STATE UNIVERSITY OF NEW YORK INSTITUTE OF TECHNOLOGY

UNDERGRADUATE CATALOG 2003–2004

Where I want to Be.

President's Message

Welcome! We are delighted to have you join the SUNYIT family of scholars. We offer world-class, focused educational opportunities for focused students. Our programs are available to you on our beautiful, 800 acre, residential campus. The education you earn will empower you to fulfill your professional goals and life-long learning needs.

As a SUNYIT scholar you are encouraged to exercise your initiative, imagination, and creativity. Throughout our campus, our faculty and staff are dedicated to supporting your educational quest. Finally, our corporate partners work with us to ensure you will be rewarded with appropriate opportunities following graduation.

I wish you every success and look forward to working with you as you pursue your goals.

Mason H. Somerville

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About SUNYIT

As a unique member of the State University of New York family, SUNY Institute of Technology (SUNYIT) is the ideal choice for the serious student interested in a focused education. Founded as an upper-division and graduate institution in 1966, SUNYIT offers a broad range of academic programs that embrace technology, professional studies, the humanities, communications, math and science.

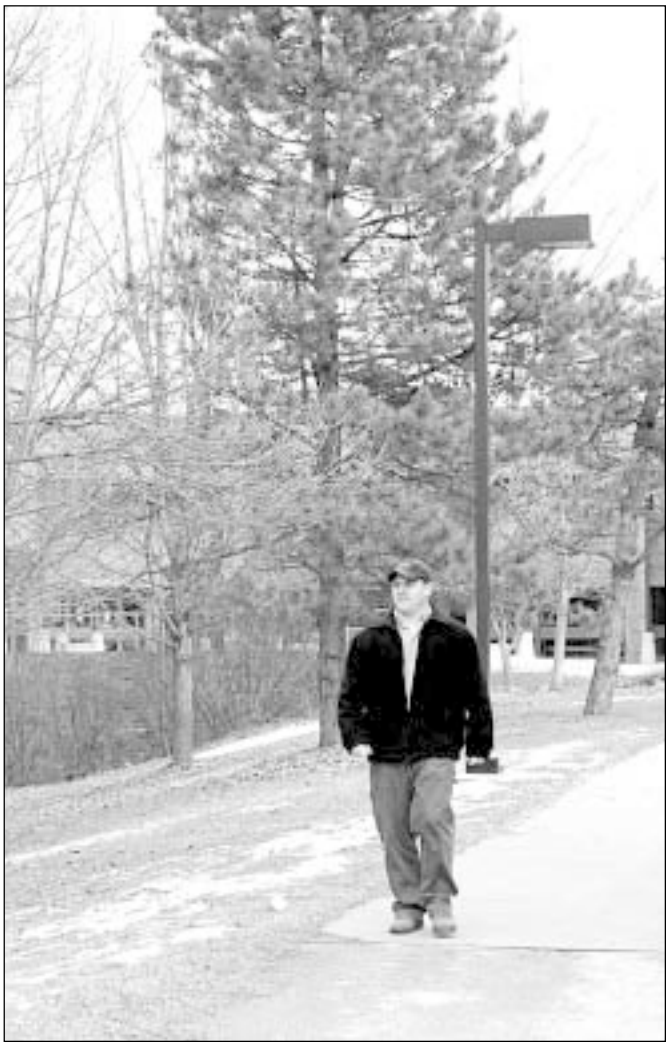
SUNYIT offers 20 undergraduate majors and 11 graduate programs, among them the only on-line MBA program in the SUNY system and one of the few completely on-line accountancy programs in the country. SUNYIT comprises four academic schools: Arts & Sciences, Information Systems & Engineering Technology, Management, and Nursing and Health Systems.

Students enjoy close contact with world-class faculty in small classes, most with fewer than 20 students. Through internships, close cooperation with employers, and one of the largest career fairs in the SUNY system, SUNYIT enjoys 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.

In addition to our human resources, the newest campus in the SUNY system offers a technologically sophisticated learning environment on a scenic site of more than 800 acres in the foothills of the Adirondacks, just north of the city of Utica, N.Y. The original $60 million campus complex was completed in 1988; a new $14 million library complex was dedicated in 2003. From classrooms to residence halls, the latest technology complements an intimate, friendly academic experience. Small class sizes offer students the opportunity to work closely with faculty; laboratories feature state-of-the-art equipment, some of it the result of SUNYIT's close working relationship with leading high-tech companies.

Residence halls on SUNYIT campus bear little resemblance to the dormitories offered on most college campuses. More accurately described as townhouse-style apartments, the SUNYIT's residence halls have been ranked the best on-campus living experience in the SUNY system. Each student's room is linked to SUNYIT's mainframe computer, allowing easy Internet access to all who live in the residence halls.

Life on campus also features a full menu of recreational and cultural experiences. Our Campus Center houses a gymnasium, racquetball courts, fully-equipped exercise and weight rooms, a swimming pool, saunas, and a 400-seat dining hall. Student Activities staff and faculty members bring the world to campus through visiting artists, musicians, entertainers, and lecturers.



SUNYIT is a member of the National Collegiate Athletic Association (NCAA), the Eastern Collegiate Athletic Conference (ECAC), and the SUNY Athletic Conference (SUNYAC). Intercollegiate athletic sports teams include men's and women's basketball and soccer; women's volleyball, softball and cross country; and men's baseball, golf and lacrosse.

Thousands of SUNYIT graduates over the last three decades have found rewarding and exciting careers in their chosen fields of endeavor, many of them with help from the Office of Career Services. All told, more than 90 percent of each year's graduates find employment in their field or pursue additional, post-graduate education. Nearly 20,000 men and women around the world are proud members of the SUNYIT alumni family.

With a growing number of degree programs, its reputation for high-tech academic excellence, and a continued commitment to a state-of-the-art learning environment, SUNYIT enjoys a prominent place among the leading educational institutions of its kind.

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

SUNYIT makes career services available to all of its students and alumni. Career Services works with students from their admission, through and after graduation, encouraging them to make use of the office's resources and teaching them how to secure internships and summer, part-time, and full-time employment. The office also provides information and counseling concerning career decision-making and job search strategies. Students are encouraged to register with the office in order to access the web job listing and be included in the resume database. Students will remain in the database one year past graduation, or until they find employment. At the end of that time frame an annual fee will be charged.

Career Services registration is a simple but important process that allows students and alumni to fully utilize our services. After completing a simple online form, respondents receive an e-mail (usually the next business day) advising them of their pin number, a link to instructions for placing their resume online, and accessing Web job listings and JOBTRAK.

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 offered daily by professional staff in our Resource Room. Students and alumni meet one-on-one with a staff member primarily for purposes of resume and cover letter critiques.

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 securing internships and/or summer, part-time, and full-time employment. Career Fair is held the second Thursday of October each year.

Resume Database/Resume Referral is maintained for the purpose of bringing qualified students and alumni to the attention of employers offering internships, and summer, part-time and full-time employment.

On-Campus Interviews are held in the fall and spring semesters in an effort to bring together interested students with private and public sector recruiters. **Students must be registered with Career Services before having their resumes referred to prospective employers.** Participating students are encouraged to attend Employer Presentations. These employer-led sessions are held prior to interviews and provide specific employer and position information.

The **Resource Room** serves as a focal point for the delivery of career information. Students and alumni have access to computers, (often used for writing and updating resumes), and local and national books and periodicals which provide employer, industry, job search, graduate school planning, and career exploration information.

Our **Graduate and Professional School Fair** is held every fall. Representatives from SUNYIT and other graduate schools are on hand to provide resources and advice useful in deciding whether or not graduate school is right for an individual's ultimate career.

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. A CD-ROM is used, which allows users to proceed at their own pace.

Web job listings and JOBTRAK enable students to search for work from the comfort of their own computer. Web job listings typically are with local employers, however, regional and national employers are represented as well. JOBTRAK listings are for thousands of companies from around the U.S. In both cases, full-time and internship opportunities are listed and job searches can be narrowed to particular fields.

For additional information visit the Career Services Web Site at: www.sunyit.edu/saf/career_services

Admissions

Admission of Freshmen

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

- accounting
- applied mathematics
- business
- computer and information science *including an accelerated BS/MS program*
- computer information systems
- computer engineering technology
- electrical engineering technology *(beginning fall 2004 pending approval)*
- finance
- health services management
- health information management
- industrial engineering technology
- mechanical engineering technology
- psychology *(beginning fall 2004 pending approval)*
- sociology *(beginning fall 2004 pending approval)*

Freshman Admission Requirements

Admission is competitive. To be considered for admission, freshman applicants should generally carry at least a B+ average in a college-preparatory program, and have achieved an 1150+ combined score on the SAT or 25+ composite on the ACT. Admission is based on high school average, SAT or ACT scores, class rank and other relevant supplemental information. A supplemental application with an essay is required for freshman admission. Although not required, letters of recommendation and an admissions interview are highly recommended and will be used with the supplemental application as factors in determining admission and merit scholarship awards.

SUNYIT participates in the Early Decision Program. Students who are interested in applying Early Decision must submit their application by November 1. Applications will be reviewed and students will be notified of admission by December 15. Students admitted under Early Decision are required to submit a deposit by January 15 and withdraw applications to other campuses.

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 March 1. Early application is strongly encouraged for scholarship consideration and residence hall preference.

Decisions regarding freshman applications will begin on January 15 and continue on a rolling admissions basis thereafter. However, SUNYIT reserves the right to close admission at any time.

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. Students with 24 credit hours or less must also submit an official high school transcript and test scores. In addition, the student must 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.

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 fall registration or until the respective program is full. Spring (January) decisions begin in mid-September and continue through spring registration 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 at the time of acceptance and should be completed prior to registration. In addition MMR documentation is required (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 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 satisfac-

tory 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 30 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 guidebook from the SUNYIT Web site, a two-year college, high school, or the Admissions Office. Students using the SUNYIT application should note that the SUNYIT code is 48. The program codes for SUNYIT are:

Accounting 0281
Applied Mathematics 0087
Business/Public Management 0275
Business Administration 0275
Civil Engineering Technology 1102
Computer and Information Science (B.S./M.S.) 0170
Computer and Information Science 0286
Computer Information Systems 0095
Computer Engineering Technology 1357
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/Nursing Administration 1609
Professional and Technical Communication 1021
Psychology 0347
Sociology 0352
Telecommunications 0890

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

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 8:00 a.m. to 5:00 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. Evening appointments are also available.

Registration

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

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, graduate MBA coursework, and programs in Accountancy (M.S.), Health Services Administration (M.S.), and Health Services Management (B.S.,) are offered on-line. Selected arts and science and nursing courses are also available. On-line coursework is available to both degree and non-degree students in most programs listed above.

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.
Health Services Administration	M.S.
Information Design and Technology	M.S.
Nursing Administration	M.S.
Telecommunications	M.S.

How to Apply

The prospective graduate student can obtain a graduate catalog and application from the Admissions Office at SUNYIT. Admissions procedures and requirements vary by program and are outlined in the SUNYIT graduate catalog. Graduate catalogs may be obtained by writing to the Admissions Office at: SUNY Institute of Technology, P.O. Box 3050, Utica, NY 13504-3050 or by telephoning (315) 792-7500 or 1 (866) 2 SUNYIT or e-mail at admissions@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/department chairperson. Non-degree graduate students requiring such approval must possess a bachelor's degree and are limited to a maximum of twelve credits. Non-degree students who plan to apply for admitted degree status in a graduate program should contact the Admissions Office to begin the application process. Non-degree study is not available in the MBA program.

Part-Time Studies

Admissions

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 8:00 a.m. to 5:00 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. Evening appointments are also available.

Registration

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 on page 17 of this catalog for details.

Counseling Services

Educational, vocational and personal counseling is available to part-time students Monday through Friday from 8:30 a.m. to 4:30 p.m. and by appointment. (Hours are subject to change.) Services include vocational testing to help the student clarify career goals, workshops in life skills, and advisement. Career counseling and information about graduate and professional schools are available at the Career Services Office.

Services are also offered through the Counseling Center for Educational Opportunity Program students, disabled students, and international students.

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. Fees and other charges 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*	$2,175 per semester	$181 per credit hour
Out-of-State Resident	$5,150 per semester	$429 per credit hour
Comprehensive Student Fee	$402.00 per semester	$31.25 per credit hr.

Graduate	*Full-Time*	*Part-Time*
New York Resident*	$3,450 per semester	$288 per credit hour
Out-of-State Resident	$5,250 per semester	$438 per credit hour
MBA (NYS Resident)	$3,550 per semester	$296 per credit hour
MBA (Out-of-State Resident)	$5,400 per semester	$450 per credit hour
Comprehensive Student Fee	$382.00 per semester	$31.25 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 services 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	*Part-time*
College Fee	*12.50*	*.85*
Intercollegiate Athletics	*120.00*	*10.00*
Student Activities	*85.00*	*5.00*
Health Services	*80.00*	*6.70*
Technology Applications	*104.50*	*8.70*
	$402.00	*$31.25*

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 $70, used to support activities and programs which aid the student transition to a new academic campus environment.

Tuition Refund Policy

Credit Courses

A student who has been granted permission to withdraw from a course (fall/spring) shall be liable for payment of tuition in accordance with the following schedule:

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 Business 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 at the Registrar's Office and submitted to the Business Office. **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 mid-point of the semester, unless SUNYIT can document a later date. 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 student accounts 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
- 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 three 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 2003-04

		Per Semester		
			Fall	*Spring*
Room	*Meal Plan*	*Basic*	*Extended*	*Extended*
Single	19/week (includes 100 pts)*	$3,700	$4,100	$4,100
Single	14/week (includes 100 pts)	$3,600	$4,000	$4,000
Single	125/semester (includes 200 pts)	$3,650	$4,050	$4,050
Single	100/semester (includes 400 pts)	$3,675	$4,075	$4,075
Double	19/week (includes 100 pts)*	$3,400	$3,800	$3,800
Double	14/week (includes 100 pts)	$3,300	$3,700	$3,700
Double	125/semester (includes 200 pts)	$3,350	$3,750	$3,750
Double	100/semester (includes 400 pts)	$3,375	$3,775	$3,775

** Default plan*

	Full-time	*Part-time*
Parking Fee (see section entitled "Parking Fees")	$59.54	$29.77
Career Services Fee — voluntary (annual fee for alumni only)	$35	$35
Alumni Fee — paid once	$20	$20
Diploma Cover Charge — payable when applying for diploma	$10	$10
Drop/Add Fee — paid per transaction	$20	$20
International Student Medical Insurance*	$687.25/yr.	$687.25/yr.
Domestic Student Medical Insurance	$158/sem.	Optional
ID Card Replacement Fee	$15	$15
Late Registration Fee	$40	$40
Orientation Fee — paid once during first semester		
freshman	$70	$70
transfer	$50	$50
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	$20	$20
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	$95	$6.50 cr. hr.
HVCC Parking Fee — HVCC students only	$43	$3.50 cr. hr.

Deposits

For full-time undergraduate students (freshmen and transfers) applying for fall admission, a $50 tuition deposit is 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 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 deposition will be granted within 30 days of the date of deposit.

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.

Full- and part-time graduate students are not required to pay admissions deposits but must return a deposit waiver card within 30 days of acceptance to hold a seat in their graduate program.

Students who wish to reserve dormitory rooms are required to pay a $100 dormitory deposit, due with their admissions deposit/waiver card. Requests for housing deposit refunds must be made in writing to Residential Life and Housing Office, and are subject to terms and conditions

of the room and board license. The refund of a housing deposit follows the same deadline as the admission 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 before the end of the second week of classes. 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.**

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 attendance. 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 ..... $316 per year*
(full-time students only)

International Student Insurance ..... $687.25 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 8.25%). All regulations pertaining to the use of vehicles on campus are enforceable 24 hours a day throughout the year.

Payment of the parking fee may be made at the Bursar's Office during normal business hours. The valid decal can then be obtained at the University Police Department. Parking fees for various categories are as follows (including applicable sales taxes):

Time Period	*Full-time*	*Part-time*
Annual (full 12 month period)	140.73	81.19
Academic Year (fall/spring only)	119.08	59.54
Single Semester Only	59.54	29.77
Summer Semester Only	21.65	21.65

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.

SUNYIT Time Payment Plans

SUNY Institute of Technology is pleased to offer its own 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 three or five payment options. The cost to you is $25.00 per semester and is non-refundable.

Three-Payment Option

The three-payment option is based on *actual* charges when you receive your initial semester billing statement. The initial payment is calculated by taking one half of the amount due and adding the enrollment fee. You will then be billed in 2 equal installments for the remaining balance.

Five-Payment Option

The five-payment option is for students who wish to spread their payments out even further. Enrollment in this plan is based on your ***estimated*** tuition and fee charges at the time you join the plan. The enrollment period for Fall begins in June with equal monthly installments due on the tenth of each month, July through November. Enrollment for Spring begins in November with equal monthly installments due on the tenth of each month, December through April. Your $25 participation fee is due with your first payment. Late enrollments will be accepted only if all past installments are paid at time of late enrollment. Contact the Bursar's/Student Accounts Office for further details.

For All Plan Participants

Approximately two weeks prior to the payment due date for the contracted amount, an invoice will be sent to your mailing address. If you wish to have the invoice mailed to an address other than your **mailing** address, you must notify the Bursar's Office. Please notify the Bursar's Office of any changes that may arise from changes in enrollment, housing, or financial aid.

Payment for past due amounts can be included in the same check or credit card payment but cannot be deferred as part of the payment plan. Past due amounts must be paid to retain your registration status.

Any payment not **received by the due date** will be assessed a $30.00 late payment fee. Any returned check payment will incur a $20.00 return check fee as well as a late payment fee. We reserve the right to deny future payment plan privileges if payments are not made as agreed upon.

If you have any questions regarding the plan, please contact the Bursar/Student Accounts Office at 315/792-7412.

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 Vietnam 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 student academic performance are allowable. **Submit a letter of authorization from your employer and payment of any fees due to our office prior to the billing due date.**

Employer Tuition Deferrals

If your employer pays your tuition expenses, but only after you complete the course, you have the option to defer your tuition payment until the semester ends. Deferral forms are available from our website (www.sunyit.edu). Your employer must sign the application, verifying your eligibility for reimbursement. (Letters from employers will not be accepted.) This deferral and payment of fees must be received by our office by the billing due date. This deferment cannot be used in conjunction with other financial aid (loans, grants, etc.). **The deferment is applied to tuition ONLY. The comprehensive student fee is due before the start of classes.** The deferment period ends on the due date stated on the deferral form, at which time payment for tuition is due in full. Late charges will accrue on your student account if payment is not made by the due date. **Non-reimbursement to you by your employer by the date tuition is due is not an exception to this policy nor is non-receipt of a grade.** Tuition is charged for the course, not for the grade. You, not your employer, are responsible for paying the tuition on time. If for any reason you become ineligible for reimbursement by your employer, you must contact the Bursar's office at (315) 792-7412.

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, HIB, 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.

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 (9% at time of printing), 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.

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

1. Obtain a financial aid application packet by contacting the Financial Aid Office. The packet contains the applications and information necessary to apply for financial aid.
2. Complete and submit a Free Application for Federal Student Aid (FAFSA). You can do this on the Internet at www.fafsa.ed.gov or you can submit a paper FAFSA to our office and we will transmit it electronically to the processor for you. 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 contacting our office. SUNY Institute of Technology's Federal Title IV School Code is 011678.

3. Complete and return the SUNYIT Application for Financial Aid form (which is included in the application packet or can be printed from SUNYIT's web page) to the Financial Aid Office.

4. If you are a New York State resident and you have submitted a FAFSA, you will receive either a preprinted Tuition Assistance Program (TAP) application or a Change Form from New York State Higher Education Services Corporation (HESC). If you receive the TAP application and you plan to enroll full-time, you must mail the application with any necessary corrections and the appropriate signatures to HESC. If you receive a Change Form, review the data on the form and return to New York State Higher Education Services Corporation (HESC) only if corrections are necessary. SUNY Institute of Technology's TAP undergraduate school code is 4975; the graduate school code is 5695.

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 system 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 processes applications 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. Refund checks cannot be issued to Freshmen until 30 days into the semester. 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 $4,000, while a graduate student can receive up to $6,000 annually. The maximum aggregate loan amount is $20,000 for an undergraduate student and $40,000 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 (FNLP): Eligibility for the FNLP 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, whether the student is full-time or part-time, and whether the student attends SUNYIT for a full academic year, or less than that.

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 variable and capped at 8.25 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 $2,625 for freshmen, $3,500 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 are charged a three percent 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 - $2,625 for freshmen, $3,500 for sophomores, $5,500 for juniors or seniors; independent undergraduates - $6,625 for freshmen, $7,500 for sophomores, $10,500 for juniors or seniors, and $18,500 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, which is variable and capped at 8.25 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.

Average Loan Indebtedness: For May 2002 graduates who borrowed while attending SUNYIT, the average loan indebtedness was $6,960 for subsidized loan borrowers and $4,683 for unsubsidized loan borrowers. The average of all loans was $13,416 per borrower per two-year enrollment period.

