selected from atomic and solid state physics, including semiconductors and lasers. Prerequisites: MAT 230, MAT 253, and PHY 202 or equivalents.

PHY 490 Special Topics in Physics (4)
A detailed examination of a topic in physics not treated extensively in other physics courses. Prerequisite: Permission of instructor.

PHY 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisite: Matriculated students only, permission of instructor and dean of subject area.

Political Science

POS 110 American Public Policy (4)
An introduction to the major features of the policy making process in the United States. Emphasis on the structures and institutions of the American political system and the role of citizens in political process. Examination of democratic theory and political philosophy in the American context. Meets new General Education Social Science requirement.

POS 262 Online Politics (4)
The emergence of the Internet, and especially the Web, as a significant factor in American and global life has challenged traditional views of communication and politics. In this course, we use some core concepts of political communication, information design and technology, and deliberative democracy to examine the role of information technologies in candidate and issue campaigning, online voting, protest and advocacy movements, law-making and electronic governance. Students will be required to engage as participant-observers of a Web-based political activity using a methodological approach appropriate to their analysis. Cross listed with COM 262. Meets the General Education Social Sciences requirement.

POS 252 The Politics of Life and Death (4)
Examines the nature of political debate and policy-making in the United States on issues related to human life. Four issues will be examined: assisted reproduction, human cloning, abortion, and assisted suicide. For each of the issues, we will review the scientific and philosophical context, assess the actions of the legislative, judicial, executive and administrative branches of the national and state governments, and explore the nature of public discourse. This course assumes an interest in and understanding of American politics and political institutions. Though not a prerequisite, completion of an introductory course in American politics is recommended prior to enrollment. Meets new General Education Social Science requirement.

POS 321 State and Local Government (4)
A structural examination of the organization and responsibilities of state and local governments, with particular emphasis on the state of New York. This course includes a discussion of current problems facing urban governments, and their solution in the context of multiple levels of government. Meets new General Education Social Science requirement.

POS 330 World Politics (4)
A survey of major political developments in the post-WWII period. Through the use of several case studies, the student will examine political structures and processes in both the western and non-western world. Meets new General Education Social Science requirement.

POS 339 Public Opinion in Contemporary Society (2)
An analysis of public opinion as a phenomenon that is simultaneously political, psychological and sociological. Draws on resources and knowledge from several fields, including political science, psychology, sociology and market research. Examines the formation, measurement and marketing of public opinion in contemporary society.

POS 340 Elections and Political Behavior (4)
An exploration into the roots and consequences of political behavior with a focus on the "average" citizen. Topics include the formation and importance of political values, the dimensions of political participation, and the implications of empirical evidence for electoral strategy and contemporary democratic theory. Meets new General Education Social Science requirement.

POS 341 American Politics and Communication Technology (4)
An examination of the interplay between patterns of development in American public policy, political institutions, and communications technology. Close study of the role of the FCC, Congress and the Courts in regulating and controlling communication technologies. Emphasis on newly emerging media delivered via computer networks. Analyzes the place of communications technology in democratic theory. Meets new General Education Social Science requirement.

POS 342 Constitutional Law (4)
An examination of the Constitution of the United States and its interpretation by the judiciary, with an emphasis on the activities of the Supreme Court. Analysis of issues concerning the separation of powers, federal-state relationships, economic regulation, and political and civil rights. Meets new General Education Social Science requirement.

POS 400 Topics in Political Science (4)
An in-depth examination of a current topic in political science. Examples might include political psychology, media and politics, political ethics, and presidential elections. May be taken more than once as topics change.

POS 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

POS 492 Political Science Internship (Variable 1-4)
Internship is designed to provide practical work in a position related to political science or public policy, and to compare and contrast real-world experience with scholarly assessment of political actors or behavior. Students either work on or off campus. Minimum of 45 hours of contact time per credit required. Prerequisite: Permission of faculty member; approval of internship agreement. Only S/U grades are awarded for this course.

Psychology

PSY 100 Principles of Psychology (4)
Surveys the field of psychology, emphasizing issues of current importance. Topics covered include research methodology and the influence of biological, social, and environmental factors on behavior. No credit will be given to students who have previously taken an introductory psychology course. Meets new General Education Social Science requirement.

PSY 216 Child and Adolescent Development (4)
Provides a general introduction to the study of psychological development from conception through adolescence. The emphasis is primarily on normal development. We will consider development in contexts such as home and school, and examine specific issues such as daycare, infant attachment, cognitive development, sibling relations, and adolescent identity. When discussing these issues we will focus on integrating theory and research with real world problems and your own knowledge and experience. Prerequisite: PSY 100 or equivalent.

PSY 218 Adult Development and Aging (4)
Provides you with a general introduction to the study of psychological development from early adulthood through death. The emphasis is primarily on normal development, although aspects of abnormal development will be discussed when appropriate. We will consider development in contexts such as home, work, school, and long-term care facilities, and examine specific issues such as identity formation, mid-life crisis, sandwich generation, and cognitive decline. When discussing these issues we will focus on integrating theory and research with real world problems and your own knowledge and experience.

PSY 220 Life-span Developmental Psychology (4)
Examines the physical, cognitive, social, and emotional development of individuals from conception to death. Special attention is given to the environmental and biological factors that contribute to normal development in childhood, adolescence, adulthood and aging. Prerequisite: PSY 100 or equivalent.

PSY 222 Abnormal Psychology (4)
Examines the dimensions, theories, and empirical findings in human psychopathology. Topics covered will include: concepts of abnormality, theories, classification, etiology, assessment, and treatment of the major psychopathologies. Prerequisite: PSY 100 or equivalent.

PSY 242 Social Psychology (4)
Examines principles of social behavior in a variety of settings. Topics include: attitude formation and change, group dynamics, interpersonal attraction, social perception, altruism, and aggression. Prerequisite: PSY 100 or equivalent.

PSY 262 Learning and Motivation (4)
Examines historical and modern concepts of learning and motivation, Pavlovian and operant conditioning, and their application. The relationship of learning to motivation and physiological, cognitive, and social theories of motivation will also be discussed. Prerequisite: PSY 100 or equivalent.

PSY 273 Dying, Death & Bereavement (4)
Examines psycho-social conceptualizations of dying, death and grief in contemporary society with special emphasis on one's own feelings and attitudes towards death and coping and supportive strategies of the dying and bereaved persons. Socio-cultural, legal/ethical issues are also explored. Prerequisite: PSY 100 or equivalent or permission of instructor.