Loan Consolidation: If you borrow other federal student loans (i.e. Federal Perkins, Nursing, or 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 can be obtained from the New York Higher Education Services Corporation, 99 Washington Ave., Albany, NY 12255. You may also call them at 888-697-4372 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 of assistance for full-time study or up to five years in certain programs. Graduate or professional 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.

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 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.

Vietnam/Persian Gulf Veterans Tuition Awards: Vietnam and Persian Gulf veterans who are New York State residents may receive up to $1,000 per semester ($500 per semester if part-time) to help pay the tuition at an undergraduate degree-granting institution or in an approved vocational training program in New York State. If a Tuition Assistance Program award is also received, the combined academic-year award cannot exceed tuition. To be eligible, students must: (1) be enrolled in an approved undergraduate degree program; (2) have served in the U.S. Armed Forces in Indochina between January 1, 1963 and May 7, 1975 or in the Persian Gulf from August 2, 1990 to November 30, 1995; (3) have been discharged from the U.S. Armed Forces under other than dishonorable conditions; (4) be a New York State resident; (5) have applied for TAP and the Federal Pell Grant.

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 Award for Children of Deceased or Disabled 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, or Vietnam 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.

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. The student must be enrolled as a matriculated undergraduate student in a program approved by the Commissioner of Education. Additional information can be found on the Internet at www.hesc.com.

Regents Awards for Children of Deceased Police Officers, Firefighters, and Correction Officers: These awards are for children of police officers, firefighters, and correction officers who served in New York State and who died as a result of injuries sustained in the line of duty. The award is $450 per year for up to four years of full-time undergraduate study. Those who are eligible for this award, with the exception of children of correction officers, may also receive the Memorial Scholarship (see below). Study must be at a college in New York State.

Memorial Scholarships for Children of Deceased Police Officers and Firefighters: This scholarship supplements the $450 received through the Regents Award for Children of Deceased Police Officers, Firefighters, and Correction Officers. The award amount is based on tuition and non-tuition costs of attendance. The award is available for four years of full-time study at a college or school in New York State.

Health Services Corps Scholarships: These are competitive awards of up to $15,000 per year to students enrolled in an approved undergraduate or graduate program. Eligible health care professions include, among others, nursing. Upon completion of study and certification requirements, the recipient must agree to work in certain not-for-profit or state-operated facilities for 18 months for each annual award. Failure to meet the service requirements results in an obligation to repay all scholarship monies received plus a substantial penalty and interest.

National Science Scholars Program: This federally funded program provides merit awards for undergraduate study in sciences, computer science, math, and

engineering. To be eligible for an award, the student must meet established criteria. The award is based on the annual federal budget and cannot exceed cost of attendance. Scholars may receive scholarships for no more than three academic years of undergraduate study.

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, Albany, NY 12230.

Scholarship for Academic Excellence: This academically competitive program provides scholarship assistance to outstanding New York State high school graduates. 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 selects recipients and will notify students who have been selected to receive the scholarship.

Robert C. Byrd Honors Scholarship Program: 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. The New York Higher Education Services Corp. sends a Robert C. Byrd Honors Scholarship Payment Application and a Certification of Eligibility for Federal Assistance form to scholarship winners.

Educational Opportunity Program (EOP): The Educational Opportunity Program is designed to identify New York State students who are educationally under prepared, talented and in need of academic and financial support to attend college. 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).

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 by providing supplemental financial resources based on academic performance and community and/or college service.

Application Process

All scholarship candidates are selected by the Admissions Office at the time the student is accepted to the Institute. 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. Freshmen applicants will be sent a SUNYIT Supplemental Application, which must be completed and returned in order to be considered for admissions and merit scholarships. Scholarship candidates will be selected from the top ranks of admitted freshmen and may be required to attend a special scholarship interview/luncheon prior to receipt of a scholarship award. SUNYIT will award full tuition, half tuition and other endowed scholarships to select freshmen. In addition, a limited number of residential scholarships may also be awarded.

Transfer Students: Using the transfer grade point average as an indicator of academic excellence (a minimum of 3.25 is required for consideration), 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 SUNYIT's admissions process as early as possible.

SUNYIT Endowed Scholarships

Joseph M. Asselta Trust: This scholarship is awarded annually to an outstanding scholar.

The Robert S. Best Memorial: This scholarship is awarded annually to a non-traditional student from any curriculum.

Brodock Press: This award is made annually to an academically strong student in the engineering technology fields.

James A. Burns, Jr. Memorial: This scholarship is awarded annually to an outstanding senior majoring in telecommunications.

Ruddy Paul Cayan Memorial: Two scholarships are awarded annually to exceptional nursing students.

CIGNA Telecommunications: This award is made annually to a full-time student majoring in telecommunications.

Class of 1982 Service Award: This award is open to a returning student, from any curriculum, who is active in student government.

Class of 1983 Award: This scholarship is awarded annually to an entering student who is dedicated to academic excellence.

Dr. Ellen P. Coher - Nursing: These two awards are made annually to academically excellent students in the nursing curriculum.

College Association: This annual award is open to students from any curriculum.

CONTEL: This award is made annually to a superior student majoring in telecommunications.

Michael Paul Dennison Memorial: Preference for this annual award will be given to students studying Computer and Information Science or another program from the School of Information Science and Engineering Technology (ISET).

Senator James H. Donovan: Four two-year scholarships are awarded annually to students from Herkimer, Lewis or Oneida Counties who have exceptional academic performance and active involvement in community affairs.

Senator James H. Donovan - Lewis County: An annual award is made to an outstanding scholar from Lewis County.

John A. Falcone: This scholarship is made annually to an outstanding scholar.

Faxton Hospital Alumni Association: This award will be made annually to an outstanding nursing student from Oneida or Herkimer Counties.

General Electric: This annual award is directed toward women, Vietnam veterans and minority students in the technologies, including computer science and telecommunications.

Globe Mill: This annual award is open to students from any curriculum.

Howard W. Hart Memorial - Kiwanis Club of Utica: This award is restricted to a student from the Utica area.

John and Katherine Hutchinson Memorial Scholarship: This scholarship is awarded to a new full-time student who meets the GPA criteria.

John F. Kaminsky Memorial: Open to students from any curriculum, however, preference will be given to students majoring in Business/ Public Management.

Dr. William R. Kunsela: This endowment provides a minimum of ten student scholarships annually.

Lillian W. & David J. Leffert: This award is made annually to an academically excellent student from any curriculum.

Dr. Robert D. Leidig Memorial: These two scholarships are awarded annually to students from any curriculum.

Laura J. Link Memorial: This annual award is given to a full-time student pursuing a B.S. degree. Preference will be given to students majoring in Electrical Engineering Technology. The student must demonstrate financial need.

Albert Mario - School of Management: This annual award is given to an exceptional student enrolled in the School of Management.

New York State Telephone Association: This annual award acknowledges a superior student enrolled in SUNYIT's baccalaureate program in telecommunications. Preference should be given to children of telephone company employees in New York State.

Nortel-Valhalla: This scholarship is awarded annually to a superior student majoring in Telecommunications.

Nursing Administration: This scholarship is awarded annually to an outstanding student pursuing an M.S. degree with a major in Nursing Administration. The student must demonstrate financial need.

NYNEX: Two scholarships are awarded annually to exceptional students in the telecommunications program.

George F. Pitman: This Book Scholarship is awarded annually to students from any curriculum.

Mary M. Planow Memorial: This scholarship is awarded annually to a non-traditional student from any curriculum.

Psi Chi Honor Society: This annual award is open to an outstanding junior or senior, majoring in Psychology. The recipient must be a financially needy, full-time student. Preference will be given to Psi Chi members.

Racal-Datacom Award for Excellence: This annual award is presented to an outstanding senior in the telecommunications program who has not previously received a scholarship at SUNYIT. Extra consideration will be given to minorities and women. The recipient of this award should demonstrate financial need.

Kenneth Roemer Memorial: Two annual awards are restricted to outstanding students from the greater Utica/Rome area.

Dr. Spencer J. Roemer Four annual awards are restricted to outstanding students from the greater Utica/Rome area.

Florence Roemer-Bevan Memorial: Two annual awards are restricted to outstanding students from the greater Utica/Rome area.

Norman Saltzburg Memorial: This annual award is made to an academically superior student who is in need of financial assistance.

Rose D. & Harry B. Saltzburg: This annual award is made to an outstanding scholar from any discipline.

Victor C. Salvo Memorial: Preference for this annual award will be given to an exceptional, full-time student studying Electrical Engineering Technology or Computer Engineering Technology or one of the other engineering technology programs (Civil, Industrial, or Mechanical).

Milton L. Smith: This award is made annually to an academically excellent student from any curriculum.

Special Metals: This scholarship recognizes superior academic performance and is open to students from any curriculum.

Stetson-Harza: This is an annual award open to students from any curriculum.

Telecommunications Department: This scholarship is awarded annually to a superior student majoring in Telecommunications.

TIE Communications: This scholarship is awarded annually to an entering student pursuing a degree in telecommunications.

Women's Christian Association of Utica: This scholarship was created to provide awards to female students at SUNYIT, from any curriculum. Preference is given to residents of Oneida County.

WSTA, Partners in Information and Network Technology: This award is made annually to provide fiscal aid for a financially needy, full-time student in the department of telecommunications.

SUNYIT Annual Scholarships

Alumni Presidential and Deans: Established through the annual gifts of SUNYIT alumni. Each year scholarships are awarded to entering students from any curriculum.

Central New York Communications Association (CNYCA): One scholarship is awarded to a student in the telecommunications program who has the highest grade point average, and also has the greatest financial need.

The Community Foundation of Herkimer & Oneida Counties, Inc.: Awards are made annually to outstanding scholars from Oneida or Herkimer County.

Christopher J. Frens Memorial: This scholarship is awarded annually to an outstanding scholar.

Leatrice Golden Book: This scholarship is restricted to a woman in a science or technology discipline.

Health Services Management Book: This scholarship is restricted to a student majoring in Health Services Management.

Independent Telephone Pioneer Association, Inc./ Empire State Chapter: An award is made annually to a full-time student

majoring in telecommunications.

International Communication Association (ICA): Intended for full-time students who have declared a major in a telecom-related degree. All students receiving a scholarship from the ICA Foundation will be required to be an affiliate member of ICA.

Julia O. Wells Foundation: Scholarships are awarded to nursing students, half of which must go to Albany Memorial Hospital School of Nursing graduates. The number and amount of the scholarships depend on annual funding.

MARCH Associates: An award is made annually to an academically outstanding student from any curriculum.

Marcy Chamber of Commerce: This annual award is open to any senior who owns, or whose family owns property in the Town of Marcy, and has resided there for at least five years. The recipient is selected using both academic excellence and financial need as criteria.

Mohawk Valley Institute for Learning in Retirement (MVILR): An award is made annually to an academically excellent student.

NFL Alumni, Inc/Capital District - Saratoga Chapter: An award is made annually to an academically excellent student in the telecommunications program.

Northern Telecom, Inc. (NORTEL): An award is made annually to an academically excellent student in the telecommunications program.

Arnold Simpson Memorial: This scholarship is awarded annually to an outstanding scholar.

Slocum-Dickson Foundation: Awards are made annually to nurses enrolled in the master of science in nursing degree program who are from the Utica area.

SUNY Empire State Minority Honors: Scholarships are awarded to members of under-represented minorities with at least a 3.0 grade point average. Number and amount of scholarships depend on annual funding.

Additional Sources of Aid:

Check your local library for the following publications:
Directory of Financial Aid for Women
Directory of Financial Aid for Minorities
Chronicle Student Aid Annual
The Great American National Scholarship & Grants Guide
Scholarships, Fellowships & Loans

You may also access scholarship information through the Internet's World Wide Web. FastWEB, an on-line scholarship database, is available by typing: **http://www.finaid.org/**.

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, 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. Applications for a Class of 1983 loan can be obtained from the Financial Aid Office.

Foundation of Record Education Loans (FORE): Students in medical record administration may apply for a FORE Loan from the American Health Information Management Association. Interested students should obtain an application from: FORE, c/o American Health Information Management Association, 919 N. Michigan Ave., Suite 1400, Chicago, Illinois 60611.

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. Applications can be obtained from the Financial Aid Office.

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. For more information, please contact the Financial Aid Office.

Estimated Costs for the Academic Year

	Commuter	*Off-Campus*	*On-Campus*
Tuition	$3,400	$3,400	$3,400
Fees	860	860	860
Books & Supplies	800	800	800
Room	750	3,915	4,700
Board	750	2,530	2,700
Travel	1,440	1,440	490
Personal Expenses	1,120	1,445	1,440
Total Budget	$9,120	$14,390	$14,390

Tuition for out-of-state residents is $8,300. In-state graduate students should substitute $5,100 (out-of-state use $8,416) 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 Bursar 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 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 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

The Higher Education Act of 1965, as amended by Congress in 1986 and 1992, and Part 145 of the Regulations of the New York State Commissioner of Education dealing with state student financial assistance require institutions of higher education to establish minimum standards of "good academic standing" for students to be eligible for financial aid. SUNYIT applies the federal standards to the Federal Perkins Loan, Federal College Work Study, Federal Supplemental Educational Opportunity Grant, Federal Nursing Student Loan, Federal Pell Grant, Federal Direct Stafford Loan Program, Federal Direct Unsubsidized Stafford Loan Program, Federally Insured Student Loan, and the Federal Direct Parent's Loan for Undergraduate Student programs and the state standards to the Tuition Assistance Program, Aid for Part-Time Study program and other state programs for the purpose of maintaining a consistent policy for all students receiving assistance. 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 for TAP), 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 SUNY Institute of Technology and consists of the following two components. In order to remain academically eligible for the federal aid programs, the student must meet the following requirements:
   1. Reasonable Length of Time Requirement: students must meet all degree requirements within 150% of the credit hours needed to earn the degree; and
   2. Minimum Scholastic Requirement: students must 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. Measurable Progress Requirement: students must pass at least one course each semester and 66% of all SUNYIT credit hours attempted (measurement begins when the student has attempted 24 credit hours).

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

B. Review Policies:
   1. Following each 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 course audited with no credit;
      d. "I" incomplete.

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 during a subsequent semester. Also, any student who withdraws from SUNYIT, does not pass any courses (Incompletes are not considered passing grades) or is academically dismissed will lose his/her eligibility for aid until the requirements have been met. Financial aid suspension results in the termination of financial aid from all federal financial aid programs including loans.

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. A student wishing to appeal the initial decision may do so in writing to the Vice President for Student Affairs, or his/her designee.

F. Conditions of Reinstatement:
   1. A student's eligibility for federal financial aid will be reinstated for a 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 Admissions Office. Those students who are reinstated will receive a one-time waiver and have their good academic standing status reinstated. The Undergraduate Standing section of the Academic Requirements and Policies chapter in this catalog contains information on reinstatement.
   3. A student who enrolls after a 12 month absence will have his/her eligibility reinstated.
   4. 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 chart below:

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

* *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.

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 Technology, 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, health services administration, information design and technology, nursing administration, and telecommunications. SUNYIT also offers a master of business administration in technology management and advanced certificates in adult nurse practitioner and family nurse practitioner.

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 National League for Nursing (NLN), and the Commission on Accreditation of Allied Health Educational Programs (CAAHEP) in collaboration with the Council on Accreditation of the American Health Information Management Association.

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

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 Executive Vice President for Academic Affairs. 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.

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 readmissions.
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 Imformation 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 toSUNYIT 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 one year or more 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, division, 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 register for a course to be taken for audit, and the form must be signed by the instructor of the course and the dean of the academic school within which the course is offered. Courses to be taken for audit cannot be registered for during advance registration. Courses taken for audit must be so specified *at the time of registration, or* 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.
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.

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.

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

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).

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. 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
Art History	3, 4, 5	4 cr.	Humanities
Biology	3	4 cr.	Natural Science (non-lab)
	4, 5	4 cr.	Natural Science (lab or non-lab)
Calculus (AB)	4, 5	4 cr.	Mathematics
(BC)	3	4 cr.	Mathematics
(BC)	4, 5	8 cr.	Mathematics
Chemistry	3	6 cr.	Natural Science (non-lab)
	4, 5	8 cr.	Natural Science (lab & non-lab)
Computer Science (A)	3, 4, 5	4 cr.	–––––
(AB)	3, 4, 5	8 cr.	–––––
Economics (Micro)	3, 4, 5	4 cr.	Social Sciences
(Macro)	3, 4, 5	4 cr.	Social Sciences
Eng. (Lang.& Comp.)	3, 4, 5	4 cr.	Humanities
(Lit. & Comp.)	3, 4, 5	4 cr.	Humanities
Environmental. Sci.	3	3 cr.	Natural Science (non-lab)
	4, 5	4 cr.	Natural Science (lab or non-lab)
European History	3, 4, 5	4 cr.	Western Civilization
French (Language)	3, 4, 5	4 cr.	Foreign Language
(Lit.)	3, 4, 5	4 cr.	Foreign Language
German	3, 4, 5	4 cr.	Foreign Language
Govt & Politics (Comp.)	3, 4, 5	4 cr.	Social Sciences
(U.S)	3, 4, 5	4 cr.	Social Sciences
Human Geography	3, 4, 5	4 cr.	Social Sciences
Latin (Literature)	3, 4, 5	4 cr.	Foreign Language
(Virgil)	3, 4, 5	4 cr.	Foreign Language
Music Theory	3, 4, 5	4 cr.	Arts
Physics (B)	3	6 cr.	Natural Science (non-lab)
	4, 5	8 cr.	Natural Science (lab&non.lab)
(C-Elect & Mag.)	3	3 cr.	Natural Science (non-lab)
	4, 5	4 cr.	Natural Science (lab or non.lab)
(C-Mechanics)	3	3 cr.	Natural Science (non-lab)
	4, 5	4 cr.	Natural Science (lab or non.lab)
Psychology	3, 4, 5	3 cr.	Social Sciences
Spanish (Language)	3, 4, 5	4 cr.	Foreign Language
(Literature)	3, 4, 5	4 cr.	Foreign Language
Statistics	3, 4, 5	4 cr.	–––––
Studio Art (Drawing)	3, 4, 5	4 cr.	Arts
(2-D Design)	3, 4, 5	4 cr.	Arts
(3-D Design)	3, 4, 5	4 cr.	Arts
U.S. History	3, 4, 5	4 cr.	American History
World History	3, 4, 5	4 cr.	Other World Civilizations

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 with the Registrar's Office by the proceeding 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.

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 Executive Vice President for Academic Affairs. 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 worked out 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.

** 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.*

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.

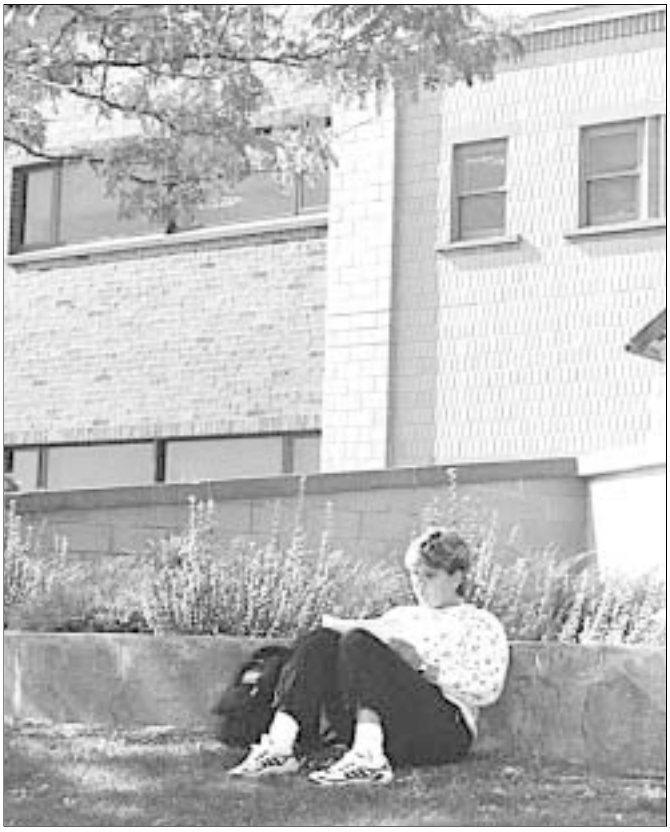
Regional Educational Consortium

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, 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/Graduate Academic Calendars

Fall Semester 2003*

August 22	(Fri)	New Student Orientation/Registration
August 25	(Mon)	**ALL CLASSES BEGIN** Add/Drop and Late Registration Begin - No Fees Charged
August 29	(Fri)	Last Day to Register Without Late Fee for Fall 2003 Courses
August 30	(Sat)	Saturday Classes Are in Session
September 1	(Mon)	LABOR DAY HOLIDAY - No Classes
September 2	(Tues)	Add/Drop and Late Registration Fees Begin
		(Students Must Obtain Instructor's Signature to Add a Course)
September 8	(Mon)	Last Day to Add a Course or Drop Without Academic Record
September 9	(Tues)	Withdrawal (W Grade) from Courses Begins
October 10	(Fri)	Last Day of Classes for First Half Semester Courses
October 11-14	(Sat-Tues)	Mid Semester Break
October 15	(Wed)	First Day of Classes for Second Half Semester Courses
		Incomplete Grades from Spring & Summer 2003 Revert to "F" Grades
October 31	(Fri)	**Last Day to Officially Withdraw (W Grade) From Courses**
November 3	(Fri)	Last Day to File for May 2004 Graduation
Nov 10-12	(Mon-Wed)	Advance Registration - Spring 2004
		(Matriculated Students see Academic Department for Advising Schedule)
Nov 26-30	(Wed-Sun)	THANKSGIVING HOLIDAY RECESS
		(Recess begins at 8:00 am, Wednesday, Nov. 26th)
Nov 27-28	(Thurs-Fri)	SUNYIT Closed for ALL Business
December 1	(Mon)	Classes Resume
December 6	(Sat)	Classes End
December 8	(Mon)	Final Exams Begin
December 11	(Thurs)	Final Exams End
December 13	(Sat)	December Commencement – 1:00 PM
December 16	(Tues)	Final Grades Due – 2:00 PM

Spring Semester 2004*

January 23	(Fri)	New Student Orientation/Registration
January 26	(Mon)	**ALL CLASSES BEGIN**
		Add/Drop and Late Registration Begin - No Fees Charged
January 30	(Fri)	Last Day to Register without late fee for Spring 2004 Courses
February 2	(Mon)	Add/Drop and Late Registration Fees Begin
		(Students Must Obtain Instructor's Signature to Add a Course)
February 6	(Fri)	Last Day to Add a Course or Drop Without Academic Record
February 9	(Mon)	Withdrawal (W Grade) from Courses Begins
March 12	(Fri)	Last Day of Classes for First Half Semester Courses
March 14-21	(Sun-Sun)	**SPRING BREAK**
March 22	(Mon)	Classes Resume
		First Day of Classes for Second Half Semester Courses
		Incomplete Grades from Fall 2003 Revert to "F" Grades
April 1	(Thurs)	Last Day to File for August 2004 Graduation
April 9	(Fri)	**Last Day to Officially Withdraw (W Grade) From Courses**
April 19-20	(Mon-Tue)	Advance Registration – Summer and Fall 2004
		(Matriculated Students see Academic Department for Advising Schedule)
May 8	(Sat)	Classes End
May 10	(Mon)	Final Exams Begin
May 13	(Thurs)	Final Exams End
May 15	(Sat)	Commencement – 10:00 AM
May 18	(Tues)	Final Grades Due – 2:00 PM
June 2	(Wed)	Last Day to File For December 2004 graduation

A more detailed academic calendar will be published by the Registrar's Office just prior to each semester.

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 them achieve all 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 SUNYIT has adapted its curriculum to help students achieve an education such as this.

Foreign Language Requirement

The SUNY General Education Foreign Language Requirement may be waived for those students who are accepted to SUNYIT and who have scored 85 or higher on a New York State Regents Exam in a language other than English. Students who desire this waiver must have an official copy of their high school transcript showing their State Regents Exam score on file in the Registrar's Office. A petition requesting the waiver must be completed and approved. 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.

The Foreign Language Requirement may also be waived for accepted students who have attained a diploma/degree from a secondary, or higher, educational institution in which the language used to attain the diploma/degree was other than English. Students who desire this waiver must have an official transcript, with an approved translation, on file in the Registrar's Office. A petition requesting the waiver must be completed and approved. 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 306, COM 308, COM 350, COM 400, MGT 340) to ensure a professional level of writing competency. Students who complete the entire three-course freshman general education core sequence are exempt from the upper division writing requirement.

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 FRC 101, "Perspectives on Knowledge," FRC 102, "Nature and Culture," and FRC 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. Because these courses provide students with an intensive pedagogical and writing experience, students who complete all three courses will also be exempt from SUNYIT's additional upper division writing requirement. 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.

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 313 Finite Mathematics for Computer Science
MAT 120 Precalculus
MAT 121 Calculus I
MAT 122 Calculus II
MAT 323 Calculus III
MAT 325 Applied Statistical Analysis
MAT 330 Differential Equations
MAT 335 Mathematical Modeling
MAT 340 Matrix Methods
MAT 345 Introduction to Graph Theory
MAT 365 Computational Linear Algebra
MAT 370 Applied Probability
MAT 380 Abstract Mathematics: An Introduction
MAT 401 Series and Boundary Value Problems
MAT 413 Discrete Mathematics for Computer Science
MAT 420 Complex Variables and Their Applications
MAT 423 Vector and Tensor Calculus
MAT 425 Real Analysis
MAT 440 Linear Algebra
MAT 450 Partial Differential Equations
MAT 460 Numerical Differential Equations

Natural Sciences
AST 222 Astronomy
BIO 302 Genetics
BIO 305 Biology of Aging
BIO 310 Evolution
BIO 337 Nutrition and Health
CHE 110 Essentials of Chemistry
ENV 100 Ecology
ENV 210 Weather and Climate
ENV 115 Introduction to Physical Geology
PHY 300A General Physics
PHY 300B General Physics II
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
ECO 110 The Theory of Price
ECO 330 Economics of Aging
POS 110 American Public Policy
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
POS 352 The Politics of Life and Death
PSY 303 Principles of Psychology
STS 360 Science, Technology, and Politics
SOC 300 Social Problems

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

Western Civilization
GEN 400 Prominent Themes in Western Civilization Since the Renaissance
GEN 401 Contemporary World Views
HIS 306 History of Science and Technology
HIS 317 Topics in Black History
HIS 350 History of Modern Europe
HIS 360 Environmental History
HIS 370 Western Civilization and the World

Other World Civilizations
PHI 330 World Religions
HIS 340: Latin American Civilizations
HIS 370 Western Civilization and the World

Humanities **
ART 350 History of American Art
COM 315 Theater and Communication
COM 316 Media and Communication
ENG 305 Creative Writing
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
HIS 306 History of Science and Technology
HIS 307 History of Science and Technology since Newton
HIS 317 Topics in Black History
HIS 350 History of Modern Europe
PHI 350 Technology and Ethics
*** Courses listed under the Humanities requirement can ONLY be used to fulfill the Humanities requirement and can not be double counted.*
*FRC 101 Perspectives on Knowledge
*FRC 102 Nature and Culture
*FRC 103 Science, Technology, and Human Values
** See description of the Freshman General Education Core.*

The Arts
COM 315 Theater and Communication
ART 335 Drawing
ART 340 Painting-Technique and Style
ART 341 Painting II-Technique and Style
ART 350 History of American Art
ENG 305 Creative Writing
MUS 300 Music Appreciation
MUS 301 SUNY Jazz
MUS 302 Choral performance
THR 300 Theater Production

Foreign Language
SPA 301 Elementary Spanish

Basic Communication
COM 306 Report Writing and Technical Communication
COM 308 Analytical and Research Writing

Accounting

The School of Management is committed to continuous quality improvement for all our programs. As part of our quality enhancement initiatives, our School is seeking accreditation by AACSB, the Association to Advance Collegiate Schools of Business. AACSB is the most prestigious accrediting body for business schools. Our School successfully completed the two-year Precandidacy process in the summer of 2002. Our Accreditation Plan was accepted by the AACSB Board of Directors in September of 2002. SUNYIT is pleased to announce that the School of Management is in Candidacy with AACSB. The Candidacy period is typically five years.

The following statement was taken from the AACSB home page, and provides an overview of this accrediting body (http://www.aacsb.edu/accreditation/). Visit the AACSB website to learn more.

Accreditation is a process of voluntary, non-governmental review of educational institutions and programs. Specialized agencies award accreditation for professional programs and academic units in particular fields of study. As a specialized agency, AACSB International grants accreditation for undergraduate and graduate business administration and accounting programs. Institutional accreditation reviews entire colleges and universities.

AACSB International accreditation represents the highest standard of achievement for business schools worldwide. Institutions that earn accreditation confirm their commitment to quality and continuous improvement through a rigorous and comprehensive peer review. AACSB accreditation is the hallmark of excellence in management education.

Through accreditation, business schools provide stakeholders with the assurance that they:

- *Guide educational delivery by a carefully constructed mission*
- *Select and support students to produce outstanding graduates*
- *Deliver degree programs with qualified faculty*
- *Structure learning through relevant curricula*
- *Contribute to knowledge through research and scholarship*

More than 400 AACSB International member institutions have affirmed their commitment to educational quality through the achievement of accreditation. Of the accredited institutions, more than 150 have achieved additional accreditation for their accounting programs.

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, and Taxes—ACC 310 or ACC 311, 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.

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
English or Communications (3 cr. minimum)	1 course
Basic Communication (upper division, 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	1 course
Total Accounting	**24**
Unrestricted Electives (remainder of credits)	
Total	**Minimum 124**

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

In addition to the CPA preparation program, the B.S. or B.B.A. degree programs with a major in business and public management 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/public management 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/public management 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.

Applied Mathematics Computer Laboratories

Students may take advantage of two computer laboratories for classroom instruction and for independent work. Our Applied Mathematics Unix Laboratory consists of networked PC's operating under the Linux version of the Unix operating system. We also oversee a Windows environment laboratory. These laboratories run the MATLAB computational software and Mathematica. Many of our courses are project-based and depend heavily on computational techniques for solving mathematical problems.

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 (24-32 credits)	
MAT 151 Calculus I (Differential Calculus)	4
MAT 152 Calculus II (Integral Calculus)	4
MAT 323 Calculus III (Multivariate Calculus)	4
MAT 330 Differential Equations	4
MAT 340 Matrix Methods	4
MAT 370 Applied Probability	4
MAT 401 Series and Boundary Value Problems	4
MAT 420 Complex Variables and Their Applications	4

IV. Restricted Elective courses (4 courses from the following)	
MAT 335 Mathematical Modeling	4
MAT 345 Introduction to Graph Theory	4
MAT 365 Computational Linear Algebra	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 425 Real Analysis	4
MAT 440 Linear Algebra	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/Public Management

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- *Deliver degree programs with qualified faculty*
- *Structure learning through relevant curricula*
- *Contribute to knowledge through research and scholarship*

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The Bachelor degree programs in business are supported by a broad general education program. They prepare students 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 Management require the completion of a minimum of 124 semester hours, which include at least 30 semester hours of upper division college work.

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

a. a minimum of 124 semester hours with a maximum of 64 semester hours 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.

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

SUNYIT also offers a Master's in Business Administration (MBA) degree program. Students may concentrate in either Accounting and Finance, Human Resource Management, E-Commerce and Marketing, Health Services Management and General Management. A Master of Science (M.S.) degree program in Accountancy, and a Master of Science (M.S.) degree program in Health Services Administration are also offered. Consult the graduate catalog and/or the Admissions Office for details.

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*	
Mathematics (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
Written Communications (3 cr. minimum)	1 course
Basic Communication (upper division, 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 62 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 Elec/Specialization (remainder of credits)	
Unrestricted Electives (remainder of credits)	
Total	Minimum 124

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

The B.S. with a Major in Business

In contrast to the B.B.A., the B.S. program is for those students with an A.S. transfer program in business from a two-year college, or a broad background in the arts and sciences, 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. A student with an A.A.S. degree may also pursue the B.S. program, but this may entail more coursework than required for a B.B.A. degree.

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 or an Associate in Science (A.S.) degree.

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*	
Mathematics (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
Written Communications (3 cr. minimum)	1 course
Basic Communication (upper division, 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 Elec/Specialization (remainder of credits)	
Unrestricted Electives (remainder of credits)	
Total	Minimum 124

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

Academic Regulations Business/Public Management

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 Management encourages direct interaction with the business world through a hands-on internship experience. BUS 477, Projects in Business, is a course 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 School of Management also has a Small Business Development Center. This program provides some students field assignments and opportunities for internships.

Program Features

The Management Simulation

A computer simulation (sometimes called a "management game") of actual management decisions has been successfully integrated into the course in management policy (BUS 485). In the game, 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 Management has its own student laboratory which is equipped with the most advanced microcomputers. Each of these computers is connected through the school's local area network to a central file server and to the SUNYIT mainframe computer system and to various local and international internet systems. Each faculty member's office also has a computer which is connected to the local area network. Accordingly, students are afforded telecommunications access which is literally worldwide.

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 Management 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 3.50 grade point average.
3. Request permission to enter the Accelerated Program. (Permission may be obtained by writing to the Dean, School of Management.)
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

At no time in recent history has the civil field been more poised for growth than now. With the aging of the infrastructure (highways, city water supplies, waste water treatment plants, and bridges) and the upturn in construction caused by past years of delay in industrial expansion, the market for civil engineering technology graduates is strong.

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, hydraulics/fluid flow, and highway planning and design. Other courses include network scheduling, construction administration, finite element analysis, advanced steel design, advanced concrete structures, and drainage design. The B.S. degree requires additional arts and sciences electives designed to enhance the employability of students. The program is designed to provide students with the necessary skills to pursue a life-long career in civil engineering technology.

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 bridges, 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, project administration, construction methods and structural analysis.

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 Sciences (60 credits) Minimum Credits

A. Mathematics and Science – 24 credits

Calculus I	3
Calculus II	3
Upper Division Math Elective	3
Physics 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	2
American History	2
Western Civilization	2
Other World Civilizations	2
Humanities	2
Arts	2
Foreign Language	2
Oral Communication	3
Composition	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)

Courses Required to be Taken at the Community College Level

Problem Solving Techniques	3
Surveying	3
Soils and Foundations	3

Courses Normally Taken at the Community College Level - SUNYIT Courses are sublisted

Statics—MTC 318	2
Strength of Materials—MTC 322	2
Engineering Graphics—CTC 312, CTC 313 or ITC 362	3
Steel or Concrete Design—CTC 422, CTC 424	3
Transportation Engineering—CTC 340, CTC 440	3

Courses Normally Taken as Upper Level Work at SUNYIT

CTC 430—Dynamics	3
CTC 461—Hydraulics	3
CTC 475—Engineering Economics	3
CTC 320—Structural Analysis	4

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 370 – Network 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

In addition to the course requirements above, a student must also attain a minimum GPA of 2.00 for all courses in Civil Engineering Technology taken at SUNYIT.

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. Dynamics and fluid mechanics require extensive use of bench type lab equipment. 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, Microsoft Project and Primavera Project Planner.

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:

Amerada Hess, Avis Car Rental, Cabletron Systems, Canon/MCS, CompUSA, E-systems, Eastman Kodak, Fujitsu-ICL, ISIS Corporation, MAPINFO, Northern Telecom, Inc., Performance Engineering Corporation, Photographic Sciences, Inc., Prisma Systems Corp., Rochester Telephone, SUNY Health Science Center at Syracuse, TDH Medical Systems, US Navy, Welch Allyn, West Point-Pepperell Foundation, Inc.

Placement

A degree in computer engineering technology has helped build rewarding careers for many of SUNYIT's graduates.

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
- Written Communications
- Upper-Division Writing
- **Humanities***
- **Social Sciences***
- **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 & Natural Science with a lab (Biology/Chemistry/Physics/Environmental Science)

Mathematics, including the following:
- Differential Calculus (MAT321)
- Integral Calculus (MAT322)
- Restricted Math Elective (MAT313, MAT330, or Mat340)

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 (CSC308)
- Data Structures (CSC340)
- 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, CSC, or ETC

62 Credits

Unrestricted Electives **Balance of 128 Credits**

Total Credits 128

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 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 also requires that each student complete a core of courses offered by the School of Management and is designed to follow the curricular guidelines of the Data Processing Management Association. Many graduates who pursue advanced study enter graduate programs in management or business administration. However, with appropriate course selection, a student in computer/information systems may also be prepared to continue on 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 a well-prepared and well-motivated two-year college graduate to complete both a bachelor's degree and a master's degree in computer and information science in three years of full-time study beyond the associate degree. Similarly, entering freshmen may complete the BS and the MS in 4 to 5 years. For all students, admission into the graduate program is ensured at the beginning of the junior year of study or shortly thereafter.

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 must 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 to the undergraduate "Advanced" computer science electives, and one graduate course may be applied as an undergraduate unrestricted elective. Graduate bridge courses 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 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 constitutes satisfactory performance in the undergraduate program will automatically be placed in that program.

Admission

Applications are invited from well prepared students completing a lower division program and from students currently enrolled in the undergraduate program. Admission to the joint BS/MS program requires a minimum of 48 and a maximum of 94 semester hours of credit with an overall GPA of at least 3.0, and 3.20 in the major. In addition, the following courses or their equivalents must be completed with grades of B or better prior to matriculation:

CSC 108 - Computing Fundamentals
CSC 240 - Data Structures & Algorithms
Mathematics Elective (Calculus, Linear Algebra, or Statistics)

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 CSC 307, the UNIX Programming Environment.

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

Computer Science Courses (42 credits)

Introductory Courses (12 credits)
CS 108 - Computing Fundamentals
CS 109 - Object-Oriented Programming
CS 240 - Data Structures and Algorithms

Intermediate Courses (16 credits)
CS 220 - Computer Organization
CS 330 - Operating Systems and Networking
CS 350 - Information and Knowledge Management
CS 370 - Software Engineering

Advanced Electives (12 credits)
Three courses to be selected from electives listed below or from graduate courses.
CS 345 - Logic Design
CS 410 - Data Security
CS 415 - Structure and Interpretation of Programs
CS 420 - Numerical Computing
CS 421 - Computational Linear Algebra
CS 430 - Operating Systems
CS 431 - Principles of Programming Languages
CS 441 - Computer Architecture
CS 445 - Network Programming
CS 450 - Computer Graphics
CS 451 - Distributed Systems
CS 454 - System Simulation
CS 477 - Algorithms
CS 480 - Compiler Design
CS 484 - Logic Programming
CS 487 - Object-Oriented Systems
CS 490 - Special Topics in Computer Science
CS 495 - Artificial Intelligence
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.)*

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 407 - UNIX System Administration
CS 409 - Software Project Management
CS 446 - Local Area Network Architecture
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

Arts & Sciences requirements (up to 52 credits)

Mathematics (2 courses)

MAT 115. Finite Mathematics for Computer Science
or
MAT 413 Discrete Mathematics for Computer Science

One course selected from: Statistics, Calculus, Linear Algebra, Matrix Methods, and Probability Models.

Science (2 courses)

Two courses selected from Biology, Physics, Chemistry, Ecology, Environment or Weather and Climate. One of the courses must have a lab.

Social Sciences and Humanities (7 courses)

One course in each of the following areas:
Social/Behavioral Sciences
American History
Western Civilizations
Other Civilizations
The Arts
Humanities (PHI 350 - Technology and Ethics recommended)
Foreign Languages
Communications (2 courses)
ENG 101 – English Composition
and one upper-division writing course (COM 350 or COM 400 recommended)

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 and 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 (12 credits)
CS 108 - Computing Fundamentals
CS 109 - Object Oriented Programming
CS 240 - Data Structures and Algorithms

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)
MGT 320: Business Principles for Information Systems
MGT 421: Business Projects for Information Systems

Upper-Division Electives (12 credits)
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 8 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 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
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: (up to 56 credits)
When a specific course is not specified students may choose any approved course that satisfies the requirement. A list of approved courses may be found in the catalog, online, and in course schedule booklets.

1. Mathematics
   MAT 115: Finite Mathematics for Computer Science and One course selected from: Statistics, Calculus, Linear Algebra, Matrix Methods, Probability Models
2. Natural Sciences (2 courses, 1 must include a lab)
3. Social Sciences (1 course)
4. American History (1 course)
5. Western Civilization (1 course)
6. Other World Civilizations (1 course)
7. Humanities
   PHI 350: Technology and Ethics (recommended)
8. The Arts (1 course)
9. Foreign Languages (1 course)
10. Basic Communication
    ENG 101: English Composition
11. Upper Division Writing Requirement
    COM 350: Designing Online Information

Open Electives
(10 credits or more - 124 credits minus the credits accrued by satisfying all other requirements)

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.

Academic Minors

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. in CIS 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. CIS majors may choose to minor in Accounting; Anthropology; Economics; Finance; Gerontology; Health Services Management; Mathematics; Physics; Psychology; Quality Engineering and Systems Technology; Science, Technology, and Society; and Sociology. CIS majors may not minor in Computer Science. The detailed requirements for each minor are contained in this catalog.