PSY 304 Sports Psychology (4)
Deals with the applications of psychology in sport: personality analysis of athletes, skill acquisition, equipment design, gender differences, role of the coach, aggression and stress management.

PSY 305 History and Systems of Psychology (4)
Examines theoretical systems of psychology in historical perspective. Classical and contemporary theories of human behavior will be analyzed in terms of their impact on various fields of psychology. Prerequisite: PSY 100 or equivalent. Restricted to Psychology majors only.

PSY 310 Research Methods in Psychology (4)
This lecture and laboratory course will provide experience in the use of a variety of research designs and methods of data analysis. Students design research projects in small groups by selecting an appropriate sampling procedure and devising a method of collecting and analyzing data. Prerequisites: STA 100 or equivalent and PSY 305 or permission of instructor.

PSY 325 Psychology of Gender (4)
Reviews the major findings and theories related to sex roles and sex typing. It will also examine gender specific issues (e.g. motherhood/fatherhood). Prerequisite: PSY 100 or equivalent.

PSY 331 Psychology of Personality (4)
A study of determinants of personality and methods of studying personality, including various systems of psychology and their interpretations of personality structure and development. Prerequisite: PSY 100 or equivalent.

PSY 352 Industrial and Organizational Psychology (4)
Examines the behavior of people in industrial work environments. Topics include attitudes toward work, organizational climate, appraising employee performance and interest, engineering psychology, worker efficiency, accident behavior, leadership styles, and effectiveness. Prerequisite: PSY 100 or equivalent.

PSY 360 Perception (4)
A presentation of the basic facts and theories of human perception, concentrating primarily on vision. Topics to be covered include psychophysics, form and space perception, the constancies, the effects of learning, motivation, and set on perception, selective attention, and perceptual development. Prerequisite: PSY 100 or equivalent.

PSY 365 Educational Psychology (4)
Provides an overview of the psychological theory and research in relation to educational practices. Cognitive, motivational, interpersonal and socio-cultural influences on learning and retention in educational institutions will be examined. Characteristics and developmental needs of the learner throughout lifespan, along with evaluative measures of learning/instructions will be considered. Prerequisite: PSY 100.

PSY 377 Health Psychology (4)
Health and illness is experienced within a broad psychosocial context. Physical states affect mental states and mental and emotional experiences have the capacity to influence the course of physical health and illness. Investigates the relationship that exists between physical and mental health. Emphasizes the role that psychological, cultural and social factors have for both physical health and illness, and also examines stress and stress management techniques. Prerequisite: PSY 100.

PSY 385 Evaluation Research (4)
Application of various research methods to the planning, monitoring, and evaluation of social intervention programs. Topics include research design, questionnaire construction, survey methods, computer applications, and the critical analysis of evaluation studies. Assignments in class and field settings will provide students with practical experience in the design of evaluation studies, data collection and analysis, and the writing of evaluation reports. Prerequisite: PSY 310 or SOC 332 or equivalent.

PSY 390 Engineering Psychology and Human Performance (4)
Deals with the systematic application of relevant information about human capabilities and limitations to design of things and procedures people use. Topics include: information displays, acquisition of skills, person-machine system properties, work space, applied anthropometry, accidents, and psychological factors in transportation. Prerequisite: PSY 100 or equivalent.

PSY 415 Psychology of Aggression and Nonviolence (4)
Deals with the factors associated with aggression and nonaggression. Topics include theories of aggression, control of aggression, personality patterns of violent and nonviolent individuals, psychology of power, conflict resolution, and techniques for teaching nonviolent behavior. Prerequisites: PSY 305 or PSY 315 or PSY 331 or PSY 242 or permission of instructor.

PSY 425 Cognitive Psychology (4)
A survey of memory, thinking, language, and problem solving. The course will follow the history of psychological theory on cognition from associationism to gestalt approaches to modern information processing approaches and artificial intelligence. Particular attention will be paid to practical and clinical applications of research. Prerequisite: PSY 262 or PSY 360 or permission of instructor.

PSY 444 Applied Social Psychology (4)
Intended to expose students to interventions by social psychologists in real-world problem solving. Topics include applied nature of social psychology; social psychology of education, religion and politics; cross-cultural psychology; social psychology and legal issues; consumer behavior; social psychology and social policy; and conservation and environmental concerns. Prerequisites: PSY 305 or PSY 331 or PSY 242 or PSY 352 or equivalent or permission of instructor.

PSY 445 Group Dynamics and Interpersonal Communication (4)
Examines interaction in small groups. Topics include group structure and development, and aspects of group process such as problem-solving, decision-making, productivity, creativity, power, conflict resolution, leadership, and communication. Skill in application of concepts of group dynamics is developed through exercises in experiential learning and observation. Prerequisite: PSY 242 or PSY 352 or equivalent.

PSY 460 Neuropsychology (4)
The mind arises from the brain and every topic in psychology has a biological basis. This course is a survey of the biological bases of a wide array of topics, including perception, motivation, emotion, bodily movement, learning, memory and language. Prerequisite: PSY 100 or equivalent.

PSY 470 Psychological Testing (4)
Examines the basic concepts of measurement theory and their application to developing, administering, and interpreting psychological tests. Moral, ethical, and legal issues associated with testing and the use of test results are considered. Prerequisites: PSY 222 or PSY 331 or PSY 352 or equivalent.

PSY 477 Principles of Psychological Counseling (4)
Examines the theories and techniques used in counseling situations. Special attention will be given to interviewing skills, ethical issues, and the interpersonal dynamics that comprise the major therapeutic approaches. Prerequisites: PSY 222 or PSY 331 or equivalent, or permission of instructor.

PSY 490 Selected Topics in Psychology (4)
An in depth treatment of a selected topic in Psychology. Provides students with the opportunity to investigate psychological subject matter. Students may receive credit in a future semester for different topic areas. Prerequisite: PSY 100 or an introductory psychology course.

PSY 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, method of evaluation, and number of credits to be earned. Prerequisite: Matriculated students only, permission of instructor and dean of subject area.

PSY 492 Practicum in Psychology (4)
Supervised, discipline-related experience in a community service agency is provided. The major emphasis is to help the student in applying theoretical knowledge to real life situations, and to develop skills and competence as a professional. Regular meetings with agency supervisor and practicum coordinator are an essential feature of the practicum. Minimum GPA 3.0 and permission of the psychology department are required for admission. Prerequisites: PSY 305, PSY 310, and PSY 385 or equivalent. This course will not be a substitute for one of the three advanced courses required to complete the credits to major in the Psychology program.

PSY 493 Senior Seminar in Psychology (4)
Special topics of current interest and relevance are treated in-depth. Emphasis is placed on the critical analysis of current research literature and development of independent projects by seminar members. Topics vary from semester to semester. Prerequisites: Senior standing, PSY 310 and PSY 385 or equivalent and permission of instructor.

Recreation

See Health and Physical Activity

Science, Technology, and Society

STS 300 Introduction to Science, Technology, and Society (4)
Explores the humanistic and social dimensions of science and technology by looking at the interactions and interrelationships among science, technology, and society. We will explore: 1) the practice of science and technology to understand how scientific and technological work are conducted as creative and human enterprises; 2) how science and technology are shaped by different social and economic forces; 3) the impact of science and technology on society; 4) ethical issues related to science and technology.

STS 301 Monsters, Robots, Cyborgs (4)
What is the significance of the troubling figures – the monsters, robots, and cyborgs – that haunt our collective imagination? In this course students will examine the monstrous figures and technological bodies that populate the cultural landscape, interpreting them within their social, historical, cultural, political, and intellectual contexts. Approached in this manner, we will explore how these figures reveal our anxieties about the world – anxieties about the social, political, moral, and technological orders that organize our world, and how we fit (and do not fit) within these structures and systems. Meets General Education Humanities requirement.

STS 350 Science and Technology Transfer and Assessment (4)
Focuses on two aspects of modern science and technology: 1) an introduction to and critical analysis of technology assessment; i.e., the determination of potential impacts of technology on people and the environment; and 2) an analysis of the basic mechanisms and major obstacles related to the communication and transfer of science and technology to different groups of users, including the general public, and the public's response to science and technology.

STS 490 Topics in Science, Technology and Society (Variable 1-4)
An in-depth examination of particular topics in science, technology and society. Topics may include: Science, Technology, and Identity; Science, Technology, and the Environment; Science, Technology, and Gender; Science, Technology and Religion; Science, Technology, and Science Fiction. Typically, a topics course will use two or three general textbooks, and every student will be required to perform research on a particular issue related to the topic. May be taken more than once as topics change.

STS 491 Independent Study (Variable 1-4)
Extensive study and research on a particular topic of student interest under the supervision of a faculty member. The student is required to submit a written proposal which includes a description of the project, its duration, educational goals, methods of evaluation, and the number of credits to be earned. Prerequisites: STS 300 and permission of instructor and dean of subject matter.

Sociology

SOC 100 Introduction to Sociology (4)
Introduces the sociological perspective in understanding the everyday lives of members of a society. Emphasizes the influence of socialization, culture, inequality, institutionalization, conflict and collective behavior. Focuses primarily on the United States. Meets new General Education Social Science requirement. Senior Sociology majors may not register for this course.

SOC 110 Social Problems (4)
Examines social problems in industrial society, and how social institutions can lead to their creation, perpetuation, and solution. Focuses on particular social issues, such as poverty, power, race, ethnicity, gender roles, work, health, education, and war. Explores similarities and differences between sociological and other social science approaches to the study of social problems. Emphasis placed on the United States. Meets new General Education Social Science requirement.

SOC 210 Sociology of the Family (4)
Analyzes the nature of gender roles in the family, a basic social institution. Examines various patterns of family organization and problems confronting the family. Emphasizes the family in the United States.

Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 220 Sociology of Gender (4)
Explores contemporary theories, understandings and performances of gender, with attention to the intersections of race, class, gender and sexuality. Also examines the relationships of gender to life opportunities and experiences, social structures and societal reproduction. Prerequisites: SOC 100 or SOC 110 or CJ 101.

SOC 230 Sociology of Racial and Ethnic Relations (4)
Explores the complex and dynamic nature of race and ethnicity in American society, with a combined focus on historic and ethnographic approaches. Topics covered include the patterns of racial and ethnic inequality, the evolving social construction of race and ethnicity, the changing perceptions of and explanations for race relations, the intersection of race and ethnicity with other forces (such as social class and gender), and the social pressure for and against assimilation and acculturation. Prerequisite: SOC 100 or SOC 110 or CJ 101.

SOC 290 Special Topics in Sociology (1-4)
Treatment of a special topic in Sociology. Provides student with the opportunity to investigate sociological subject matter. Students may receive credit in future semester for different topic area.

SOC 310 The History of Sociological Theory (4)
Presents a historical overview of the emergence and development of sociological theory, with emphasis on theorists such as Comte, Spencer, Marx, Durkheim, Weber, Mead, and post-WWII theorists. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 314 Sociology of Deviance (4)
Presents major sociological theories of deviance. Examines specific forms of deviance, such as drug abuse, crime, sexual deviance, and mental illness. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 332 Methods of Inquiry (4)
Provides experience in the design and implementation of social science research. Topics covered include philosophies of social science, development of theories and hypotheses, modes of observation, methods of sampling and techniques of analysis. Students will design and implement several research projects during the semester. Use of computers is required, though no prior experience is assumed.

SOC 350 Chemical Dependencies and Human Behavior (4)
Explores sociological perspectives on the acquisition, continuation, and elimination of human dependency on chemical substances like drugs and alcohol. Aims to bridge the gap between professional and academic skills and information. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 351 Sociology of Crime (4)
Introduces the study of crime and the criminal justice system. Examines the causes of crime, including violent crime, crimes against property, substance abuse, sexual offenses, white collar, and organized crime. Considers the efforts of the police, courts, penal system, and community to deal with the various types of crime, as well as the social policy implications of our understanding of and approaches to the problem of crime. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 360 The Sociology of Work (4)
Describes contemporary sociological analyses of work, especially industrial labor processes. Explores the relative impact of technological and social factors on the organization of a variety of specific labor processes. Develops and synthesizes skills of work description. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 370 Sociology of Health and Illness (4)
Integrates varied sociological perspectives with the study of health and illness. Investigates the relationship between social structure and the experience of health or illness. Examines the organization and delivery of medical services in the United States. Focuses on the individual's experience of illness. Links sociological theory and sociological practice in the healthcare arena. Prerequisites: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 381 Social Gerontology (4)
Compares sociological, biological, and psychological analyses of aging. Analyzes the problems confronting older people in industrial societies. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 410 Power and Violence in the Family (4)
Issues of power and control are part of every relationship and can lead to emotional, physical, and sexual violence. Through lectures and class discussion the student will gain an understanding of the fundamental dynamics of abusive situations, the consequences for all concerned, and the policy implications. (Designed specifically to meet the needs of students interested in the human services field.)