Computer Science Laboratories

DogNET and DogNET Multimedia Lounge (Kunsela Hall C-012, C-107, and C-122) – provides access to UNIX workstations (that are named after dogs, of course). Twenty-two workstations (currently Pentium III/500 with 17" monitors) are in C-012 running the FreeBSD operating system, and providing access to over 800 programs for Internet access, multimedia applications, language compilers, etc. Many of these systems are equipped with sound cards for applications like mbone (Internet audio/video broadcast/conference system). The lab is supported by a file server for central data storage which is available both on and off campus. In addition to providing disk storage (without quota) to computer science and information systems majors, additional servers support the computer science departmental WWW site (www.cs.sunyit.edu), databases (mySQL, PostgreSQL, and Oracle), 16 lines for dialup connections, and many other services. The public DogNET lab is one of five labs managed by the Computer Science department with the assistance of student administrators. The DogNET Multimedia Lounge (C-122) contains a mix of Pentium-based computers and SUN workstations running on various operating systems. The Multimedia Lounge accommodates small groups of students working collaboratively on projects. Another SUN DogNET lab - currently SUN Ultra5 workstations (C-107) - is used for computer science courses in operating systems, networking, web development, and system administration. The ground floor DogNET lab (C-012) is open extended night and weekend hours.

Advanced Environments Lab (Kunsela C-014 and C-228) – twenty-seven workstations (currently Pentium IV/2GHz) interconnected with 100TX Ethernet technology. All systems run the latest version of Windows Workstation and Server. This lab supports instruction and experimentation in object-oriented programming, client-server and distributed computing (networking, system administration and interoperability with other platforms), collaborative computing (web development, videoconferencing, multimedia). Programming environments supported include SUN Java, Visual Studio .NET (C#, J#, C++, Visual Basic), FORTRAN90, Prolog, LISP, ML-ObjectCaml. Application software includes Microsoft Office2002, FrontPage, Publisher, Project, Visio, StarOffice, and GIMP. C014 and C228 are also managed by the Computer Science department and assisted by student workers. These labs are open for extended night and weekend hours.

Computer and Information Science Minor

See academic minor section.

Computer Information Systems Minor

See academic minor section.

Electrical Engineering

EE is integral to virtually all modern technologies and industries: aviation, medicine, automotive transportation, telecommunications, energy, commerce, space, agriculture. In every facet of human endeavor, electrical engineers have the opportunity to make a difference. As a result, EE is one of the broadest engineering disciplines. 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. A bachelor's degree in this discipline opens the door to a variety of career opportunities in engineering, mathematics, science, analysis, research, design and development. Opportunities for electrical engineering graduates are also increasingly available in medicine, law, sales, and business.

The Program

SUNYIT and Binghamton University (BU) are offering a jointly-registered transfer program that allows SUNYIT students to earn a Bachelor of Science degree in Electrical Engineering (BSEE) from BU. Students who have completed two years of appropriate study at a community college or other institution are eligible to transfer into the program; all course offerings will be available on the SUNYIT campus with select classes available on-line. Students will be able to complete this program at SUNYIT without travel to the BU campus.

The BSEE degree from BU is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). This program draws upon faculty from both SUNYIT and BU, each of whom is dedicated to the instructional mission of the department. The BSEE is offered by the Department of Engineering in SUNYIT's School of Information Systems and Engineering Technology (ISET). The School of ISET is also home to graduate and undergraduate programs in related disciplines: telecommunications, computer and information sciences, and engineering technology.

The Field

Throughout such diverse application areas as geographical information systems, secure computing and network communications, biomedicine, and aviation and automotive electronics, electrical and electronics engineers are responsible for a wide range of technologies. Such broad responsibility links engineering to other academic disciplines, especially mathematics, science, and computer science. As one might expect, EE relies heavily on the use of computers to create designs, analyze problems, and develop new techniques and computer applications to solve emerging engineering problems.

Admission Guidelines

Students with a minimum GPA of 2.8+ in Engineering Science or Math/Science programs may apply for Binghamton University's Watson School Bachelor of Science degree in Electrical Engineering (BSEE) at SUNYIT.

• Students interested in admission to the SUNYIT–BU BSEE degree program starting in fall 2003 should contact the SUNYIT Admissions Office; telephone (315) 792-7500 or 1 (866) 2 SUNYIT; or e-mail admissions@sunyit.edu.

Students will be considered for merit scholarships under the academic guidelines set up by SUNYIT and BU.

Curriculum

SUNYIT's electrical engineering curriculum builds upon the base provided by the two-year core in BU's Thomas J. Watson School of Engineering and Applied Science. The two-year core, required for all engineering students in the school, provides the student with a broad foundation in engineering fundamentals, natural sciences, mathematics, and laboratory experience.

The successful student will gain an awareness and understanding of the many interrelated EE subject areas: signals and systems; controls and automation; communications, information, and signal processing; computer systems and architectures; and electronics and circuits. The BSEE curriculum also encourages students to apply their knowledge to emerging problems in a technology-driven world, through a sequence of senior-level design courses. The final year includes a capstone experience: a proposed, planned, budgeted and executed design project.

• A sample four-year plan of study is available on-line at www.sunyit.edu/academics/programs/ee.

The goal of the BSEE curriculum is to provide the highest-quality education in the fundamentals of electrical engineering. After successfully completing the BSEE degree, graduates can choose to directly enter the workforce or continue their studies in pursuit of a graduate degree in electrical engineering or a related field.

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
- Digital Systems
- Microprocessors

The B.S. and B.Tech. 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 ***Minimum Credits***

Liberal Arts
Oral Communications
Written Communications
Upper-Division Writing
Humanities*
Social Sciences*
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 & Natural Science with a lab (Biology/Chemistry/Physics/Environmental Science)
Mathematics, including the following:
Differential Calculus (MAT 321)
Integral Calculus (MAT 322)
Differential Equations (MAT 330)
Math/Science Elective for balance of 24 credits

24 Credits

Technical Courses – 54 Credits

Required Core

QC and Workplace Issues (ETC 299)	2 Credits
Control Systems/Communications (ETC 331/ETC 316)	4 Credits
Digital Systems/Microprocessors (ET 311/ETC 342)	4 Credits
Senior Level courses (ETC 4xx courses)	8 Credits
Capstone Course	4 credits
Technical Elective (ETC courses)	34 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 301, 302, 304, 305, 310, 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 493— Digital Filters

Control Systems

ETC 331— Control Systems
ETC 356— Programmable Controllers
ETC 433— Automatic Control Systems
ETC 434— Servomechanism Design
ETC 435— Digital Control and Robotics
ETC488— Computer Control of Instrumentation

Digital Systems

ETC 311— Advanced Digital Systems Design
ETC 412— Digital Systems Design III
ETC 465— Microprocessor-Based Robotics Design

Microprocessors

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 twelve pentiums. These computers are used for CAD, general purpose report writing using Microsoft Office and for support of EET and CET lab courses. Application software supporting a range of courses includes Electrical CAD software PCAD2001 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 VHDL software supporting digital and VLSI design; COMNET simulation package for network simulation. 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 two 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 analog computers, A/D and D/A units. Siemens and Gould Modicon PLCís are also housed in this laboratory.

Communications: Labs are equipped with Microwave trainer systems, Global Positioning System, Doppler radar trainer systems, PC based analog and digital communication systems, wireless LAN, Novell LAN, a Windows 2000 NT server, an FDDI LAN, HP protocol analyzers, spectrum analyzers, and fiber optic links for transmitting speech, data, and video. The computers in the communications lab run ComNet software for communications networks. An experimental lab running multi protocol network with TCP/IP is used for ETC416 and is equipped with a Cisco Router. SUNYIT's networked Unix lab has MAGIC software for VLSI, SPICE, and IRSIM simulators.

The fiber optics lab is equipped with optical time domain reflectometers (OTDR), fusion splicers, optoscope, power meters, optical spectral analyzers, waveform analyzers, Newport projects in fiber optics, 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 i8088 i8086, i80286, and the 32-bit i80386 CPUs.

Microprocessor: Microprocessor laboratories supporting microprocessor courses include: EPROM and PLOD programmers; 68HC11 microcontroller trainers; MicroChip PIC trainers and programmers, faculty developed 68000 trainer boards; 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, Albany International, Bartell Machinery Systems Corp., Berkshire Community College, Boeing, Cabletron Systems, Coffman Engineers, Computer Related Technologies, DOW Jones & Co., Inc., Eastman Kodak Co., EMI Communications Corp., Encore Paper Co., Inc., Evans & Sutherland Computer Corp., Exide Electronics, General Electric, General Railway Signal, IBM, Integrated Sensors Inc., Kaman Sciences, Laser Precision, Leeds & Northrup, Lockheed Martin Corp., Lucent Technology, MCI, Mohawk Valley Community College, Motorola, NY Power Authority, NYNEX, Niagara Mohawk Power Corp., NORTEL Northern Telecom, Inc., PAR Microsystems, PAR Technology, Pall Trinity Micro, Partlow Corp., Performance Systems International Inc., REDCOM Labs, Remington Arms Corp., Rock Valley College, S/G Industries, Inc., SUNY Health Science Center, Smiths Industries Aerospace, Spargo Wire Co., Synectics Corp., Tektronix, Thomson Consumer Electronics, Time Warner, Toshiba, UNYSIS Corp., Valeo Engine Cooling Inc., Welch Allyn, Xerox Corp.

Finance

The School of Management is committed to continuous quality improvement for all our programs. As part of our quality enhancement initiatives, our School is seeking accreditation by AACSB, the Association to Advance Collegiate Schools of Business. AACSB is the most prestigious accrediting body for business schools. Our School successfully completed the two-year Precandidacy process in the summer of 2002. Our Accreditation Plan was accepted by the AACSB Board of Directors in September of 2002. SUNYIT is pleased to announce that the School of Management is in Candidacy with AACSB. The Candidacy period is typically five years.

The following statement was taken from the AACSB home page, and provides an overview of this accrediting body (http://www.aacsb.edu/accreditation/). Visit the AACSB website to learn more.

> *Accreditation is a process of voluntary, non-governmental review of educational institutions and programs. Specialized agencies award accreditation for professional programs and academic units in particular fields of study. As a specialized agency, AACSB International grants accreditation for undergraduate and graduate business administration and accounting programs. Institutional accreditation reviews entire colleges and universities.*
>
> *AACSB International accreditation represents the highest standard of achievement for business schools worldwide. Institutions that earn accreditation confirm their commitment to quality and continuous improvement through a rigorous and comprehensive peer review. AACSB accreditation is the hallmark of excellence in management education.*
>
> *Through accreditation, business schools provide stakeholders with the assurance that they:*
>
> - *Guide educational delivery by a carefully constructed mission*
> - *Select and support students to produce outstanding graduates*
> - *Deliver degree programs with qualified faculty*
> - *Structure learning through relevant curricula*
> - *Contribute to knowledge through research and scholarship*
>
> *More than 400 AACSB International member institutions have affirmed their commitment to educational quality through the achievement of accreditation. Of the accredited institutions, more than 150 have achieved additional accreditation for their accounting programs.*

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.*	
Mathematics (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
Written Communications (3 cr. minimum)	1 course
Basic Communication (upper division, 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.

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

Finance Minor

See academic minor section.

General Studies

In the General Studies major students plan their own program 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 four courses. "Understanding Human Nature" analyzes what it means to be human from a variety of perspectives. "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, using sources from history, art, literature, psychology, management, and so on. The last core course is an independent project 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 knowledge 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 minor in that field. 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.

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:	52
General Electives:	32-42

Satisfactory completion of a minimum of 60 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)	*Credits*
Mathematics: MAT 311 or equivalent	3-4
Natural Sciences	
Lab Science	4
Natural Science	3-4
Social Sciences	3-4
American History	3-4
Western Civilization	3-4
Other World Civilizations	3-4
Humanities	3-4
The Arts	3-4
Foreign Language	3-4
English Composition: ENG 101 or equivalent	3-4
Upper Division Writing: COM 308 or approved alternative	4

II. Program Requirements

(13-17 courses, 52 credits)
The student must complete 52 credit hours.
Required General Studies Courses:
As part of the 52 credit hours, all general studies students must complete four general studies courses:
GEN 304: Understanding Human Nature
GEN 400: Prominent Themes in Western Civilization since the Renaissance
GEN 401: Contemporary Worldviews
GEN 499: General Studies Project

Option A: (36 credit hours in two of the following areas to be decided upon with your advisor; one area must satisfy requirements for a minor.)
*ANT/SOC
*ENG/HUM/ART/MUSIC/PHI/STS/HIS
*Communication
*Mathematics
*Natural Sciences
*Psychology
*Social Sciences (ECO/POS/STS/GOG/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 the 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

(32-42 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 of Allied Health Educational Programs in collaboration with the Council on Accreditation of the American Health Information Management Association.

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.

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 Management (3)
HSM 411	Management for the Health Professions (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 Schedule –

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	
MGT 307 – 4	ACC 301 – 4	
HSM 309 – 4	Arts and Sciences – 4	
Total 15	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	MGT 307 – 4
Other degree requirements – 8-9	HSM 401 – 3
	Other degree requirements – 5-6
Total 15-16	Total 15-16

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	MGT 307 – 4	
Total 16	Total 16	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 (30 credit hours)

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

Department Requirements (64 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 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
Computer-based Patient 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
Introductory Accounting	3
Financial Management for Health Care Organizations – HSM 435	3
Epidemiology - HSM 401	3
Organizational Behavior – MGT 307	4
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 (64 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 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
Computer-based Patient 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
Introductory Accounting	3
Financial Management for Health Care Organizations – HSM 435	3
Epidemiology - HSM 401	3
Organizational Behavior – MGT 307	4
Human Resources Management – MGT 318	4

Unrestricted Electives (20 credit hours)

Total Credits 124

**Open to transfer students only.

Health Services Management

The School of Management and the Health Services Management Program are committed to continuous quality improvement for all our programs. As part of our quality enhancement initiatives, our School is seeking accreditation by AACSB, the Association to Advance Collegiate Schools of Business. AACSB is the most prestigious accrediting body for business schools. Our School successfully completed the two-year Precandidacy process in the summer of 2002. Our Accreditation Plan was accepted by the AACSB Board of Directors in September of 2002. SUNYIT is pleased to announce that the School of Management is in Candidacy with AACSB. The Candidacy period is typically five years.

The following statement was taken from the AACSB home page, and provides an overview of this accrediting body (http://www.aacsb.edu/accreditation/). Visit the AACSB website to learn more.

Accreditation is a process of voluntary, non-governmental review of educational institutions and programs. Specialized agencies award accreditation for professional programs and academic units in particular fields of study. As a specialized agency, AACSB International grants accreditation for undergraduate and graduate business administration and accounting programs. Institutional accreditation reviews entire colleges and universities.

AACSB International accreditation represents the highest standard of achievement for business schools worldwide. Institutions that earn accreditation confirm their commitment to quality and continuous improvement through a rigorous and comprehensive peer review. AACSB accreditation is the hallmark of excellence in management education.

Through accreditation, business schools provide stakeholders with the assurance that they:

- *Guide educational delivery by a carefully constructed mission*
- *Select and support students to produce outstanding graduates*
- *Deliver degree programs with qualified faculty*
- *Structure learning through relevant curricula*
- *Contribute to knowledge through research and scholarship*

More than 400 AACSB International member institutions have affirmed their commitment to educational quality through the achievement of accreditation. Of the accredited institutions, more than 150 have achieved additional accreditation for their accounting programs.

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 accepted for candidacy in 1999 and was certified for full membership in 2000. 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.

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.

In order 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 required business courses and health services management elective courses, and no less than a 2.30 cumulative average in health services management core and elective courses.

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 their 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 their chosen area of professional preparation.

In general, each student includes in their program the following 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	ECO 405
Communications (upper division)	4	COM 306 or 308
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
HSM Electives	12	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	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.

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, 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, operations research, 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	3
Written Communications	3
Upper-Division Writing	3
Humanities*	3
Social Sciences*	3
American History*	3
Western Civilization*	3
Non-Western Civilization*	3
Fine Arts*	3
Foreign Language*	3

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

Arts & Sciences Electives	10
Total Credits	34

B. Mathematics and Science – 26 credits	
Physics with Lab	4
Basic Science with Lab	4
Mathematics (including Calculus I/II)	12
Math & Science Elective	4
Computer Programming Language	2
Total Credits	26

II. Technical Courses – 54 credits

Grade Point Average (GPA) of 2.0 is required in all IET courses taken at SUNYIT.

A total of 54 credits is required, of which a minimum of 32 credits must be taken in the department. The following courses are required:

ITC 311 – Manufacturing Operations
ITC 327 – Production and Operation Manufacturing
ITC 358 – Plant Layout and Material Handling
ITC 362 – Computer-Aided Design for IET
ITC 373 – Statistical Quality Control
ITC 462 – Computer-Aided Manufacturing
ITC 475 – Engineering Economics
ITC 483 – Quality Improvement
Application Projects I & II
Technical Electives — Balance of 54

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.

Freshman class should follow the two – year course requirement shown below

Course Number	*Course Title*	*Credits*
First Semester		
ENG 101	Freshman Composition	4
ITC/MCT 162	Computer-Aided Design	4
ITC/MTC 101	Intro to Engineering Technology	2
MAT 120	Pre-Calculus	4
PHY 101	General Physics I	4
		18
Second Semester		
ITC/MTC 111	Manufacturing Processes	4
ITC/MTC 198	Industrial Instrumentation	2
MAT 121	Calculus I	4
PHY 102	General Physics II	4
FRC 101/102/103		4
		18
Third Semester		
ITC/MTC 318	Statics	2
ITC/MTC 336	Material Science	2
MAT 122	Calculus II	4
ITC 327	Production Operations Mgmt	4
FRC 101/102/103		4
		16
Fourth Semester		
STA 325	Statistics	4
COM 306	Technical Writing	4
ITC/MTC 373	Statistical Quality Control	4
FRC 101/102/103		4
		16

Areas of Concentration**

Manufacturing Engineering Technology	*Credits*
ITC 411 – Manufacturing Cost Estimation	4
ITC 485 – Concurrent Engineering and Design for Manufacture	4
ITC 467 – Industrial Safety & Environmental Impact	2
ITC 366 – Introduction to Robotics	2
ITC 488 – Introduction to Ergonomics	4

Quality Engineering Technology	
ITC 390 – ISO9000 and Total Quality Assurance	2
ITC 391 – ISO14000 – Auditing & Implementation	4
ITC 484 – Advanced Topics in Statistical Process Control	2
ITC 485 – Concurrent Engineering and Design for Manufacture	4
ITC 486 – Reliability for Design and Production	4

Industrial Engineering Technology	
ITC 411 – Manufacturing Cost Estimation	4
ITC 485 – Concurrent Engineering and Design for Manufacture	4
ITC 390 – ISO9000 and Total Quality Assurance	2
ITC 484 – Advanced Topics in Statistical Process Control	2

CAD/CAM/Robotics	
ITC 366 – Introduction to Robotics	2
ITC 430 – Engineering Dynamics	4
ITC 485 – Concurrent Engineering and Design for Manufacture	4
ITC 486 – Reliability for Design and Production	4
ITC 405 – Solid Modeling/Rapid Prototyping	2

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

Industrial/Manufacturing Laboratories

The industrial laboratories are well equipped for courses in Robotics, Quality Control, Quality Improvement, Computer-Aided Design, Computer-Aided Manufacturing and Simulation. Equipment includes such items as industrial robots and CNC machinery. CAM equipment includes vision, manufacturing simulation equipment, and computer-assisted NC software. Computers and industrial software are used in as many classes as possible.

Quality Engineering and System Technology Minor

See academic minor section.

Mechanical Engineering Technology

The Mechanical Engineering Technology Department at SUNYIT has been in existence for more than two decades. Since its establishment in the late seventies, hundreds of students have successfully completed the requirements for the Bachelor of Science Degree (B.S.).

Graduates of this program have pursued careers in mainstream industries, education, and research. Alumni responses to surveys have shown resounding success and a steady progress in career advancements.

The degree requirements for the B.S. have been carefully structured to provide students with the necessary depth and breadth of subject matter. In addition, students may opt to follow a specific area of concentration in:

- Applied Mechanics
- Thermal Power
- Computer-Aided Design

In recent years, teams of Mechanical Engineering Technology students have competed in the American Society of Mechanical Engineers (ASME) Regional and International Design Competition. Two students won first place in the Design Competition at the 1998 ASME Regional Student Conference at Rochester Institute of Technology in Rochester, NY. They came in fourth at the 1998 ASME International Mechanical Engineering Congress and Exposition, Student Design Contest at Anaheim, CA. In 2000, a team of students won first place in the Design Competition at the ASME Regional Student Conference at Cornell University in Ithaca, NY. In April of 2001, yet another team entered the 2001 ASME Regional Student Design Contest and won third prize.

Graduates of this program can pursue careers not only in Mechanical Engineering Technology, but also in related fields such as: Industrial, Manufacturing and Civil Engineering, and Computer Science. Typical starting jobs for graduates of this program include: Product Development and Design, Computer-Aided Design, Computer-Aided Manufacturing, Computer-Integrated Manufacturing and numerous other titles. (Refer to the SUNYIT Career Services Office.)