SOC 411 Sociology of Community (4)
Examines the tradition of Community Studies in American Social Science. Presents various models of community process. Examines particular social problems manifest in communities such as community development, ethnicity, and poverty. Encourages a research orientation in socially-relevant professions. Prerequisite: ANT 321.

SOC 424 Social Welfare Policy (4)
Investigates the history, concepts, programs, and practices of social welfare policies in the United States. Promotes an appreciation for the interrelatedness of practice and policy analysis in the field of social welfare scholarship. Prerequisite: ANT 321.

SOC 446 The Individual and Society (4)
Presents various ways to conceptualize the mutual influences of individual-level and social-structural processes. Addresses specific topics within social psychology, "human nature," communication and language, perception, socialization, and the acquisition of roles, ideologies, and values. Prerequisite: ANT 321.

SOC 450 Sociology of Corrections (4)
Introduces students to correctional institutions by examining the history and philosophy of corrections; the social organization of prison societies as total institutions; the management of prisons; prison violence and court-mandated attempts to restore civility; jails and community corrections; and critiques of traditional approaches to corrections. Prerequisites: ANT 320 or SOC 314, or SOC 351.

SOC 452 White Collar Crime (4)
Focuses upon crime that occurs within organizational and occupational contexts. Applies the major theories of crime causation to such illegality whether committed for the benefit of an employing organization, by individuals through the exercise of State authority, by individuals in their particular professional capacity, or for other types of individual gain. Explores legal and social strategies for controlling these practices. Prerequisite: ANT 320 or SOC 314, or SOC 351.

SOC 453 Comparative Criminal Justice Systems (4)
Compares the American Criminal Justice System to Criminal Justice Systems of a number of other advanced industrial societies, especially in Western Europe. Focal areas include overall policy/philosophy and social organization. Special emphasis upon the alternatives to American approaches, referred to broadly as harm reduction, including decriminalization, diversion before entering the CJS, diversion after entering the CJS, effective rehabilitation, and successful re-entry. Prerequisites: CJ 101 or SOC 110 and one 200 or 300 level CJ or SOC course.

SOC 455 Sociology of Law and the Courts (4)
Examines the social origins of law and the institutions by which it is administered; the effect of law on the reproduction of social arrangements; the history of legal ideas and their influence on legislation and court

precedents; and the relation of law to the problem of social order and control. Primary emphasis is on criminal law and courts. Prerequisites: ANT 320 or SOC 314, or SOC 351 and SOC 310.

SOC 465 Sociology of Occupations and Professions (4)
Presents previous and current sociological approaches to the structure of labor markets, both occupational and professional. Analyzes changes in these markets. Examines the relations between labor markets and other social institutions, such as the family, the school, race/ethnicity, gender, and class. Analyzes professions as particular types of occupation, the social consequences of professionalization, and the implications of current patterns of labor market recruitment, mobility, segregation, and segmentation. Prerequisite: ANT 301 or SOC 110, or an introductory anthropology or sociology course.

SOC 490 Selected Topics in Sociology (4)
An indepth treatment of a selected topic in Sociology. Provides students with the opportunity to investigate sociological subject matter. Students may receive credit in a future semester for different topic areas. Prerequisite: ANT 301 or SOC 110 or an introductory anthropology or sociology course.

SOC 491 Independent Study (Variable 1-4)
Provides a structure for extensive study and/or directed research (under faculty supervision) on a topic. Application form must include a description of the project, its duration, its educational goals, method for its evaluation, and a suggested number of credits. Prerequisites: Matriculated students only; permission of instructor and school dean required.

SOC 493 Senior Seminar in Sociology (4)
Explores in depth a particular sociological topic chosen by the instructor. Emphasizes critical analysis of current sociological literature and the development of independent projects by students. Topic varies. Prerequisite: SOC 310 and SOC 332. Permission of instructor required.

SOC 495 Practicum in Sociology (4)
Integrates academic and practical experience during one semester placement in an appropriate social service, criminal justice, or work-related community setting. Involves execution of a social practice project, negotiated among student, staff, and placement supervisor. Students must apply for admission to the course. Prerequisites: Completion of at least 2 Sociology/Anthropology courses at this campus prior to the start of this class and a 3.0 GPA and permission of instructor.

Spanish

SPA 101 Elementary Spanish (4)
Designed to give the beginning student an awareness of how members of another culture communicate and live. Student achieves this by using language skill of listening, speaking, reading, and writing. The process entails study of pronunciation, basic grammar, selected vocabulary, and the culture that the language represents. Meets the new General Education Foreign Language requirement.

SPA 102 Intermediate Spanish (4)
Refines the skills learned in an introductory Spanish class in oral comprehension, speaking, reading, and writing. The course instruction will be primarily in Spanish. Meets the new General Education Foreign Language requirement. Prerequisite: SPA 101.

Statistics

STA 100 Statistical Methods (4)
Study of the methods whereby data are collected, analyzed, and presented. Topics include: frequency distributions, measures of location, dispersion, and skewness, probability and probability distributions, and various topics in statistical inference. Meets the new General Education Mathematics requirement.

STA 225 Applied Statistical Analysis (4)
This course deals in-depth with statistical methods used to analyze data. Applications are drawn from many diverse areas. Topics include: measures of location and scale for frequency distributions, addition and multiplication laws for probability, binomial, Poisson, and normal distributions, inferences about proportions and location parameters in one-sample and two-sample problems, analysis of completely randomized and randomized blocks designs, simple linear regression and correlation, sign test, median test, rank sum test, and signed rank test. Prerequisites: Calculus II (MAT 152) or Calculus II for Engineering Technologies (MAT 122). Cross listed with MAT 225.

STA 290 Topics in Statistics (1-4)
An introductory course in selected topics in Statistics not currently covered in any of the listed classes. Topics are chosen to illustrate different fields and applications which are all part of Statistics.

Telecommunications

TEL 100 Introduction to Telecommunications (3)
An introduction to the field of telecommunications. Interrelation of telecommunications, data processing, and data communications. Managing voice and data systems and discussions of current technologies.

TEL 201 Basic Voice Communications (4)
Overview of voice communications. Fundamental concepts and terminology, structure of the telecommunications industry, physical and pricing components of voice products and services, and an introduction to telecommunications engineering, and financial considerations in purchasing a telecommunications system. Prerequisite: TEL 100.

TEL 205 Basic Data Communications (4)
Provides an overview of data communications, including fundamental concepts such as coding schemes, modulation techniques, transmission impairments, and digital versus analog networking. Also explained are various types of networks and and their advantages and disadvantages. The lab will include hands-on experience with data communications concepts, processes and products. Prerequisite: TEL 100.

TEL 310 Telecommunications Transmission Technology (4)
Will familiarize students with various transmission technologies such as coaxial cables, microwave radio, fiber optics and satellite communications. The advantages and disadvantages of analog and digital technologies are compared as they pertain to long-range network planning. Voice and data integration will also be discussed. Includes an overview of the national wiring standards as presented by the telecommunications distribution methods manual. Prerequisites: TEL 100 and TEL 201.

TEL 316 Data Network Design (4)
Data network design issues and applications, point-to-point network design, multipoint network design, data collection and verification and an overview of protocols. Network design tools such as MIND, OPNET, and Comnet III are used for network design and simulation. Use of simulation results to design a private line or packet switched based data communications network. Three hours of lecture and one hour of laboratory per week. Prerequisites: TEL 205 and STA 100.

TEL 330 International Telecommunications (4)
An assessment of global telecommunications networks, business, trade in services and equipment, and regulation. Topics include voice and data services, technical standards, transborder data flow issues, network competition, and the role of telecommunications in economic development. Prerequisite: TEL 100.

TEL 340 Network Standards & Protocols (4)
An intermediate course surveying the field and covering details of important current network standards, architectures, and their associated protocols. General principles and a number of protocols will be reviewed in detail including: OSI, TCP/IP, SNA, and SS7, SDLC, Ethernet and Token Ring. Prerequisites: TEL 205.

TEL 381 Introduction to Information Assurance (4)
A fast paced introduction to the field of Information Assurance. The various kinds of threats that might be faced by an information system and the security techniques used to thwart them are covered. Hacker methods, viruses, worms, and system vulnerabilities are described with respect to the actions that must be taken by a Network Manager to combat them.

TEL 382 Information Assurance Policies and Disaster Recovery (4)
Development of information systems security policies for small and large organizations with specific regard to components such as email, web servers, web browsers, firewalls, personal applications, etc. The need for and development of disaster recovery plans and procedures are also covered. Course intended for Telecommunications majors or students with a networking background. Non-Telecommunications majors require permission of instructor.

TEL 383 Network Firewalls (4)
Teaches the student the basic design of firewalls and provides actual hands-on experience with a popular enterprise firewall. The need for firewalls is also covered. Builds upon the foundations of Information Assurance presented in TEL 381, Introduction to Information Assurance. Provides more detailed background and skills in the area of firewalls for those individuals who seek employment in the areas of network and data security. Prerequisites: TEL 205 and TEL 381.

TEL 384 Network Intrusion Detection (4)
The need for intrusion detection systems (IDS) is described. Several basic IDS design approaches and implementation methods are presented. Basic attack methods employed by network attackers and the resulting signatures are explained. The business case for justifying the acquisition of IDS is explored. Builds upon the foundations of Information Assurance covered in TEL 381. Provides additional background and skills in the area of network IDS for those students interested in the areas of network and data security. Prerequisites: TEL 205 and TEL 381.

TEL 400 Wireless Telecommunications (4)
Investigate of the technologies, networks, and services of wireless telecommunications systems. Areas examined include public cellular, microcellular and mobile satellite systems; as well as privately owned wireless LANS-WANS and PBXs. Domestic and international regulation of these networks and services, as well as infrastructure, supplier competition, and access technologies will be examined. Prerequisites: TEL 201 and TEL 205.

TEL 416 Digital and Internet Telephony (4)
Consists of both lecture and application oriented lab assignments. Emphasizes digital and internet telephony fundamentals including the convergence of voice, data and multimedia communications using the Internet Protocol. Three hours of lecture and two hours of laboratory. Prerequisite: TEL 201.

TEL 420 Telecommunications Systems Analysis and Project Management (4)
A study of project management techniques and processes from a corporate user perspective. Topics include strategic planning, needs assessment, development of requests for proposals, security and disaster planning, financial evaluation techniques, negotiation with vendors, outsourcing, implementation and system changeover planning, and creation of validation and acceptance test procedures. Prerequisite: TEL 100. Cross listed with TEL 520.

TEL 425 Internetworking Telecommunications Systems (4)
Intended to introduce new content and extend previously learned networking skills which will empower students to enter the workforce and/or further their education in the area of telecommunications networking. A task analysis of current industry standards and occupational analysis is used in the development of content standards. Instruction introduces and extends the student's knowledge and practical experience with switches. Local Area Networks (LAN's) and Virtual Local Area Networks (VLAN's) design, configuration and maintenance. Students develop practical experience in skills related to configuring LAN's, WAN's, routing protocols and network troubleshooting. Prerequisite: TEL 205.

TEL 430 Local Area Networks (4)
Survey and evaluation of local area network media, access methods, and topologies. Design, configuration, operation, and configuration of local area networks. Hands-on Microsoft Network System Administration. Prerequisite: TEL 205.

TEL 493 Special Topics in Telecommunications (Variable 1-4)
An in-depth study of selected topics based on: new developments in the field, more in-depth treatment of topics than covered in regular courses, or topics not normally covered in an undergraduate program in telecommunications. Topics may include: Computer Telephony Integration, Software Defined Radio, Building Wiring Standards, and others. Prerequisites: TEL 100 and others depending on topic, or permission of instructor.

TEL 494 Telecommunications Internship/Co-op (2 or 4)
Part-time supervised experience in a professional atmosphere which supplements classroom instruction. Two written reports on the work experience, two supervisor's evaluations and one site interview required. Required contact hours min. 150. Prerequisite: Permission of instructor.