The B.S. Degree with a major in Mechanical 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 Mechanical 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 – 24 credits	
	Oral Communications	3
	Written Communications	3
	Upper-Division Writing	3
	Humanities*	3
	Social Sciences*	3
	American History*	3
	Western Civilization*	3
	Non-Western Civilization*	3
	Fine Arts*	3
	Foreign Language*	3
	***Complete coursework in at least five out of the above seven categories**	
	Total credits	24
	B. Mathematics and Science – 24 credits	
	Physics (with laboratory)***	4
	Chemistry (with laboratory)	4
	Physics elective***	4
	Mathematics (including Calculus I/II and Differential Equations)	12
	Total credits	24
	C. Computer Programming Language	3
	Liberal Arts, Math and Science, C.S Electives	9
	Total credits	12

II. Technical Courses – 54 credits

Grade Point Average (GPA) of 2.0 is required in all MET courses taken at SUNYIT.

A. Core Courses – 16 credits

Students must take at least 4 credits from each of the following groups of courses at SUNY Institute of Technology.

Group I	
MTC 308 – Mechanical components	4
MTC 362 – Experimental Stress Analysis	4
MTC 465 – Advanced Machine Design	4

Group II	
MTC 350 – Solar Energy Technology	2
MTC 352 – Thermodynamics**	2
MTC 450 – Solar Energy Concepts	4
MTC 451 – Engineering Heat Transfer I	2
MTC 452 – Engineering Heat Transfer II	2
MTC 461 – Fluid Mechanics**	4

Group III

MTC 430 – Engineering Dynamics**	4
MTC 464 – Vibration Analysis	4

Group IV

MTC 318 – Statics**	2
MTC 322 – Strength of Materials**	2
MTC 336 – Material Science Applications	2
MTC 388 – Fundamentals of solid Modeling with PRO-E	2
MTC 398 – Mechanical Measurements	2
MTC 455 – Laser Technology	2

B. Applications Project
To be taken during senior year

MTC 320 – Applications Project I	2

C. Mechanical Electives – 32 credits
Students must take at least 6 credits at SUNYIT.

D. Electrical Electives – 4 credits

III. Open Electives – Balance of 128 credits
Students are encouraged to take courses in Industrial Engineering Technology (ITC), Electrical Engineering Technology (ETC), Computer Science (CSC), Mathematics (MAT), and Physics (PHY).

Total credits 128

** *Required courses*
*** *Students are encouraged to take Calculus-Based*

Freshman class should follow the two – year course requirement shown below

Course Number	*Course Title*	*Credits*
First Semester		
ENG 101	Freshman Composition	4
ITC/MCT 162	Computer-Aided Design	4
ITC/MTC 101	Intro to Engineering Technology	2
MAT 120	Pre-Calculus	4
PHY 101	General Physics I	4
		18
Second Semester		
ITC/MTC 111	Manufacturing Processes	4
ITC/MTC 198	Industrial Instrumentation	2
MAT 121	Calculus I	4
PHY 102	General Physics II	4
FRC 101/102/103		4
		18
Third Semester		
CHE 101	Intro to Chemistry	4
ITC/MTC 318	Statics	2
ITC/MTC 336	Material Science	2
MAT 122	Calculus II	4
FRC 101/102/103		4
		16
Fourth Semester		
MAT 330	Differential Equations	4
MTC 322	Strength of Materials	2
MTC 352	Thermodynamics	2
ITC/MTC 373	Statistical Quality Control	4
FRC 101/102/103		4
		16

Areas of concentration+

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

Applied Mechanics – 20 credits

MTC 318 – Statics	2
MTC 322 – Strength of Materials	2
MTC 336 – Material Science Applications	2
MTC 388 – Fundamentals of solid modeling with PRO-E	2
MTC 398 – Mechanical Measurements	2
MTC 430 – Engineering Dynamics	4
MTC 464 – Vibration Analysis	4
MTC 471 – Space Technology	2

Thermal Power – 20 credits

MTC 350 – Solar Energy Technology	2
MTC 451 – Engineering Heat Transfer I	2
MTC 452 – Engineering Heat Transfer II	2
MTC 352 – Thermodynamics	2
MTC 450 – Solar Energy Concepts	4
MTC 461 – Fluid Mechanics	4
MTC 462 – Turbo Machinery	4
MTC 471 – Space Technology	2

Computer-Aided Design – 20 credits

MTC 308 – Mechanical Components	4
MTC 322 – Strength of Materials	2
MTC 362 – Experimental Stress Analysis	4
MTC 460 – Computer-Aided Engineering Technology	4
MTC 465 – Advanced Machine Design	4
MTC 467 – Computer-Aided Design	4
MTC 476 – Finite Element Application	4
MTC 493 – Computer Integrated Manufacturing	4

+ Students are not required to complete a concentration

Mechanical Laboratories:

The Department of Mechanical Engineering Technology has a large number of laboratories fully equipped with modern apparatus. These laboratories encompass all aspects of mechanical engineering technology. Some of the equipment used in these laboratories are as follows: Vishay Stress Analysis Systems, Instron multi-purpose testing machine, LDS Vibration testing unit, bending moment and the deflection of beams apparatus, friction apparatus, and drum brake and clutches.

Equipment in the thermal power laboratories include heat exchangers, conduction, convection, and radiation heat transfer units, heat pipes, heat pumps, solar energy systems, subsonic wind tunnels, reaction and impulse turbines. Some of the advanced courses are taught using software packages such as:

- AutoCAD for mechanical design and layout
- ALGOR for finite element analysis
- LabVIEW for mechanical measurements
- MATLAB/SIMULINK for simulation
- PRO-E for solid modeling and analysis
- Solidworks for rapid prototyping

This curriculum provides students experience with modern software and hardware that is used in industry.

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 posed by these enhanced access alternatives. The curricular emphases in baccalaureate nursing programs on health promotion and maintenance behaviors, coordinating cost-effective quality care, and community-focused health care are particularly appropriate to achieving the future's agenda. It is estimated, however, that the next decade's demand for baccalaureate-prepared nurses will greatly 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 exclusively 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 a full-time or part-time basis. In addition to the SUNYIT program, courses have been offered at outreach sites, for example, Albany, NY. Course offerings at the outreach locations have been scheduled within a select time frame and have been delivered by senior nursing faculty, with select courses offered through distance learning technology, i.e. using online internet instruction through the SUNY Learning Network (SLN) or through simulcast instruction at outreach locations. Complete details regarding scheduling of nursing courses at outreach locations 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 leadership, community health nursing, and introduction to nursing research. It provides the student with the opportunity to practice in a variety of health care settings, emphasizing contemporary nursing practice.

As with all programs at SUNYIT, the nursing program includes a strong base in liberal arts. 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 throughout life.

Accreditation

The undergraduate and graduate nursing programs are registered by the New York State Education Department and are accredited by the National League for Nursing Accreditation Commission (NLNAC, 61 Broadway, New York City, NY, 212-363-5555) and have been granted preliminary approval 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 majors in nursing administration (33 credit hours), adult nurse practitioner (39 credit hours), or family nurse practitioner (45 credit hours). 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 three accelerated courses. These courses combine elements of both the undergraduate and graduate core course thus allowing the student to proceed through the program at a more accelerated pace. Students have the option of selecting either of three graduate specialty areas of concentration: nursing administration, adult nurse practitioner, or family nurse practitioner. At the end of either 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

Nursing 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, health care agencies, and community based 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, a maximum of 30 semester hours in nursing and a maximum of 34 semester hours in arts and sciences can be transferred.
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. From the lower division level, a maximum of 30 semester hours in nursing and a maximum of 34 semester hours in arts and sciences can be transferred to the applicable degree.
3. 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.
4. Upper division level courses to be considered for transfer as upper division credit (30 semester hours maximum) must be passed with a minimum grade of "C".
5. 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.
6. Applicants who need to validate lower division arts and sciences credits may do so through RCEs or CLEP tests. CLEP tests may be scheduled at SUNYIT by contacting the Counseling Office. Information concerning RCE exams can be obtained by contacting the School of Nursing and Health Systems.
7. 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 through the SUNY Learning Network on the World Wide Web 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 course (NUR 444, NUR 474) and NUR 324 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 School of Nursing and Health Systems.
   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 School of Nursing and Health Systems office 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, Uniforms and Equipment

All students must provide their own transportation for laboratories, field trips and community health assignments required for laboratories and clinical assignments. Professional attire and roles will be specified for each clinical 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	3
NUR 324	Contemporary Nursing Practice **Prerequisites:** Matriculated status, NUR 313, NUR 314, BIO 350, current New York Registered Professional Nurse license; **Pre/Corequisites:** Cultural Anthropology, Developmental Psychology	2
NUR 325	Epidemiology in Nursing	2
NUR 344	Ethical Issues in Nursing	2
NUR 390	Nursing Research **Pre/Corequisites:** NUR 313, Statistics	3
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 324, NUR 344	4
NUR 455	Community Health Organization **Prerequisites:** NUR 313, NUR 325, NUR 390	4
NUR 474	Community Health Nursing **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/Corequisites:** Sociology elective.	4
NUR 480	Special Topics in Nursing	2
NUR 490	Culminating Seminar **Pre/Co Requisites:** NUR 474; Student must be within 4 credits of graduation at completion of culminating seminar.	2

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 (required as a prerequisite for NUR 324)	#	3-4
3	Social Science	Introductory Psychology *	#	3-4
		Developmental Psychology (required as a pre/corequisite for NUR 324)	#	3-4
		Introductory Sociology *	#	3-4
		Cultural Anthropology (required as a pre/corequisite for NUR 324)	#	3-4
		Sociology elective (required as a pre/corequisite for NUR 474)	#	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 (must pass within first 32 semester hours after matriculation at the college)		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	Semester 2	Credits
NUR 313	4	NUR 390	3
NUR 314*	3	Statistics	4
NUR 325	2	Developmental Psych. *(Spring only)* or	
BIO 350	4	Gen. Ed.	4
Cultural Anthropology	4	COM 306	4
	17		15
Semester 3	**Credits**	**Semester 4**	**Credits**
NUR 444*	4	NUR 490	2
NUR 455	4	NUR 474*	4
NUR 344	2	NUR 480	2
Gen. Ed.	4	Sociology	4
NUR 324	2	Gen. Ed.	4**
	16		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*	3	NUR 390	3	NUR 324	2
BIO 350	4	Cult.Anthro.	4	Statistics	4	NUR 325	2
						DevPsych/Gen Ed.	4
	8 cr.		7 cr.		7 cr.		8 cr.

ONE (1) Summer – 4 cr. Gen. Ed. if fewer than 34 A&S credits transferred

Fall (5)		***Spring (6)***		***Fall (7)***		***Spring (8)***	
Com 306	4	NUR 444*	4	NUR 474*	4	Gen. Ed.	4
NUR 344	2	NUR 455	4	Sociology	4	NUR 490	2
NUR 480	2						
	8 cr.		8 cr.		8 cr.		6 cr.

**These courses have a laboratory or clinical component requirement*

Degree Requirements:

Accelerated BS/MS for Professional Registered Nurses with a Major in Nursing Administration

1. Continued matriculation in the Accelerated BS/MS with a Major in Nursing Administration 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 BS/MS program.
5. Students who are academically dismissed or choose not to complete the 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) and/or Nursing Research (2cr), a directed study will be available for those students to complete course requirements of the baccalaureate program of study. In addition, the exemptions from Nursing Leadership (4cr) and Special Topics in Nursing (2cr) and Contemporary Nursing Practice (2cr for Nurse Practitioner students only) 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 Accelerated BS/MS in nursing students. 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 made available for accelerated BS/MS students.

7. Up to 10 credits in graduate nursing courses can simultaneously apply to the BS and MS degrees. These courses are: NUR500, NUR504A, NUR560, and NUR510.
8. Students must complete all undergraduate courses and a total of 120 credits to be awarded a BS with a major in nursing.
9. Residence requirement is 30 hours; no more than 6 graduate credits can be transferred.
10. Graduate status begins at the 2nd fall term in the student's program of study.
11. Upon completion of the program, both BS and MS degrees will be conferred.

Program of Study:

Accelerated BS/MS for Professional Registered Nurses with a Major in Nursing Administration

	Credits
Advanced Physiology	4
Upper Division Writing	4
Developmental Psychology	3
Sociology	4
Humanities	6
Statistics	4
Cultural Anthropology	4
NUR 320A Nursing Theory Professional Nursing Practice	2
NUR 330A Nursing Research Professional Nursing Practice	2
NUR 314 Comprehensive Health Assessment	*4
NUR 324 Contemporary Nursing Practice	2
NUR 325 Epidemiology in Nursing	2
NUR 344 Ethical Issues in Nursing	2
NUR 455 Community Health Organization	4
NUR 474 Community Health Nursing	4
NUR 500 Theoretical Foundations for Nursing Practice	3
NUR 504A Advancing Leadership in Health Care	*3
NUR 522 Financial Management for Nurse Managers	2
NUR 524 Program Planning Development	2
NUR 526 Legal Regulatory Issues in Nursing	2
NUR 560 Nursing Research Methods	3
NUR 610 Nursing Administration Seminar	3
NUR 611 Nursing Administration Practicum	3
NUR 624 Grant Proposal Development	3
CSC 507 Data Analysis	3
HRM 518 Human Resource Management	3
MGT 607 Organizational and Management Theory	3
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**Under revision*

Sample Curriculum Plan:

Accelerated BS/MS for Professional Registered Nurses 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 after two years of full-time study (15-17 credit hours per academic semester) and with completion of 3 summers (3-8 credit hours per summer), and 2 winter terms (2 credit hours per winter term).

Undergraduate status

Summer	1st Fall	Winter Term	1st Spring
Soc Elect. Or	NUR 320A and NUR 330A	NUR 325 or NUR 344	NUR 344 or 325 in 1st half of semester
Cul Anthro and/or Dev Psych	NUR 314 BIO 350 COM 306		NUR 455 NUR 324 Anthro or Soc Stats

Graduate status

Summer	2nd Fall	Winter Term	2nd Spring
NUR 500	NUR 474 A&S	NUR 526	NUR 560 NUR 524
NUR 522	MGT 607 CSC 507 NUR 504A		NUR 610 HRM 518 Humanities

Summer
NUR 611
NUR 624

Note: Graduate status begins at the 2nd fall term in the program of study.

Degree Requirements:

Accelerated BS/MS for Professional Registered Nurses with a Major in Adult Nurse Practitioner

1. Continued matriculation in the Accelerated BS/MS program 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. For all major-specific graduate nursing courses, a student in the BS/MS program must maintain a B average in all components of each course.
5. 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 and counseled by the program coordinator. 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 BS/MS program.
6. Students who are academically dismissed or choose not to complete the 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 and/or Nurs-

ing Research, a directed study will be available for those students to complete course requirements of the baccalaureate program of study. In addition, the exemptions from Contemporary Nursing Practice (2cr), Nursing Leadership (4cr), and Special Topics in Nursing (2cr) will be invalid, and the student will be required to complete these courses for the baccalaureate degree requirement.
7. Each semester a required two-hour colloquium will be held for all Accelerated BS/MS in nursing students. 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 made available for BS/MS students.
8. Up to 10 credits in graduate nursing courses can simultaneously apply to the BS and MS degrees. These courses are: NUR500, NUR504A, NUR560, and NUR566.
9. Students must complete all undergraduate courses and a total of 120 credits to be awarded a BS with a major in nursing.
10. Residence requirement is 30 hours; no more than 9 graduate credits can be transferred.
11. A comprehensive exam will be implemented in the culminating course for practitioners to evaluate successful completion of the program of study.
12. Graduate status begins at the 2nd fall term in the student's program of study.
13. Upon completion of the program, both BS and MS degrees will be conferred.

Program of Study:

Accelerated BS/MS for Professional Registered Nurses with a Major in Adult Nurse Practitioner

	Credits
Advanced Physiology	4
Upper Division Writing	4
Developmental Psychology	3
Sociology	4
Humanities	6
Statistics	4
Cultural Anthropology	4
NUR 320A Nursing Theory Professional Nursing Practice	2
NUR 330A Nursing Research Professional Nursing Practice	2
NUR 314 Comprehensive Health Assessment	*4
NUR 325 Epidemiology in Nursing	2
NUR 344 Ethical Issues in Nursing	2
NUR 455 Community Health Organization	4
NUR 474 Community Health Nursing	4
NUR 500 Theoretical Foundations Nursing Practice	3
NUR 504A Advancing Leadership in Health Care	*3
NUR 555 Clinical Pharmacology	3
NUR 566 Advanced Practice Nursing Lecture	3
NUR 567 Advanced Practice Nursing Clinical	2
BIO 570 Pathophysiology	3
NUR 560 Nursing Research Methods	3
NUR 574 Adult Health Promotion & Disease Prevention	2
NUR 582 Beginning Adult Clinical	2
NUR 653 Adult Primary Care I	2
NUR 658 Women's Health Care	2
NUR 672 Intermediate Adult Clinical	3
NUR 669 Adult Primary Care II	3
NUR 682 Advanced Adult Clinical	3
NUR 692 Culminating Seminar	2
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**Under revision*

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 after three years of full-time study (11-16 credit hours per academic semester) and with completion of 2 summers (3-6 credit hours per summer), and 1 winter term (2 credit hours).

Undergraduate status

Summer	1st Fall	Winter Term	1st Spring
Soc Elect. or	NUR 320A and Nur 330A	NUR 325 or NUR 344	NUR 344 or NUR 325 in 1st half of semester
Cult. Anthro and/or Dev Psych	NUR 314 BIO 350 COM 306		NUR 455 Anthro or Soc Stats

Graduate status

Summer	2nd Fall	Winter Term	2nd Spring
NUR 500	NUR 474 BIO 570 NUR 566 NUR 567		NUR 560 NUR 555 NUR 574 NUR 582 Humanities
Summer	**3rd Fall**	**Winter Term**	**3rd Spring**
	NUR 653 NUR 658 NUR 672 NUR 504A		NUR 669 NUR 682 NUR 692 Humanities

Note: Graduate status begins at the 2nd fall term in the program of study.

Degree Requirements:

Accelerated BS/MS for Professional Registered Nurses with a Major in Family Nurse Practitioner

1. Continued matriculation in the BS/MS program 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. For all major-specific graduate nursing courses, a student in the BS/MS program must maintain a B (3.0) average in all components of each course.
5. Students with an average GPA of less than 3.0 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 and counseled by the program coordinator. 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 BS/MS program.
6. Students who are academically dismissed or choose not to complete the 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 and/or Nursing Research, a directed study will be available for those students to complete course requirements of the baccalaureate program of study. In addition, the exemptions from Contemporary Nursing Practice (2cr), Nursing Leadership (4cr), and Special Topics in Nursing (2cr) will be invalid, and the student will be required to complete these courses for the baccalaureate degree requirement.
7. Each semester a required two-hour colloquium will be held for all Accelerated BS/MS in nursing students. 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 made available for BS/MS students.
8. Up to 10 credits in graduate nursing courses can simultaneously apply to the BS and MS degrees. These courses are: NUR500, NUR504A, NUR560, and NUR566.
9. Students must complete all undergraduate courses and a total of 120 credits to be awarded a BS with a major in nursing.
10. Residence requirement is 30 hours; no more than 9 graduate credits can be transferred.
11. A comprehensive exam will be implemented in the culminating course for practitioners to evaluate successful completion of the program of study.
12. Graduate status begins at the 2nd fall term in the student's program of study.
13. Upon completion of the program, both BS and MS degrees will be conferred.

Program of Study:

Accelerated BS/MS for Professional Registered Nurses with a Major in Family Nurse Practitioner

	Credits
Advanced Physiology	4
Upper Division Writing	4
Developmental Psychology	3
Sociology	4
Humanities	6
Statistics	4
Cultural Anthropology	4
NUR 320A Nursing Theory Professional Nursing Practice	2
NUR 330A Nursing Research Professional Nursing Practice	2
NUR 314 Comprehensive Health Assessment	*4
NUR 325 Epidemiology in Nursing	2
NUR 344 Ethical Issues in Nursing	2
NUR 455 Community Health Organization	4
NUR 474 Community Health Nursing	4
NUR 500 Theoretical Foundations Nursing Practice	3
NUR 504A Advancing Leadership in Health Care	*3
NUR 531 Family Theory	2
NUR 555 Clinical Pharmacology	3
NUR 566 Advanced Practice Nursing Lecture	3
NUR 567 Advanced Practice Nursing Clinical	2
BIO 570 Pathophysiology	3
NUR 560 Nursing Research Methods	3
NUR 572 Family Health Promotion & Disease Prevention	3
NUR 580 Beginning Family Clinical	2
NUR 652 Family Primary Care I	3
NUR 658 Women's Health Care	2
NUR 668 Family Primary Care II	4
NUR 670 Intermediate Family Clinical	3
NUR 680 Advanced Family Clinical	4
NUR 692 Culminating Seminar	2
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**Under revision*

Sample Curriculum Plan:

Accelerated BS/MS for Professional Registered Nurses 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 after three years of full-time study (12-16 credit hours per academic semester) and with completion of 2 summers (3-6 credit hours per summer), and 1 winter term (2 credit hours).