Theater

THR 120 Studio Art: Visual and/or Performing (2)
An introduction and hands-on experience with the style and techniques of a visiting artist. Suitable lecture/demonstration of background and personal approach to the work will be shared by the artist. Students in a studio/workshop type of environment will participate in sequential exercises designed to allow them adopt and adapt some of those stylistic elements and/or features in their own work (visual and/or performing). Meets new General Education Arts requirement.

THR 300 Theater Production (4)
A balance between academics and studio work. Students will learn about theatre history and production as well as actively participate in the mounting of a theatrical work. Using the varied talents of the class, we will select polished scenes, a one act play, a full length play, or an interactive educational play about current issues. The production may be a public performance or merely in-class final design and performance presentations. If a public performance, members of the class will provide the artistic and technical staffing of the production, under the overall guidance of the class instructor. Additional assistance may be provided by student volunteers not enrolled for credit. Because theatre is an art which draws upon many areas of skill and intelligence, some reflective work will be done to document each student's personal journey. There will be some class visits to areas theaters and/or productions as these opportunities become available. Meets new General Education Arts requirement.

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Ph.D. Arizona State University

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Ph.D. Virginia Polytechnic Institute

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Ph.D. University of Massachusetts

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B.S. The University of Flordia
M.B.A. The Wharton School, University of Pennsylvania
Ph.D. The University of Texas at Austin

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M.B.A. Arizona State University
M.I.M. AGSIM
Ph.D. University of Georgia

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M.B.A. St. John's University
Ph.D. Southern Illinois University

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M.B.A. University of Texas at Austin
Ph.D. University of Iowa

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M.L.H.R. Ohio State University
Ph.D. Ohio State University

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B.S.N. University of Pennsylvania
M.S.N. Syracuse University
M.B.A. Syracuse University
Ph.D. Syracuse University

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J.D. Albany Law School
C.P.A. State of New York

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M.A. University of London (Kingston-Upon-Hull, England U.K.)
Ph.D. Canfield Univesity (Bedford, England U.K.)

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Ph.D. Syracuse University

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M.B.A. Hofstra University
M.A. University Iowa
Ph.D. University of Connecticut

M. Imtiaz Mazumder
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B.S.S. University of Dhaka
M.S.S. University of Dhaka
Ph.D. University of New Orleans

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B.S. Iowa State University
M.S. Iowa State University
M.S. University of Iowa
Ph.D. University of Wisconsin

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Associate Professor, Finance
B.S. State University College at Geneseo
M.B.A. Rochester Institute of Technology
Ph.D. Western Colorado University
State University Chancellor's Award for Excellence in Teaching, 1997

Naren Peddibhotla
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B.S. IIT Bombay
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Ph.D. University of Minnesota

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M.S. West Virginia University
Ph.D. West Virginia University

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M.P.H. University of Tennessee

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M.S. University of Akron
C.P.A. States of New York and Ohio
C.M.A. National Association of Accountants

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Ph.D. Saint Louis University

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Ph.D. Purdue University

School of Information Systems and Engineering Technology

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Ph.D. Lehigh University

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M.S. University of Washington
P.E., New York State

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B.S. M.S. Clarkson University
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Ph.D. State University of New York at Binghamton
Ernest W. Goodell Research & Creativity Award, 1990

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Ph.D. Auburn University

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M.Tech. Indian Institute of Technology
Ph.D. University of Manchester Institute of Science & Technology

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M.Eng. Rensselaer Polytechnic Institute
P.E. New York State

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M.E. Rensselaer Polytechnic Institute
Ph.D. Rensselaer Polytechnic Institute

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M.S. University of Michigan

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Ernest W. Goodell Research & Creativity Award, 1992

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Ernest W. Goodell Research & Creativity Award, 1993

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State University Chancellor's Award for Excellence in Teaching, 1995

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M.S.N. The Catholic University of America
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Emeriti

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B.S. Syracuse University
M.S. Syracuse University

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M.L.S. State University of New York at Albany
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Ed.M. Northeastern University

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Ph.D. Tulane University

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M.E.E. North Carolina State
Ph.D. North Carolina State

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M.B.A. Auburn University
Ph.D. Syracuse University

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M.Sc. Panjab University
Ph.D. London University

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Ph.D. University of Illinois

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State University Chancellor's Award for Excellence in Professional Service, 1982

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State University Chancellor's Award for Excellence in Teaching, 1998

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M.S. Syracuse University
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C.P.A. State of New York
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Ph.D. Syracuse University

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M.A. Trinity University
Ph.D. Michigan State University

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State University Chancellor's Award for Excellence in Teaching, 1990

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Ph.D. Syracuse University

Robert L. Smith
Professor Emeritus
B.S. Ohio University
M.S.Ed. Syracuse University
Ph.D. Syracuse University

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Ph.D. Bradford University

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M.S. University of Rochester
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Richard A. Wolber
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B.A. University of Notre Dame
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C.P.A. State of New York
C.M.A.

State University of New York

The nation's largest and most comprehensive state university system, The State University of New York (SUNY), was founded at Potsdam, New York in 1816. Years later, the Morrill Act of 1862 led to the creation of four Ivy League land-grant SUNY colleges, which now currently exist at Cornell University. SUNY was officially established in February 1948 when New York became the 48th state, of the then 48 states, to create a state university system. SUNY initially represented a consolidation of 29 unaffiliated institutions, including 11 teachers colleges. All of these colleges, with their unique histories and backgrounds, united for a common goal: To serve New York State. Since 1948 SUNY has grown to include 64 individual colleges and universities that were either formerly independent institutions or directly founded by the State University of New York.

Today, the State University of New York's 64 geographically dispersed campuses bring educational opportunity within commuting distance of virtually all New Yorkers and comprise the nation's largest comprehensive system of public higher education. The State University of New York's 64 campuses are divided into four categories, based on educational mission, types of academic opportunities available and degrees offered. SUNY offers students a wide diversity of educational options including short-term vocational/technical courses, certificate, associate, and baccalaureate degree programs, graduate degrees and post-doctoral studies. SUNY provides access to almost every field of academic or professional study within the system via 7,669 degree and certificate programs.