Undergraduate status

Summer	1st Fall	Winter Term	1st Spring
Soc Elect. or	NUR 320A & NUR 330 A	NUR 325 or NUR 344	NUR 344 or NUR 325 in 1st half of semester
Cult. Anthro and/or Dev Psych	NUR 314 BIO 350 COM 306		NUR 455 Anthro or Soc Stats

Graduate status

Summer	2nd Fall	Winter Term	2nd Spring
NUR 500	NUR 474		NUR 560
	BIO 570		NUR 555
	NUR 566		NUR 572
	NUR 567		NUR 580
	NUR 531		Humanities

Summer	3rd Fall	Winter Term	3rd Spring
	NUR 652		Humanities
	NUR 658		NUR 668
	NUR 670		NUR 680
	NUR 504A		NUR 692

Note: Graduate status begins at the 2nd fall term in the program of study.

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.

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 Admissions Office at the time of their application so that specific information regarding preparation for law school at SUNYIT can be shared with them.

Professional & Technical Communication

Professional and technical communication 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 professional and technical communication. 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, Internet publishing, applied writing and speaking, editing, graphic arts, and document design.

Graduates from professional and technical communication have gone on to find employment in web design, technical writing and editing, communication management, computer documentation, public relations, graphics, journalism, and document design. The field was ranked a "Hot Job Track" in 1999, 2000, and 2001 by *U.S. News and World Report*. Students may also go on to graduate study in information design, rhetoric and professional and technical communication.

Writing Classrooms and Laboratories

To support advanced writing and design courses, SUNYIT has a 23-station electronic classroom with state-of-the-art equipment for teaching computer graphics, digital photography, and desktop publishing. The classroom has Internet access, QuarkXPress, Pagemaker, Dreamweaver, Fireworks, Flash, Photoshop, and Robohelp software, as well as other drawing programs, on-line documentation and presentation software. The lab has both black and white and color printers, a scanner, an overhead projection device, and a central file server.

The program uses an Apple Macintosh dual processor G-4 lab for use with computer graphics, digital photography, computer visualization, animation, Web design, and desktop publishing. The laboratory has individual stations or can be configured for group work. The lab has 20 G4 dual processor machines with CD burners and a limited number of DVD drives and zip drives. It has high-end color, as well as black and white output devices, and 2 scanners.

SUNYIT also uses a 24-workstation microcomputer writing classroom to support instruction in the writing program. The classroom is equipped with current microcomputers, a high-quality laser printer and Internet access.

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 406, students are required to initiate and complete a documentation project for a 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 professional and technical communication 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 and professional concentrations give 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. In addition, prior to being accepted into the program, students must present a portfolio of work for evaluation by faculty. Visit the Pro Tech Com web site (protechcom.doc) for more information about portfolio evaluation.

To earn a Bachelor of Science (B.S.) degree in professional and technical communication, 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.	Core 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.

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, GOG, POS, PSY, SOC, SSC, STS)
HISTORY
American History (2-4)
Western Civilization (2-4)
Other World Civilization (2-4)

II. CORE REQUIREMENTS

1. Technical Communication (28)

COM 302	Presentational Speaking
COM 306	Report Writing/Technical Communication
COM 320	Design & Desktop Publishing
COM 380	Communication Theory
COM 350	Online or Print Documentation
-or-	
COM 400	
COM 406	Advanced Technical Communication
COM 499	Portfolio & Professional Review

2. Career Concentration (16)

16 credits of upper division coursework with a COM prefix, approved by your advisor. Courses NOT permitted are COM 300, COM 305, COM 308.

III. GENERAL ELECTIVES (36-49)

Professional & Technical Communication Minor

See academic minor section.

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. Graduates in psychology find employment in the areas of mental health, human services, social work, mental retardation, counseling, personnel administration, and business. They also go on to graduate study in psychology 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. Every semester, a distinguished psychologist of national repute is invited 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 who have delivered the Psi Chi Lecture:

Dr. Florence L. Denmark – (Former President of American Psychological Assoc.)
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)

The Psi Chi Lecture is open to the public.

Psychology Club

There is also an 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 43-56 credits
   - B. Program Requirements 38-40 credits
   - C. General Electives 44-56 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 degree in psychology.

Group I—General Education Requirements (43-56 credits)

	Credits
Mathematics (MAT 311 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 (COM 306 or COM 308)	4
Statistics (Intro Statistics)	3-4

Group II—Program Requirements (40 credits)

A. Foundations of Psychology 4

B. Intermediate Courses 8
Chosen from the following (or equivalent):
PSY 304 Sports Psychology
PSY 315 Lifespan Developmental Psychology
PSY 322 Abnormal Psychology
PSY 325 Psychology of Gender
PSY 331 Psychology of Personality
PSY 342 Social Psychology
PSY 352 Industrial and Organizational Psychology
PSY 360 Perception
PSY 362 Learning and Motivation
PSY 364 Psychology of Aging
PSY 373 Dying Death & Bereavement
PSY 377 Health Psychology
PSY 390 Engineering Psychology & Human Performance

C. Advanced Courses 12
Chosen from the following:
PSY 415 Psychology of Aggression & Non-Violence
PSY 425 Cognitive Psychology
PSY 444 Applied Social Psychology
PSY 445 Group Dynamics and Interpersonal Communication
PSY 460 Neuropsychology
PSY 470 Psychological Testing
PSY 477 Principles of Psychological Counseling

D. Core Courses 16
Psychology majors must complete the following core courses.
Courses are ordinarily taken in successive semesters in the order shown:
PSY 305 History and Systems of Psychology
PSY 310 Research Methods in Psychology
PSY 385 Evaluation Research
PSY 493 Senior Seminar in Psychology

Group III—General Electives (40-51 credits)

College-level courses in any discipline which carry SUNYIT or transferable credit. See (2) and (3) under Degree Requirements for the psychology program.

Gerontology Minor

See academic minor section.

Psychology Minor

See academic minor section.

Sociology

SUNYIT offers a curriculum in sociology which leads to a Bachelor of Arts (B.A.) degree in sociology for majors and serves the general education needs of other students and services the needs of other programs. Courses explore the general social forces and cultural forms which shape human events as well as the application of social and cultural perspectives in two specialization areas primarily: criminology and social service. Course offerings reflect these emphases.

After introductory work (Tier I courses, often completed before enrolling at the Institute of Technology), survey courses in various areas (Tier II) lead to more advanced courses (Tier III). In addition to work in one or more specialization areas, students can usually supplement their work with Tier II courses in areas where we do not have a concentration, or with courses in other arts and sciences or professional disciplines.

Primary candidates for the major are: 1) students holding Associate of Applied Science (A.A.S.) degrees in a field like human services, industrial relations or criminal justice, who wish to broaden their theoretical perspective and increase career mobility; 2) students holding Associate of Arts (A.A.) degrees who wish to have a background in applied sociology or anthropology before entering graduate school or seeking employment, especially in the criminal justice or social service area; 3) students currently working who desire a broader-based education than that available in a professional program, and 4) students seeking dual majors combining professional study with a degree in social science.

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. No more than 30 semester hours of professional courses outside the arts and sciences.

4. Achievement of at least a 2.00 cumulative grade point average in all coursework taken at SUNYIT.

5. Achievement of at least a 2.00 cumulative grade point average in sociology or anthropology coursework toward the major.

Group I—General Education Requirements—

(34-44 credits)	Credits
Mathematics (MAT 311 or equivalent)	3-4
Natural Sciences	
Lab Science	3-4
Other Science	3-4
Social Sciences (ECO/GOG/POS/PSY)	3-4
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 (COM 306 or COM 308)	4

Group II—Specific Sociology Degree Requirements

1. Completion of at least nine courses in sociology or anthropology, at least seven of which must be completed at SUNYIT.
2. Completion of SOC 310, History of Sociological Theory; STA 300, Statistical Methods; SOC 332 Methods of Inquiry, SOC 493, Senior Seminar in Methods of Applied Sociology, and at least three additional 400-level courses in Sociology or Anthropology.
3. Completion of a Tier I course is a prerequisite to enrollment in a Tier II course, and completion of a Tier II course is a prerequisite for enrollment in Tier III courses.

Tier I

SOC 100— Introduction to Sociology
SOC 300— Social Problems
ANT 301— General Anthropology
Or any introductory sociology or anthropology course

Tier II

SOC 300— Social Problems
SOC 314— Sociology of Deviance (for Criminology)
SOC 332— Methods of Inquiry
SOC 351— Sociology of Crime (for Criminology)
SOC 310— History of Sociological Theory (for Senior Seminar)
SOC 322— Sociology of the Family
SOC 350— Chemical Dependencies and Human Behavior

SOC 360— Sociology of Work
SOC 381— Social Gerontology
SOC 391— Topics in Sociology

Tier III

A. *Criminology courses:*
SOC 450— Sociology of Corrections
SOC 452— White Collar Crime
SOC 455— Sociology of Law and the Courts

B. *Social Services courses:*
SOC 411— Sociology of Community
SOC 424— Social Welfare Policy
SOC 446— The Individual and Society

C. *Other courses:*
SOC 465— Sociology of Occupations and Professions
SOC 490— Topics in Sociology
SOC 466— Worker Social Psychology
SOC 490— Topics in Sociology
SOC 491— Independent Study
SOC 493— Senior Seminar in Methods of Applied Sociology
SOC 495— Practicum in Sociology

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

Sample Programs

The following sample programs are offered as a guide to prospective students. They assume the completion of 60 credits of lower-division work, not more than 30 of which have been in professional as opposed to arts and sciences courses. They also assume that the Tier I requirement (sociology or anthropology) has already been met.

Sample Program One: Social Service/Policy

Fall, first year: social problems, history of sociological theory, sociology of deviance, COM 308
Spring, first year: chemical dependency, social welfare policy, statistics, principles of psychological counseling
Fall, second year: sociology of the family, individual and society, methods of inquiry, state and local government
Spring, second year: senior seminar, sociology of community, science requirement, humanities elective

Sample Program Two: Criminology

Fall, first year: social problems, history of sociological theory, sociology of crime, COM 308
Spring, first year: sociology of deviance, white collar crime, statistics, state and local government
Fall, second year: chemical dependency, sociology of corrections, methods of inquiry, principles of psychological counseling
Spring, second year: senior seminar, sociology of law and the courts, science requirement, humanities elective

Sociology Minor

See academic minor section.

Telecommunications

It has often been said that the only constant in business is change. Perhaps nowhere is this more evident than in the explosive, high technology field of telecommunications. Industry deregulation, new technology and the phenomenal growth of the global Internet have all combined to create a more open environment that has given rise to increased competition and an unprecedented demand for innovative and creative people who are prepared for a challenging, yet rewarding career. Success in this environment requires competent problem solving skills in combination with a strong technical foundation. Accompanying these changes are a multitude of career opportunities for aspiring telecommunications professionals. College graduates who have been formally educated in the discipline of telecommunications are currently in high demand and the long-term career opportunities are very encouraging. Particularly sought after are those individuals who will be responsible for designing, operating, and maintaining the worldwide information networks of the future. Potential career choices include telecommunications management, network operations, design and administration, consulting, research and development, vendor sales, marketing, and technical support, just to cite a few examples.

What is Telecommunications?

Telecommunications includes a broad range of technologies including telephone and cable, date communications, wireless communications systems, satellite and Internet technologies. Global markets, electronic commerce, and the Internet have served as a catalyst for the worldwide demand for telecommunications products and services, which are currently valued at more than $1 trillion per year. There is a constant demand for well-trained practitioners of telecommunications; it is a field rich in career opportunities.

Academic "telecommunications" programs have been developing in the United States since the early 1970's. At the present time there are less than 50 telecommunications degree programs awarding either graduate or undergraduate degrees offered at accredited colleges and universities in the United States. The development of academic telecommunications programs follows a more general trend in the development of information technology programs, which began with Computer Science in the 1960's.

Telecommunications programs in higher education are generally classified as interdisciplinary, integrated, or research oriented according to the type of students they graduate. Interdisciplinary programs including both the bachelor and master degree programs offered at SUNYIT are generally designed to be broad in terms of coverage, emphasizing the technical, economic, legal-regulatory and managerial aspects of the field. Integrated telecommunications degree programs produce specialists by awarding a conventional degree for study that is based in one of the traditional disciplines such as electrical

engineering or a business with a concentration in telecommunications. Research programs may or may not produce graduates at all. The particular emphasis of research programs and whether they award a degree depends upon the institution.

Interdisciplinary programs tend to span the typical course curriculum, offering courses in all of the core subject areas. Integrated programs tend to offer fewer core courses overall and tend to offer more survey-oriented courses than any other type.

The Program

Students majoring in the Bachelor of Science (B.S) degree in telecommunication develop a working knowledge of the history and methodologies, 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 new technology as a primary catalyst for an information-driven society. Areas covered in coursework include products and services, vendor selection, voice/data integration, network design and administration, network management, domestic and international telecommunications policy. The telecommunications department maintains close ties with the industry. Its faculty is recruited directly from the field, bringing working knowledge tested in real life situations. In addition, through the Telecommunications Institute at SUNYIT, the program uses the combined expertise of a professional advisory board comprised of senior managers and industry executives. As with all programs at SUNYIT, the telecommunications program includes a strong emphasis in liberal arts and science. This provides students with the necessary tools and knowledge to relate their experiences to their work and to life in general. It helps create a more diverse and complete lifelong education that continues to grow after graduation.

Placement

Since its inception in 1985, over 500 graduates of SUNYIT's telecommunications program have obtained rewarding careers in their field of study. In the latest survey taken, including our first graduating class through the most recent, over 95% of the graduates were currently employed full-time in a telecommunications related capacity. Some of the companies that have employed SUNYIT telecommunications graduates include: Nortel Networks, Cabletron, Cigna, Cisco Systems, Compaq, Concert, Bell Atlantic, AT&T, WorldCom, Sprint, GE, GTE, EDS, Citizen Telecom, Quest, Venison, 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.

Additionally, many of those who have earned their Bachelor's Degree in telecommunications have on for graduate study in fields such as: telecommunications, management information systems, business management, telecommunications law and finance.

B.S. Degree Requirement

To earn a Bachelor of Science (B.S.) 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. Liberal Arts Requirements *Minimum credits*

A. English/Humanities

Oral/Speech Communications	3
Upper Division Technical Writing (COM 306)	4
Social Science Elective	3
American History	3
Western Civilization	2
Other World Civilizations	2
Humanities Elective	3
Foreign Language Elective	3
Fine Arts Elective	3
English Composition	3

B. Mathematics and Science

Physics I (PHY 101)	4
Physics II (PHY 201)	4
Elem of Calc./Calc 1 (MAT 112/151)	4
Statistics*	3
College Math Elective	3

C. Computer Science

UNIX Programming Environment (CSC 307)	2
Computer Systems & C Program (CSC 317)	3
Computer Science Electives	8

II. Professional Coursework

A. Telecommunications Core Courses - 11 credits

Intro to Telecommunications (TEL 300)	3
Basic Voice Communications (TEL 301)	4
Basic Data Communications (TEL 305)	4

Telecommunications Technical Electives

B. Must complete 19 credits from the following: 19
TEL 307, 310, 315, 316, 340, 380, 381, 383,400, 383, 400, 416, 425, 430, 493, 494

C. Telecommunications Management/Policy
Must complete 8 credits from the following: 8
TEL 320, 420, 450, 453

D. Business 382/Management - 8 credits

Financial Management Principles (FIN 302)	4
Accounting I (ACC 301)	4

III. Open Electives - Balance of 124 credits 18

Total Credits ***124***

****If CALC requirement already fulfilled, must take MAT/STA 325.***

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 is designed to accomplish three objectives. Students can apply and hone their skills and refine their awareness of the career opportunities available, and lastly, they can build on various experiences in telecommunications that give them an added edge in the job market after graduation. To date the internship program has been overwhelmingly successful with the majority of those eligible participating. 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.

Industry Partnership

Through innovative partnerships with worldwide industry leaders, the telecommunications program at SUNYIT prepares students for the demands and enormous opportunities of the information economy while creating a qualified talent pool for building and maintaining the information networks of the future. For example, the department of telecommunications has established a Cisco Networking Academy, which is a cooperative venture between higher educational institutions and Cisco, the world's leading network company. In a lab setting that closely corresponds to the real world, students get their hands on the building blocks of today's global information networks, learning by doing as they design and bring to life

local and wide-area networks. The telecommunications department is also an educational partner of the Global Wireless Education Consortium. GWEC is a collaboration of wireless industry companies and academic institutions. GWEC is focused on expanding wireless technology curriculum in two-year and four-year academic institutions. Additionally, SUNYIT's telecommunications department is a member of the Wall Street Telecommunications Association (WSTA).

SUNYIT is also an educational partner of the Communications Managers Association (CMA). This prestigious organization encourages excellence in telecommunications management; providing a forum for the evaluation of emerging technologies and their business applications; stimulating peer-to-peer relationships and the sharing of information; providing ongoing insight into regulatory and policy issues; and fostering constructive relationships between telecommunications end users and a select group of higher education institutions that offer telecommunications degree programs. These organizations also sponsor seminars and workshops, conferences, trade shows, and field trips.

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 Institute

The major purpose of the Telecommunications Institute, located at SUNYIT, is to develop and extend research and training in the industry. The Telecommunications Institute focuses on providing both training and information to professionals in the field of telecommunications. Seminars deal with a wide variety of topics in telecommunications. Seminars deal with a wide variety of topics in telecommunications, including equipment, voice/data networks, system management, and cabling/wiring technology. These sessions may incorporate teleconferencing and other distance learning techniques, as well as equipment demonstrations. The Institute also draws on SUNYIT's extensive telecommunications laboratories and its integrated voice and data network to enhance its educational pursuits outside the classroom.

Telecommunications Advisory Board

The advisory board, comprising between 30 to 35 industry executives and decision makers including senior managers, industry service providers, consultants, academicians, and government policy makers, meets on a regular basis to shape the program's continued growth and development. These members give their time and effort to keep SUNYIT's program on the leading edge of this fast-paced industry. Current members of the advisory board come from a number of Fortune 100 organizations including: AT&T, Sprint, Cigna, Travelers, UPS, Nortel Networks, Worldcom, International Communications Association, GTE, Fleet Services, IBM, Corning Glass, Lucent Technology, and Global Crossing.

Telecommunications Laboratories

In addition to the Cisco Networking Academy lab, the telecommunications department maintains three other labs for student and faculty "hands-on" learning and experimentation. These include a digital telephone switching and transmission lab, information assurance, a network simulation lab, and optical networking. An abbreviated list of the telecom laboratory resources follows:

- Nortel Networks ATM Centillion 50 switching platform
- Nortel Networks DMS-10 Central Office Switching System
- Nortel Networks Meridian 1 PBX System-fully optional
- Nortel Networks Norstar Digital Key System
- Northern Telecom D4E Smart Channel Banks
- Northern Telecom DMS-1 Urban Digital Loop Carrier System
- Lucent Technologies Definity PBX
- Octel Voice Messaging System with Automated Attendant
- Newbridge MainStreet Channel Bank
- Redcom Labs MDX Central Office and Teletraffic Generator
- TTI Digital Access and Cross-Connect System
- ADC Fiber Patch Panel and Optical Loop Terminator
- NEC Fiber Optic Channel Multiplexors and Channel Banks
- TTC Fireberd 4000, 6000, and 224 Digital Transmission Sets
- Dialogic Corp. D4/x Voice Processing Platforms
- Cisco Network Academy File Server
- OPNET Simulation Software
- CACI COMNET III Simulation Software
- Network Analysis Center Modular Interactive Network Designer
- Network General Sniffer LAN Analyzer
- Network General WAN Analyzer
- Optical Spectrum Analyzer
- Optical Switches
- Protocol Analyzers
- Optical Power Meters
- Digital Oscilloscope
- Tunable Lasers
- Optical Connectors/Patch Cords
- Optical Network Simulation Software

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; computer information systems; economics; finance; gerontology; health services management; mathematics; physics; professional and technical communication; 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 Management 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 and Information Science Minor

The minor in computer and information science would be valuable for students in all technical disciplines and also for students in social sciences. The importance of computer information systems is increasing in all organizations and businesses. Changing hardware and software continue to permeate research laboratories and offices throughout the world. In an increasingly competitive job market, a general understanding of computer science can play a significant role in satisfying conditions for employment.

Total credit hours required for minor: 20

A. Required Core Courses (12 Credits)
CSC 308 - Programming Foundations
MAT 313 - Finite Mathematics for Computer Science
CSC 340 - Data Structures

B. Advanced Courses (at least 8 Credits)
CSC 345 - Logic Design
CSC 350 - Database Management Systems
CSC 355 - Software Engineering
CSC 357 - Laboratory for Software Engineering
CSC 377 - Introduction to Theory of Computing
CSC 415 - Structure and Interpretation of Programs
CSC 420 - Numerical Computing
CSC 421 - Computational Linear Algebra
CSC 430 - Operating Systems
CSC 431 - Principles of Programming Languages
CSC 441 - Computer Systems Architecture
CSC 445 - UNIX Network Programming
CSC 446 - Local Area Network Architecture
CSC 450 - Computer Graphics
CSC 454 - System Simulation
CSC 477 - Algorithms
CSC 480 - Compiler Design
CSC 485 - Logic Programming
CSC 487 - Object-Oriented Systems
CSC 488 - Data Engineering
CSC 495 - Introduction to Artificial Intelligence

Specific selections of courses must be worked out with the computer science faculty. No more than eight credits may be applied to both the CS and CIS minors. 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.