SUNY students represent the society that surrounds them. In January 2008, 19.9% of all enrolled students were minorities. While SUNY students are predominantly New York State residents, representing every one of the state's 62 counties, they also hail from every other state in the United States, the District of Columbia, four U.S. territories, and 160 nations. SUNY enrolls 40% of all New York State high school graduates, and the total enrollment of 418,000 full-time and part-time students represents 37% of New York State's higher education student population. SUNY alumni number over 2.4 million graduates residing in New York State and throughout the world.

SUNY attracts the best and brightest scholars, scientists, artists and professionals and boasts nationally and internationally recognized faculty in all major disciplines. Faculty are regular recipients of prestigious awards and honors. SUNY colleges and universities range from world-renowned community colleges, such as the Fashion Institute of Technology, to first-rate graduate schools and the nation's top veterinary school. The highly-regarded doctoral degree granting universities are home to top research programs and attract experts in a variety of fields. Students study in campus classrooms and laboratories or work from a distance through the SUNY Learning Network, which provides educational opportunities to more than 70,000 students through 4,000 courses and 60 degree and certificate programs.

The State University of New York is committed to providing quality education at an affordable price to New Yorkers and students from across the country and the world.

SUNY's Mission

The mission of the State University system shall be to provide to the people of New York educational services of the highest quality, with the broadest possible access, fully representative of all segments of the population in a complete range of academic, professional and vocational postsecondary programs including such additional activities in pursuit of these objectives as are necessary or customary. These services and activities shall be offered through a geographically distributed comprehensive system of diverse campuses which shall have differentiated and designated missions designed to provide a comprehensive program of higher education, to meet the needs of both traditional and non-traditional students and to address local, regional and state needs and goals.

In fulfilling this mission, the State University shall exercise care to develop and maintain a balance of its human and physical resources that:

- recognizes the fundamental role of its responsibilities in undergraduate education and provides a full range of graduate and professional education that reflects the opportunity for individual choice and the needs of society;
- establishes tuition which most effectively promotes the university's access goals;
- encourages and facilitates basic and applied research for the purpose of the creation and dissemination of knowledge vital for continued human, scientific, technological and economic advancement;
- strengthens its educational and research programs in the health sciences through the provision of high quality general comprehensive and specialty health care, broadly accessible at reasonable cost, in its hospitals, clinics and related programs and through networks and joint and cooperative relationships with other health care providers and institutions, including those on a regional basis;
- shares the expertise of the state university with the business, agricultural, governmental, labor and nonprofit sectors of the state through a program of public service for the purpose of enhancing the well-being of the people of the state of New York and in protecting our environmental and marine resources;
- encourage, support and participate through facility planning and projects, personnel policies and programs with local governments, school districts, businesses and civic sectors of host communities regarding the health of local economies and quality of life;
- promotes appropriate program articulation between its state-operated institutions and its community colleges as well as encourages regional networks and cooperative relationships with other educational and cultural institutions for the purpose of better fulfilling its mission of education, research and service.

Index of Courses

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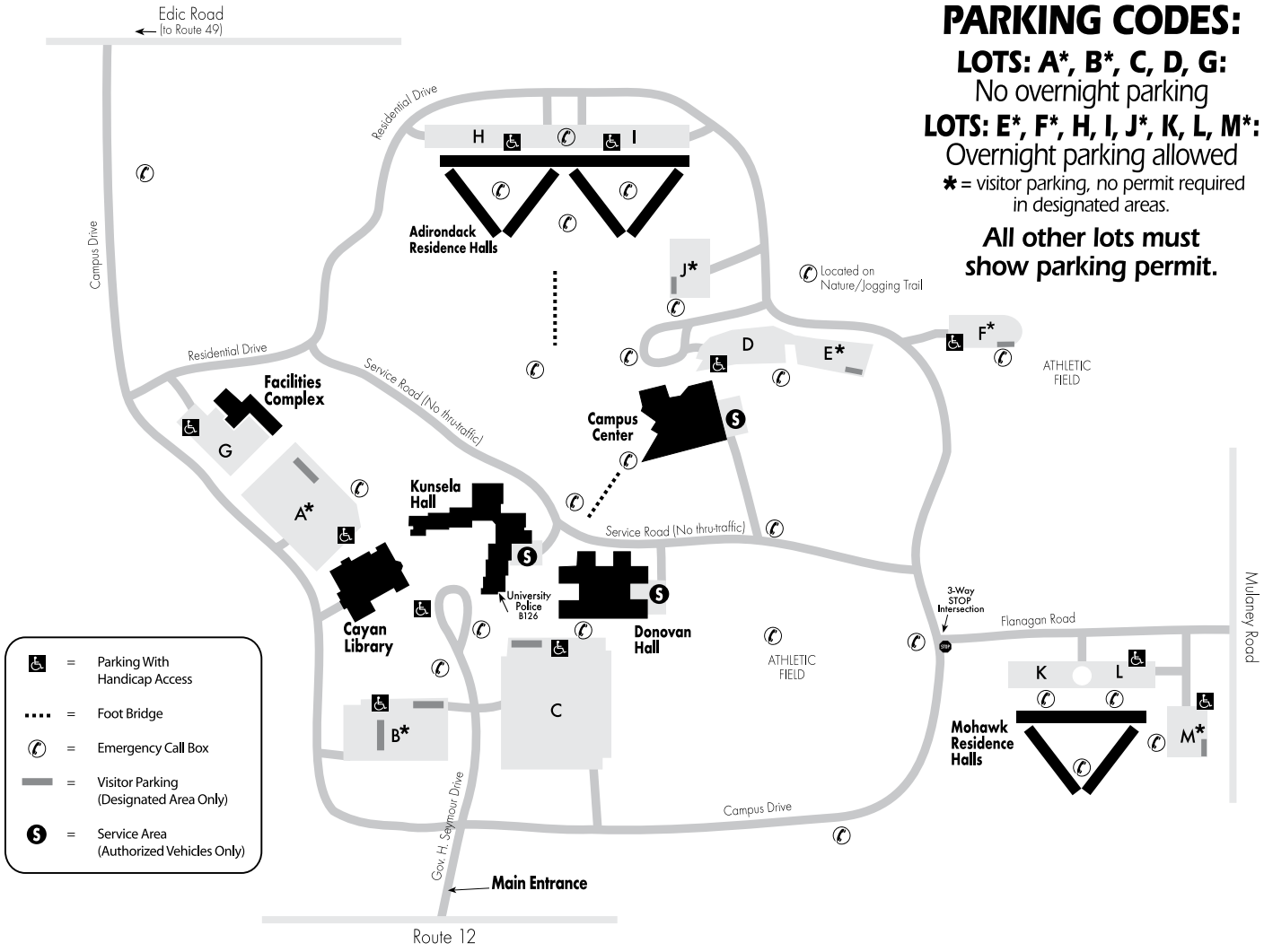
Listing of Campus Offices