Computer Information Systems Minor

The minor in computer information systems would be valuable for students in all technical disciplines and also for students in management, social sciences and mathematics. The importance of computer information systems is increasing in all organizations and businesses. Changing 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

A. Required Courses (12 Credits)
   - CSC 308 - Programming Foundations
   - MAT 313 - Finite Mathematics for Computer Science
   - CSC 340 - Data Structures

B. Advanced Courses (at least 8 Credits)
   - CSC 350 - Database Management Systems
   - CSC 351 - Web Development and Internet Programming
   - CSC 353 - Fourth Generation Systems & Prototyping
   - CSC 354 - Office Automation
   - CSC 355 - Software Engineering
   - CSC 357 - Laboratory for Software Engineering
   - CSC 360 - Decision Support Systems
   - CSC 361 - Information Services Management
   - CSC 407 - UNIX System Administration
   - CSC 409 - Software Project Management
   - CSC 430 - Operating Systems
   - CSC 460 - Business Systems Analysis I
   - CSC 461 - Business Systems Analysis II
   - CSC 465 - Techniques of Systems Analysis
   - CSC 488 - Data Engineering

Specific selections of courses must be worked out with the computer science faculty. No more than eight credits may be applied to both the CS and CIS minors. 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.

Economics Minor

The minor in economics provides valuable preparation for students pursuing careers in most fields, ranging from accounting, finance, and marketing to law, telecommunications, and many positions in government.

Total credit hours required for minor: minimum of 17

A. Required Courses:
   - ECO 310 - Theory of Price
   - ECO 312 - Theory of National Income and Employment

B. Electives (three courses):
   - ECO 330 - Economics of Aging
   - ECO 420 - Public Finance
   - ECO 425 - Economics of the Environment
   - ECO 440 - Labor Economics
   - ECO 450 - Money and Banking
   - ECO 460 - International Economics

It is expected that the student may transfer some of these courses from other institutions, and in some cases, transferred courses may carry 3 credits instead of 4. However, at least 8 credits making up the requirements for the minor must be taken at SUNYIT.

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 Management. 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.

Gerontology Minor

It is a well-documented fact that the population of the elderly (65+) in the U.S. is on the rise. It is projected that by the year 2010, 1 out of 7 Americans will be elderly. To meet the needs of this growing population, a group of trained professionals, knowledgeable about the aging process is essential. The interdisciplinary minor in gerontology offers a broad spectrum of courses which provides a valuable preparation in a variety of professions such as, nursing, business, health care management, psychology, sociology and social work.

A. General Requirements

To get an Interdisciplinary Minor in Gerontology, a student must complete a minimum of 17 credit hours in Gerontology designated courses or their equivalents.

B. Core Courses

To obtain a minor in gerontology, a student must take two core courses. The first core course consists of one generic/foundation gerontology course which covers general social, psychological, and health related issues in aging - Psychology of Aging (PSY 364).

The second core course is a gerontology course from the student's own discipline, but which is not a required course for the student's major. The second course will be selected from the list below:

BIO 305	Biology of Aging
ECO 330	Economics of Aging
ENG 362	Aging in Literature and Film
HIM 400	Non-hospital Health Information Management Systems
HSM /ECO 405	Economics of Health Care
HSM 422	Nursing Home Administration
MGT 324	Management and the Older Worker
NUR 480	Special Topics: (Aging & Health Care Policy)
PSY 364	Psychology of Aging
PSY 373	Dying, Death and Bereavement
PSY 377	Health Psychology
SOC 373	Sociology of Health and Illness
SOC 381	Social Gerontology

C. Electives

In addition to the two core courses, a student must select three gerontology electives (other than those selected as core courses) from the list above. The electives will be chosen with the approval of a gerontology advisor as designated by each program.

D. Additional Requirements

A student must maintain a minimum grade of "C" in the courses applied toward the minor.

At least 8 credit hours must be taken at SUNYIT.

Courses transferred from other institutions must be equivalent to the gerontology-designated courses at SUNYIT.

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	ECO 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
Mgmt for the Health Professions	3	HSM 311
Introduction to Epidemiology	3	HSM 401
Financial Mgmt for HCO	3	HSM 435
Total Credits Required	21	

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 325 - Applied Statistical Analysis	
	MAT 330 - Differential Equations	
	MAT 340 - Matrix Methods	
C.	Two Courses from the following:	8
	MAT 323 - 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 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 440 - Linear Algebra	
	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*

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

A. Required courses: Credits
   PHY 303 - Calculus Based Physics I 4
   PHY 304 - Calculus Based Physics II 4

B. Three courses from the following options: 12
   1. PHY 326 - Physical Optics
      or
      PHY 380 - Laser Principles and Systems
      Only one course from Option #1 can contribute to the minor.
   2. PHY 401 - Electromagnetism
   3. PHY 420 - Intermediate Mechanics
   4. PHY 415 - Introductory Quantum Mechanics
   5. PHY 491 - Independent Study
   6. 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.

Professional and Technical Communication Minor

The professional and technical communication program offers a minor in professional and technical communication. 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. Professional and technical communication is a skill that is integral to all types of professional occupations.

Total credit hours required for minor: 17.

Students wishing to earn a minor in professional and technical communication must complete:

A. Required courses (8 credits)
   COM 306 or COM 350 or COM 400
   COM 320
B. Electives (9-12 credits)
   With guidance from a faculty advisor, students pick any 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 362
Abnormal Psychology - PSY 322
Psychology of Personality - PSY 331
Life-Span Developmental - PSY 315
Perception - PSY 360
Death, Dying & Bereavement - PSY 373
Psychology of Gender - PSY 325
Educational Psychology - PSY 365
Engineering Psychology & Human Performance - PSY 390
Health Psychology - PSY 377
Social Psychology - PSY 342
Industrial & Organizational Psych. - PSY 352

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 483 - Quality Improvement
   ITC 484 - Advanced Topics in Statistical Process Control
   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

The sociology-anthropology program offers a minor in sociology. The minor is of value to students who wish to integrate interests in business, nursing, the technologies, or computer science 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/anthropology courses, at least 8 of which must be taken at SUNYIT.

B. Specific Requirements
1. ANT 301, SOC 300, or an introductory anthropology or sociology course.
2. At least one of the following Tier II courses: SOC 314, SOC 351, or SOC 360.

C. Additional courses
To promote coherence, these must be selected in consultation with a sociology/anthropology advisor.

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 encouraged 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, and tours of the campus.
- Academic expectations, advisement and registration.

During the Orientation Program, 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 sixteen-station computer lab, complete with educational software to help students with English, engineering, math and accounting.

All services of the Learning Center are free of charge and available to all SUNYIT students.

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 visiting the CSTEP Office, Campus Center Room 221, or by calling 315/792-7805.

Educational Opportunity Program (EOP)

The Educational Opportunity Program is designed to identify New York State students who are educationally under prepared, talented and in need of academic and financial support to attend college. Tutoring, personal counseling, career planning and financial assistance are available for all enrolled students.

EOP offers higher education opportunities to freshmen and transfer applicants. Freshman 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, Campus Center Room 221, or by calling 315/792-7805.

Health and Wellness Center

The Health and Wellness Center, conveniently located in the Campus Center, provides evaluation and treatment of health-related problems for full and part-time students. The Health and Wellness Center is staffed by registered nurses, a nurse-practitioner, a physician, and support personnel. There are regularly scheduled hours for physician visits. Routine GYN exams are available by appointment. The Health and Wellness Center is open daily Monday through Friday with the hours of service posted each semester.

The nurse-practitioner and the physician treat medical problems and they assist students with referrals to area specialists. Students are encouraged to make appointments but can be seen on a walk-in basis when necessary.

The Health and Wellness Center provides individual health counseling and offers innovative, prevention-oriented workshops on diet, exercise and other health-related topics throughout the year. The Health and Wellness Center staff invites students to stop in to learn more about the variety of services supported by the mandatory student health fee.

Health Requirements

1. In accordance with SUNYIT's regulations, a full-time student must submit a health history and physical examination to the Health and Wellness Center prior to attendance at SUNYIT. Part-time students who submit a health history and physical examination may also use the services of the Health and Wellness Center.

The student may only receive first-aid and emergency care from the Health and Wellness Center until the health history and physical examination form has been submitted. Full-time students will not be permitted to register for a second term until these requirements have been met.

2. In addition to the mandatory health fee, SUNYIT also has a mandatory health insurance program; i.e., all full-time students must carry some type of health insurance. SUNYIT provides a brief, economical health insurance plan for students who need basic insurance coverage or wish to purchase additional coverage.

   Students taking 12 credits or more are billed for SUNYIT's health insurance plan each semester. Those students who do not wish to participate in SUNYIT's plan must document alternate insurance coverage via electronic waiver on SUNYIT's web site each semester. Information concerning health insurance is mailed directly to full-time students (12 or more credits).

3. Students taking less than 12 credits are not billed for SUNYIT's health insurance plan but may purchase it at the Business Office each semester.

4. The State University requires international students entering the country for study or research, or any United States student studying abroad in a SUNY-sponsored program, to carry a SUNY health insurance policy. Information regarding insurance is mailed to these students upon their admission to SUNYIT. Additional information is available in the Health and Wellness Center.

Measles, Mumps, and Rubella

New York State Law 2165 requires that all students registering for six or more credits (graduate and undergraduate) provide proof of immunity to measles, mumps, and rubella. Persons born prior to January 1, 1957, are exempt from this requirement. Students who do not fulfill this requirement are de-registered 30 days after the start of each semester, pursuant to the directives of the law. Students must provide the following:

Measles: Two dates of immunization on or after the first birthday; or date and results of positive measles titer;

Mumps: Date of immunization on or after the first birthday; or date and results of positive mumps titer;

Rubella: Date of immunization on or after the first birthday; or date and results of positive rubella titer.

Students should direct requests for forms or additional information to the Health and Wellness Center, phone 315/792-7172, Fax 315/792-7371.

Counseling Services

Students can visit the Counseling Center to discuss personal, vocational and educational concerns. Office hours are Monday through Friday from 8 a.m. to 4 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.
- Vocational counseling and testing: individual testing and counseling to assist the student to clarify vocational directions.
- Graduate school: information is available regarding graduate school admissions procedures and graduate school standardized testing.

Services for International Students

The International Student Services Office serves as the point of entry for new international students coming to SUNYIT. It provides advisement and assistance to meet the requirements of the United States Immigration Services. The office is located in the Admissions Office.

The college provides special sections of ENG 306: Report and Technical Writing to assist international students who have difficulty with the written English language. The Learning Center provides support for students who experience difficulty adjusting to American education or who have difficulties in individual courses.

The International Student Association offers an excellent opportunity for international students to socialize with other newcomers to the country. The Association sponsors trips and social events for its members and their guests.

Services for Students with Disabilities

SUNYIT's small size and friendly atmosphere allow for accommodation of the special needs of the disabled student. A student with a disability should discuss individual needs with the Admissions Office and the Coordinator of Disabled Student Services in the Counseling 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 Counseling Center at 315/792-7805.

Earning College Credit by Examination

- College Level Examination Program: 34 examinations are offered monthly (except December and February) to persons who wish to earn college credit by demonstrating that they possess knowledge equivalent to that acquired in college courses. The College Level Examination Program is moving toward computer-based testing. Upon this change SUNYIT will then be a "limited" testing facility. SUNYIT awards appropriate college credit for each examination. Questions regarding CLEP should be directed to the Learning Center.
- Regents External Degree Program: The Regents External Degree Program accredits college-level education that a person has earned from all sources and awards credit toward degree completion.
- 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 Regents services should write the Counseling Center, SUNY Institute of Technology, P.O. Box 3050, Utica NY 13504-3050, or phone 315/792-7805.

Residential Life and Housing

SUNYIT considers the residential experience to be an important aspect of a college education; therefore, all freshman, sophomore and first year students who are not eligible for an exemption are required to live on campus. To be eligible for housing, you must be a registered student (full time matriculated) and have paid all debts to SUNYIT. Current students will also need to be in good standing with residence hall and campus regulations. 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 have dependents, live with a spouse, have verification of prior military experience, or other special circumstances. Request for exemptions are required in writing to the Director of Campus Life.

One-year Residential Scholarships of $500 are available to new transfer students who meet the cumulative GPA requirements. These scholarships are available on a first-come basis and are awarded in conjunction with other merit scholarships. Contact the Admissions Office for details.

Campus housing at SUNYIT offers the many benefits of townhouse apartment living with convenience and safety. The Adirondack Residence Halls were opened in 1991 and the Mohawk Residence Halls were opened in 1996. Housing for 580 students is provided in these modern and attractive apartments. Students can request single or double room housing. Each apartment is equipped with a furnished living room, bathroom, and microwave/refrigerator unit. Each bedroom is equipped with private telephone service, an internet/WWW connection, and a TV cable connection. There are also convenient laundry centers and a commons lounge/TV room for the resident students.

Residents are required to purchase a meal contract for food service (see page 13 for options and costs). For more information, call the Residential Life and Housing Office at 315/792-7810.

SUNYIT staff puts a high priority on safety and security. The residence halls are protected by central smoke and fire detectors and the exterior doors are secured with SUNYCard-activated electronic door locks. University Police monitor the residence hall area 24 hours a day with regular patrols and closed-circuit television.

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, 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 Cafe Kunsela is a full-service snack bar, open for breakfast and lunch. It features pastry, bagels, eggs, and beverages for breakfast. For lunch there are soups, sandwiches, salads, and desserts available. Operation hours are Monday through Friday.

The 'Cats' Den in the Campus Center offers sandwiches, 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 Thursday during class sessions.

Student Organizations and Boards

There are 40 academic and social clubs and student organizations, student-run publications, four governing boards, a student senate, Residence Hall Council, and a campus radio station (WCOT) 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, Black Student Union, Caribbean Club, Vietnamese Student Association and Latino Student Association). 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, instrumental jazz and choir.

Career Services

Through Career Services students are offered a wide range of career planning and employment resources and a variety of workshops on resume writing, interviewing, and graduate schools. Students are encouraged to register with Career Services in order to access a comprehensive web-based resume system (http://www.sunyit.edu/saf/career_services/).

Each year Career Services sponsors a career fair where students can meet and interview with prospective employers. The office coordinates internship opportunities and works with corporate, industrial, governmental, and social service employers to maintain a current employment listing for students.

Athletics and Recreation

The intercollegiate sports and recreation program offers a wide 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.

The Campus Center is equipped with a new and exciting fitness center which features plenty of treadmills, cross trainers, stair climbers and circuit training equipment. A free weight fitness room can benefit the athlete-in-training, the body-builder and the person seeking a good workout. The gym, swimming pool, running track and racquetball court comprise the rest of the indoor facilities, while the beautiful outdoor setting of the campus features the Roemer fitness trail, basketball and tennis courts, plus lacrosse, soccer, baseball and softball fields and a golf practice area.

A certified fitness specialist can guide you into a personalized exercise routine or our recreation assistants can get you involved in a myriad of single event or league intramural programs. Our intercollegiate sports program, a member of the SUNYAC, ECAC and NCAA, includes competitive teams in men's baseball, men's and women's basketball, cross country, golf, men's lacrosse, men's and women's soccer, women's softball, women's volleyball and bowling.

When you come to campus, please visit with us and we'll get you involved! For more information, contact us at 315/792-7520 or e-mail the director of athletics at grimmek@sunyit.edu.

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, and mountain biking/running club are examples of teams that the Student Association at SUNYIT sponsors.

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 three student publications, 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 Student Union, the Latino/a Student Association, Vietnamese Student Association, 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 Program

SUNYIT recognizes the importance of healthful choices and has established a Wellness Group. The committee schedules and promotes programs on numerous health-related topics (health fairs, speakers, wellness runs) for the campus community.

Students interested in membership on the Wellness Committee should contact the Campus Life Office at 315/792-7530.

Campus Center

The Campus Center contains a 400-seat dining area, bookstore, the 'Cats' Den snack bar, game and meeting rooms, a complete and up-to-date athletic complex, and student offices. Student services (Vice President for Student Affairs, campus life, student activities, counseling/EOP, health and wellness center, CSTEP, and athletics and recreation) are also located in this building.

Facilities include a six-lane swimming pool, fitness rooms, two racquetball courts, a weight room, fitness rooms, an indoor running track, basketball and volleyball courts, saunas, and outside basketball/volleyball and tennis courts. Outdoor lacrosse, soccer and softball fields, a cross-country track, and a nature fitness trail are available on campus.

For hours of operation of the Campus Center, see the Student Handbook. (Hours are subject to change.)

General Information

Physical Plant

SUNYIT currently occupies four academic buildings and two residential complexes on its 800 acre campus in Marcy.

Kunsela Hall, the largest of these buildings, opened in February 1985. A modern, well-lighted, air-conditioned building, it houses standard and special-purpose classrooms, the computer center, a 240 seat auditorium, and selected faculty and administrative offices.

Facing Kunsela Hall is the Peter J. Cayan Library, which opened in March 2003. This modern building houses the campus library collections and archives. The library offers private study rooms and a variety of comfortable settings for reading and studying. A large reading room on the second floor has a fireplace and a window wall overlooking the quad between the library and Kunsela Hall.

The James H. Donovan Hall is an academic building, opening its doors to students in the fall of 1988. This building houses laboratories, special purpose and general classrooms, small lecture halls, career services, a learning center, as well as faculty and staff offices.

Beyond these buildings, and across a pedestrian bridge which traverses a wooded ravine, lies the Campus Center. This building, which opened early in 1988, houses a 400-seat main dining area, a snack bar named the 'Cats' Den, the college Bookstore, a gymnasium with a capacity of 2,000 spectators, game and meeting rooms, student offices, and a modern athletic complex that includes a fitness center, weight room, six-lane swimming pool, racquetball courts, saunas, outdoor basketball, volleyball and tennis courts. Student services, including counseling and the health center, are also located in this building.

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.

The Adirondack Residence Halls, opened for occupancy in August 1991, are located at the northwest side of the campus, just a few steps across a second pedestrian bridge. They consist of 25 two-story townhouse style buildings, connected to form the borders of two triangular commons. Each building contains four suites and each suite has accommodations for four students, with a mix of one and two person bedrooms. To assist students in their studies, each bedroom is linked to a state-of-the-art computer network that enables students to be in contact with the entire campus and the World Wide Web.

The Mohawk Residence Hall, opened for occupancy in August 1996, consists of 12 two-story townhouses on the northeast side of the campus on Flanagan Road. They provide the same amenities as the Adirondack Halls; however, each suite accommodates four students in single bedrooms.

Library

Named after SUNYIT's third president, the Peter J. Cayan Library opened its doors on March 17, 2003. It is a new building across the quad from 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. New to the library are 10 group study rooms that students can use on a first come, first serve basis, a dedicated library instruction laboratory and internet access throughout the building. Currently internet access is limited to wired connections, but as the wireless standards mature, a wireless network will be installed. There is also a reading room on the second floor that overlooks the quad and Kunsela Hall. It is furnished with comfortable chairs, side tables and a fireplace.

The current collection is almost 200,000 volumes, of which 165,000 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 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 over the internet. A valid SUNYIT email account is required.

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 state-of-the-art computer graphics workstation provides students access to producing materials and presentations for the classroom. Digital cameras and VHS camcorders are available to borrow for class projects. Students also have access to videotape editing equipment. Laptop computers are rented to students on a weekly basis. A $5 fee is assessed every time a computer is checked out. Students can pick up a laptop on Wednesday after 12 noon and return it on Monday before noon.

SUNYIT Academic Computing Facilities

The use of computers is widely integrated into almost all facets of life at SUNYIT. Computing is used for instruction, research, communication, as well as the registration and business functions of SUNYIT. Every student receives a SUNYIT computer account that provides them with access to the campus-wide computing resources and computer labs. Students should expect that most of their classes will involve some use of computing, and that e-mail is the preferred method for communications with instructors as well as with campus administrative offices.

Students use their SUNYIT computer account to web register, view course grades and print unofficial transcripts; to log in to the computer labs, the Unix systems, and the web accessible Windows applications; and to access numerous web resources such as e-mail, the SUNYIT file system, and library databases. All registered students are given a home directory on the SUNYIT file system for their files, web pages and e-mail. Additional disk storage space is available to those engaged in special projects with the approval of the Director of Information Technology Services.

Academic programs at SUNYIT are supported by over 300 computing stations (personal computers and workstations) in open locations or general purpose laboratories, and many more in laboratories dedicated to particular functions. Computing labs are located in both academic buildings (Donovan Hall and Kunsela Hall), and in the Mohawk Residence Hall complex; all dormitory rooms are wired to provide private, high-speed Ethernet data connections for each occupant. The Mohawk Residence lab is available to all registered students 24 hours a day, 7 days a week. Off-campus access is maintained through the Internet.