Offices	Building	Room #	Phone #
Admissions	Kunsela Hall	A108	(315) 792-7500
Alumni	Kunsela Hall	B231C	792-7110
Athletics	Campus Center	221	792-7520
Bookmark (Campus Bookstore)	Kunsela Hall	B112	792-7257
Campus & Corporate Events	Kunsela Hall	A239	792-7819
Campus Life	Campus Center	209	792-7530
Career Services	Kunsela Hall	B101	792-7165
College Association	Kunsela Hall	A217	792-7341
Continuing Professional Education	Kunsela Hall	B234	792-7270
Counseling Center (Student Success Services)	Donovan Hall	G174	792-7805
CSTEP (Student Success Services)	Donovan Hall	G174	792-7805
Disabled Student Services (Student Success Services)	Donovan Hall	G174	792-7805
EOP (Student Success Services)	Donovan Hall	G174	792-7805
Facilities	Service Building	110	792-7456
Financial Aid (Student Services Center)	Kunsela Hall	A208	792-7210
Food Service	Campus Center	Dining Hall	792-7224
Graduate Center	Kunsela Hall	A010	792-7347
Health & Wellness Center	Campus Center	217	792-7172
Human Resources	Kunsela Hall	A011	792-7191
Information Technology Services	Kunsela Hall	C005	792-7440
Instructional Resources	Kunsela Hall	A012	792-7180
International Student Services (Student Success Services)	Donovan Hall	G174	792-7805
Learning Center	Donovan Hall	G155	792-7310
Library	Cayan Library		792-7245
President	Kunsela Hall	B225	792-7400
Print Shop/Mailroom	Kunsela Hall	A002	792-7204
Public Relations	Kunsela Hall	A229	792-7223
Registrar (Student Services Center)	Kunsela Hall	A208	792-7265
Residential Life & Housing	Kunsela Hall	A233	792-7810
School of Arts & Sciences	Donovan Hall	2123	792-7333
School of Business	Donovan Hall	1101	792-7429
School of Info. Sys. & Engineering Tech.	Donovan Hall	1191	792-7234
School of Nursing & Health Systems	Donovan Hall	1143	792-7295
Student Accounts (Student Services Center)	Kunsela Hall	A208	792-7412
Student Activities	Campus Center	208	792-7530
Student Association	Campus Center	229	792-7135
University Police	Kunsela Hall	B126	792-7106
Veterans' Affairs (Student Services Center)	Kunsela Hall	A208	792-7263
Provost	Kunsela Hall	B223	792-7200
Vice President Administration	Kunsela Hall	B220	792-7300
Voter Registration (Campus Life)	Campus Center	209	792-7530

Campus Map/Directions



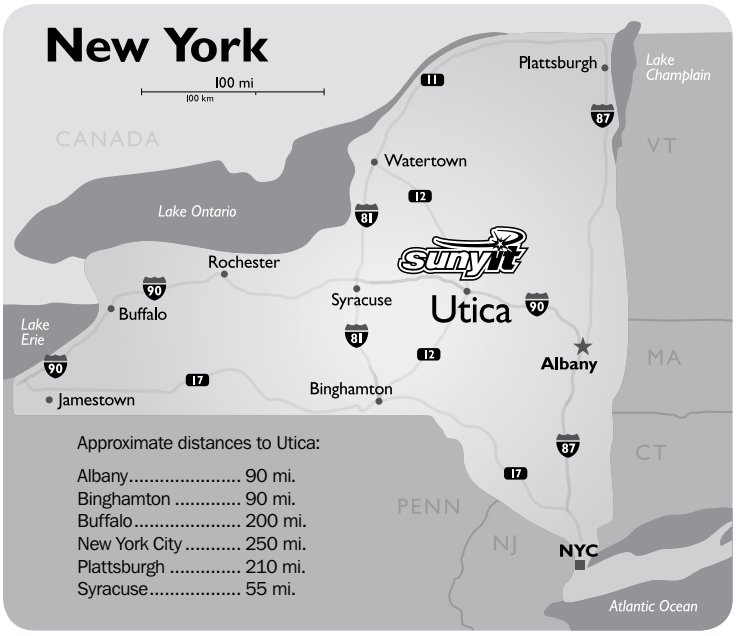
PARKING CODES:

LOTS: A*, B*, C, D, G:
No overnight parking

LOTS: E*, F*, H, I, J*, K, L, M*:
Overnight parking allowed

* = visitor parking, no permit required in designated areas.

All other lots must show parking permit.



Directions

From the NYS Thruway (I-90): Take Exit 31/Utica. After toll, bear right onto N. Genesee St. and stay in right lane. Turn right at light and immediately turn right onto ramp for West I-790/Rtes. 5/8/12/Rte. 49. Travel 1.5 miles and take the Edic Road exit. Go straight at the light and continue for about a half-mile; turn right at the Edic Road campus entrance.

From NYS Rte. 49: Take the Edic Road exit. Go straight at the light and continue for about a half-mile; turn right at the Edic Road campus entrance.

From Rtes. 5/8/12: Take the I-790/Rte.5/I-90/Rte. 49 exit and stay in the left lane, following the sign for West 49 Rome. Take the Edic Road exit. Go straight at the light and continue for about a half-mile; turn right at the Edic Road campus entrance.

Two other campus entrances (Horatio St. and Mulaney Rd.) can be used from Rtes. 8/12 by taking the Horatio St. exit and following signs for SUNY Institute of Technology.

STATE UNIVERSITY OF NEW YORK INSTITUTE OF TECHNOLOGY

We'd be happy to answer any questions, send an application, or schedule an appointment for you.

Please write or call:

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SUNY Institute of Technology
P.O. Box 3050, Utica, New York 13504-3050

(315) 792-7500 or
Call toll free @ 1 (866) 2 SUNYIT

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