The campus network has a gigabit Ethernet backbone between all buildings. The backbone runs at a speed of 1000 mb/sec; segments run at either 100 mb/sec or 1000 mb/sec.

Payment of the mandatory Technology Fee entitles students to access computing facilities, although nominal additional charges apply for the production of high-quality color output on special media and for short-term checkout of laptop computers.

SUNYIT's computer related policies are published in the Computer Use Policy, Dorm Connection Policy, Computer Software Policy, Website Policy and Copyright Policy that are available from the Information Technology Services web pages.

Internet Access

SUNYIT holds the domain name sunyit.edu. SUNYIT's Internet connection was recently upgraded to a fractional T-3 running at 15 mb/sec, thus, maintaining SUNYIT's status as having one of the highest bandwidth connections in Upstate New York. Internet services are extensively used throughout the curriculum, and student use is strongly encouraged.

Numerous courses are taught exclusively over the Internet through the SUNY Learning Network. Others provide on-line computing activities in lieu of some course meetings through SUNY CourseSpace. In addition, students have access to over 800 computer-based training courses on the SkillSoft web site.

SUNYIT maintains an extensive Web site (www.sunyit.edu) and is continually expanding its Web resources. Current web resources include: the library services such as the catalog, databases and interlibrary loan requests; the Campus Intranet for real-time registration activities such as course add/drop, schedule inquiry, grade inquiry, unofficial transcript production, and billing inquiry; the Citrix server for remote access to Windows applications; and MySUNYIT (my.sunyit.edu) for single sign-on access to a collection of web resources such as e-mail, file system, trouble ticket system, calendar and the Campus Intranet.

Campus-Wide Systems

SUNYIT maintains a number of centrally administered systems that host the web services, ftp services, printer queues, directory services, user authentication and provide access to the Oracle database management system.

Computing Labs

SUNYIT has over forty computer laboratories on the campus; some are dedicated to a particular curriculum or purpose, others are general purpose. PC labs consist primarily of Pentium III and IV class computers running under Microsoft Windows XP and connect to lab file servers. Some departmental labs also run under the UNIX, Linux and Macintosh operating systems.

Microsoft Office, consisting of Word, Excel, PowerPoint and Access, is the standard integrated office suite and is available in computer labs, classroom instruction stations, student rental laptops and on the Citrix server for remote access. The current versions available are 2000 and 2002

(XP). SUNYIT also holds site licenses for a variety of applications including Borland programming languages, and SPSS (Statistical Package for the Social Sciences), Mathematica, Maple and Minitab.

The standard lab computer is currently a Pentium III/750 MHz with 17" flat screen monitor and RW CD drive. Subject to available funding, many labs are on a replacement cycle averaging three academic years or less. Substantial upgrades to computing labs are anticipated during the lifetime of this catalog.

The labs listed below are available to all students for general use, are not scheduled for classes, access over 100 applications on lab servers and access numerous web resources. Current software is listed on the Information Technology Services, Computer Labs web page.

Mary Planow Lab (Kunsela Hall C-003) – has thirty computers, monochrome laser printer, a color laser printer, and a scanning station.

Donovan Student Lab (Donovan G-161) – has thirty computers, monochrome laser printer and color laser printer.

Learning Center (Donovan G-155) – has sixteen computers and monochrome laser printer. The Learning Center provides assistance in using the computer and various software packages.

Mohawk Lab (Mohawk Residence Hall Lounge) – has twelve computers and monochrome laser printer. The lab is accessible 24 hours a day, 7 days a week.

Departmental Academic Computing Facilities

In addition to the above listed labs, each school maintains departmental computer labs for its majors.

School of Arts & Sciences

Macintosh Lab (Donovan G-238) – twenty Macintosh G4 computers, an associated file server, and peripherals. This lab is used primarily in support of courses in Psychology and Information Design and Technology.

Technical Writing Lab (Donovan 1146) – twenty-five computers and laser printer is used extensively in support of courses in report and technical writing.

Physics Lab (Donovan 2107) – features ten computers and laser printer. This lab is primarily used for physics lab courses and use software for video analysis and scientific graphing.

Interdisciplinary Lab (Donovan 2147) – approximately twenty-four computers, three monochrome laser printers, color laser printer and scanner. This lab also has several small-group work areas with computers in each area. Used to support courses in Professional and Technical Communications, Information Design and Technology and Sociology. Currently installed software includes Microsoft Office2002, Pagemaker, Photoshop, PaintShop Pro, SPSS, Quark and RoboHelp.

School of Information Systems & Engineering Technology

Local Area Network Lab (Donovan G-143) – twenty-four computers (currently Pentium III/400) with 17" monitors and a color laser printer. This lab supports classes Local Area Network configuration and administration. Installed software includes Windows/NT Workstation, Windows/NT Server, Winmind, Opnet, and Comnet. A Robotel system permits the instructor to control the displays of all computers in this lab.

Computer-Based Training (CBT) Lab (Donovan G-145) – sixteen computers (currently Pentium 233) with 17" monitors and a laser printer. This lab provides access to over 600 computer based training modules.

CIM Lab (Donovan G-225 and G-225A) – approximately twenty-five computers (currently Pentium III/450) with 17" monitors and an assortment of monochrome and color printers and plotters. Currently installed software includes Algor Supersap, AutoCad, Hyrdrain, Microstation, and Microsoft Office2002. This lab supports courses in Civil Engineering Technology and Mechanical Engineering Technology.

Advanced CAM Lab (Donovan 1159) – ten computers, laser printer and plotter used in support of courses in Civil Engineering Technology and Industrial Engineering Technology. Currently installed software includes Algor Supersap, AutoCad, Hydrain, Microstation, SmartCam, TKSolver, and Microsoft Office2002.

School of Management

School of Management Lab (Donovan 1157) – twenty-eight computers, monochrome laser printer, color laser printer and color scanner. This lab is often used for hands-on instruction in courses in the School of Management.

School of Nursing & Health Systems

Nursing Informatics Lab (Donovan 1149) – thirteen computers and laser printer. This lab is used to support Nursing and Health Information Systems courses. Currently installed software includes Diagnostic Reasoning (DxR), Home Health Nursing, SPSS, Microsoft Office 2002 and numerous nursing and health applications.

Health Information Management Lab (Donovan 1239) – six computers and laser printer. This lab is used to support Health Information Systems courses. Currently installed software includes database applications, Microsoft Office 2002.

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 "SUNYCard." This card provides access to certain campus buildings and services. SUNYCard may be obtained at the Instructional Resources office, room A012 in Kunsela Hall. Lost or damaged SUNYCards may be obtained for a replacement fee by contacting the University Police office at 792-7105, or in person at room A022 in Kunsela Hall. (See SUNYCard policies in the Student Handbook for more information about regulations governing the use of the SUNYCard).

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.

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 additional 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 the board of directors elected by the membership.

The association provides administrative and accounting services for many organizations, including student government. It also operates the SUNYIT bookstore, vending and food services.

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 at least 49 members including representatives of the local community, alumni, the college council, administration, faculty, staff, and the student body. A 16-member board of trustees, consisting of nine individuals from the community, a member of the college council, one alumnus/a, a student, and four faculty and staff 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.

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 is available from the offices of student life, and college relations and development.

Public Release of Information on Students

The college relations and development 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' biographical data forms are filed with the college relations office to ensure that appropriate information is sent to the correct hometown newspapers. **Students not wishing** to have their names appear in news releases must confirm that their biographical data form so indicates and is properly filed with the college relations office.

"Directory information" is designated as the student's name, parent's name, address, telephone number, date and place of birth, major field of study, class schedule/ roster, 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. SUNYIT may disclose any of those items without prior written consent, unless the Public Relations Office is notified in writing. Students who wish to restrict the release of directory information should follow procedures outlined in the "Student Handbook."

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. Specific regulations and conduct procedures are 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 Assistant 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 Assistant 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 (For Associate Degree Graduates in Arts or Sciences, A.A. or A.S.)
0502	Accountancy	M.S. Master of Science
0504	Finance	B.S. Bachelor of Science B.B.A. Bachelor of Business Administration (For Associate Degree Graduates in Arts or Sciences, A.A. or A.S.) B.P.S. Bachelor of Professional Studies (For Associate Degree Graduates in Applied Science, A.A.S. Graduates)

0506	Business and Public Management	B.S. Bachelor of Science B.B.A. Bachelor of Business Administration (For Associate Degree Graduates in Arts or Sciences, A.A. or A.S.) B.P.S. Bachelor of Professional Studies (For Associate Degree Graduates in Applied Science or Occupational Studies, A.A.S. or A.O.S.) with concentrations in: 1. Marketing 2. Management 3. Other related Business Management disciplines
0506	Business Management	M.S. Master of Science
0601	Professional and Technical Communication	B.S. Bachelor of Science
0701	Computer and Information Science	B.S. Bachelor of Science (For A.S. and A.A.S. Graduates)
0701	Computer and Information Science	M.S. Master of Science (For Graduates of Baccalaureate Degree Programs in Computer Science or related disciplines.)
0702	Computer Information Systems	B.S. Bachelor of Science (For A.A.S. Graduates)
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 (For Associate Degree Graduates in Arts or Sciences; A.A. or A.S., and A.A.S. Degree Graduates) with concentrations in: 1. Electrical Engineering Technology 2. Computer Science 3. Business/Management
0799	Telecommunications	M.S. Master of Science
0909	Electrical Engineering	B.S. Bachelor of Science
0925	Computer Engineering Technology	B.S. Bachelor of Science (For A.S. and A.A.S. Graduates) with concentrations in: 1. Computer Technology 2. Electrical Engineering Technology 3. Computer Science 4. Mathematics/Science
0925	Electrical Engineering Technology	B.S. Bachelor of Science B.Tech. Bachelor of Technology (For A.S. and A.A.S. Graduates or equivalent)
0925	Industrial Engineering Technology	B.S. Bachelor of Science B.Tech. Bachelor of Technology (For A.S. and A.A.S. Graduates or equivalent)
0925	Mechanical Engineering Technology	B.S. Bachelor of Science B.Tech. Bachelor of Technology (For A.S. and A.A.S. Graduates or equivalent)
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 (For A.A. and A.S. Graduates) B.P.S. Bachelor of Professional Studies (For A.S. and A.A.S. Graduates)
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
1215	Health Information Management	B.S. Bachelor of Science (For A.A. and A.S. Graduates) B.P.S. Bachelor of Professional Studies (For A.A.S. Graduates)
1703	Applied Mathematics	B.S. Bachelor of Science
2001	Psychology	B.A. Bachelor of Arts (For A.A. or A.S. Graduates)
2208	Sociology	B.A. Bachelor of Arts (For A.A. or A.S. Graduates)
2208	Applied Sociology	M.S. Master of Science
4901	General Studies	B.A. Bachelor of Arts (For A.A. and A.S. Graduates)

Retention and Graduation of Undergraduates

Graduation statistics of full-time students entering in the successive fall semesters of 1991, 1992, 1993, 1994, 1995, 1996 and 1997 are as follows:

Date of Entry	% of Students Graduated
Fall 1992	82.69%
Fall 1993	74.30%
Fall 1994	75.23%
Fall 1995	75.54%
Fall 1996	73.14%
Fall 1997	74.09%
Fall 1998	68.58%

Courses

The courses described in this catalog are expected to be taught within the 2003–2004 academic year. 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.

Course Number Changes Effective Fall 2003

Course Name	Old Course #	New Course #	New Course Title
Introduction to Financial Accounting	ACC 301	ACC 201	
Managerial Accounting	ACC 305	ACC 205	
Astronomy	AST 322	AST 222	
Law of Business Transactions	BUS 305	BUS 105	
Essentials of Chemistry	CHE 300	CHE 110	
Computer Systems & COBOL Prog.	CSC 302	IS 305	Application Prog. with COBOL
Computer Systems & Pascal Prog.	CSC 304	CS 108	Computer Fundamentals
Programming Foundations	CSC 308	CS 109	Object Oriented Programming
Programming Methodology	CSC 309	CS 109	Object Oriented Programming
Machine Structures	CSC 332	CS 220	Computer Organization
Data Structures	CSC 340	CS 240	Data Structures & Algorithms
Database Management	CSC 350	IS 325	Database Mgmt Systems
Software Engineering	CSC 355	CS 370	
Decision Support Systems	CSC 360	IS 330	Decision Support & Intel. Sys.
E-Commerce	CSC 371	IS 340	
Principles of Programming Languages	CSC 431	CS 431	
Computer Graphics	CSC 450	CS 450	
Distributed Systems	CSC 451	CS 451	
Techniques of Systems Analysis	CSC 465	IS 320	Systems Analysis & Design
Database Programming	CSC 470	IS 470	
Compiler Design	CSC 480	CS 480	
Selected Topics in Computer Science	CSC 490	CS 490	
Introduction to Artificial Intelligence	CSC 495	CS 495	Artificial Intelligence
Theory of Price	ECO 310	ECO 110	Microeconomics
Theory of National Income and Employment	ECO 312	ECO 112	Macroeconomics
Ecology	ENV 300	ENV 100	
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 302	ETC 102	
Operational Amplifiers & Linear	ETC 304	ETC 104	
Electrical Fundamentals	ETC 305	ETC 105	
Digital Systems I	ETC 310	ETC 110	
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	
Health Care Delivery in the US	HSM 301	HSM 201	
Management for the Health Professions	HSM 411	HSM 311	
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
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	
American Public Policy	POS 310	POS 110	
Statistical Methods	STA 300	STA 100	

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 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 (3)
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 (3)
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 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. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

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.

ANT 302 Biological Anthropology: Contemporary Issues
Introduces the fundamental theoretical and research themes in the holistic study of humans as a life form. Examines how these themes are pursued in various practical contexts. Includes an overview of biological evolutionary theory, basic genetics, and other concepts essential for addressing major topics like human biological variation, primate studies, and human evolution.

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. Course may not be taken by Sociology majors.

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 300 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 300, or an introductory anthropology or sociology course. Restricted to Sociology 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 300 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 300 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 300 or an introductory anthropology or sociology course.

ANT 490 Selected Topics in Anthropology (4)
An in-depth treatment of a selected topic in Anthropology. Provides students with the opportunity to investigate Anthropological subject matter that will not be repeated in a future seminar. Prerequisites: ANT 301 or SOC 300 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 335 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.

ART 340 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.

ART 341 Painting II - Techniques & Style
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.

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, museum tours.

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. Does not meet General Education 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. Satisfies the general education science requirement and the SUNYIT laboratory science requirement.

BIO 225 Biology of the Sexes (4)
Examines the genetic and physiological bases 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 the

general education science requirement, but does not meet the SUNYIT laboratory science requirement.

BIO 302 Genetics (4)
A broad coverage of the field of genetics to include discussion of the transmission, chemical nature, and function of genetic material, with special attention to its importance in medicine, agriculture, and other aspects of human life and culture. Three hours of lecture and three hours of laboratory. Satisfies the general education requirement for a laboratory science course.

BIO 305 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 can not receive credit for both BIO 350 (Advanced Physiology) and BIO 305.

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 general education non-lab science requirement.

BIO 337 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.

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: Introductory course in Anatomy and Physiology or Consent of Instructor. Does not meet General Education 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.

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 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 477 Projects in Business (4)
The student will complete an in-depth project which provides strong insight to the application of business theory and technique. The student is expected to illustrate a high level of understanding regarding the theory associated with the project. Examples of potential project formats are comprehensive case studies, a senior thesis, an organization case history, research projects for government or not-for-profit agencies, faculty approved internships, or other projects approved by the supervising faculty. A report suitable to the project will be required. Prerequisite: Permission of instructor required.

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.

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 General Education Laboratory Science Requirement.

Civil Engineering Technology

CTC 312 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 313 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 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: MTC 318 or equivalent. Pre/Corequisite: MAT 121 and CSC 300 or CSC 317.

CTC 325 Computer Methods in Construction Estimating (4)
Course emphasizes the determination of probable construction costs. Special attention is given items that influence and contribute to the cost of a project. Estimates are prepared from drawing and specifications using industry standard estimating handbooks and software. Three hours of lecture and two hours of laboratory per week. CSC 300 or CSC 317 and CTC 320 or permission of instructor.

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: CSC 300 or CSC 317. Corequisite: MAT 121.

CTC 355 Foundation Design (2)
Basic principles of analysis and design of foundations. Topics covered include bearing capacity and settlement of spread footings, axial load capacity of piles, structural design of shallow foundations and earth retaining structures. This course is intended for students who have had previous course work in soil mechanics or properties, and limited course work in foundations. Prerequisite: Course in soil mechanics.

CTC 370 Network Scheduling (4)
Basic course network scheduling using PERT Diagrams and Controlling Path Methods. Construction project control through the scheduling process will be covered. Techniques for project schedule development, changes and crashing will be studied. Industry scheduling software (such as Primavera Project Planner) will be utilized in the laboratory as well as in the homework assignments. Three hours of lecture and two hours of laboratory per week.

CTC 413 Construction Methods Heavy and Highway (4)
Introductory course to heavy construction methods. Topics include earth moving and heavy construction, and construction management. Three hours of lecture and two hours of laboratory per week. Prerequisite: CSC 300 or CSC 317 and CTC 320.

CTC 414 Construction Methods: Commercial and Light Industrial
Course in building construction methods. Topics include commercial and light industrial building systems, site work and construction management. Three hours of lecture and two hours of laboratory per week. Prerequisite: CSC 300 or CSC 317 and CTC 320.

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 3 hours of lecture and 2 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 3 hours of lecture and 2 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 work per week. Cross listed with MTC 430 and ITC 430. Prerequisite: MTC 318 or equivalent. Pre/Corequisite: MAT 122 or equivalent.

CTC 435 Welded Structures (3)
Course emphasizes the design of welds and the use of welding process in structures. Further, the course studies the selection of connecting systems, the fundamental differences between types of welds and procedures, the most efficient use of steel, and economy of weld. Prerequisite: CTC 422.

CTC 440 Highway Design (4)
Course emphasizes the highway design process using conventional and computer methods. In particular, industry standard design and engineering handbooks and software are used to complete a number of highway design projects involving site planning, earthwork, geometric design, pavement design, and project management. Three hours of lecture and two hours of laboratory per week. Extensive use of InXpress software. Students should have familiarity with CAD. Prerequisite: CTC 340.

CTC 450 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 ITC 452.

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, 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 462 Drainage Design (4)
Introductory course in drainage design including topics in applied hydrology, applied hydraulics, culvert sizing, inlet spacing and channel stabilization. 3 hours of lecture and two hours of lab per week. Prerequisite: CTC/MTC 461.

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 320 and CTC 370, 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.

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 work per week. Cross listed as MTC 476. Prerequisite: MAT 122.

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 supervisors' 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 300 Oral Communication (4)
Designed to train student 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" Research Techniques for Personal, Professional and Academic Life (1)
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.

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.

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.

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. Prerequisites: COM 306 or COM 308. It is also desirable for students to have background in or have completed a course in basic newswriting and desktop publishing.

COM 315 Theater and Communication (4)
As the art of human interaction, theater provides a means to explore communication issues through role-playing, improvisation, and scripting. Designed for students concerned with group dynamics, public education, and counseling, this course will examine, through reading and exercise, how theater has affected contemporary America. Students will apply theater techniques to public issues, education, conflict resolution, and group dynamics. May be taken to meet the Humanities 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. May be taken to meet the Humanities Requirement.

COM 320 Principles of Design for Desktop Publishing (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. Prerequisites: 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 SUNYIT'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 Designing Online Information (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 Usability 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 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. May be taken to meet the Humanities Requirement.

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 406 Advanced Technical 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 or 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 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. Course satisfies the social science, but not the humanities requirement. Prerequisite: 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 effect 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 412 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.

COM 413 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 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 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 (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 (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 (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. Prerequisite: 3.0 GPA in major; permission of program faculty and internship corporate sponsor. Only S/U grades are awarded for this course.

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 406.

Computer Engineering Technology

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. Also, focus will be placed on the process controls necessary for the practice of electrical and computer engineering. Cross listed with ETC 299.

CET 311 Advanced Digital Systems Design (4)
In depth study in Digital Systems Design using the 80386 CPU in Virtual-Mode, and related applications. Study analysis and applications of peripherals such as: i8251A PCI (Programmable Communication Interface), and i8255A PPI (Parallel Peripheral Interface), i8257A DMA (Direct Memory Access), and i8259A (Interrupt Controller). Extensive design of memory configurations using Static and/or Dynamic RAMs configurations. Introduction to i80387 architecture and related applications. Three hours lecture, two hours of laboratory per week. Prerequisite: ETC 310 or equivalent. Cross listed with ETC 311.

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, two hours of laboratory per week. Prerequisite: ETC 310 or permission of instructor. No prior microprocessor background needed. Cross listed with ETC 342.

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, two hours of laboratory per week.

Prerequisites: ETC 310 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, two hours of laboratory per week. Prerequisite: ETC 310 or equivalent or permission of instructor. Cross listed with ETC 429.

CET 431 PC Integration and Maintenance (4)
This course stresses the upgrading and repair of IBM PC 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. Pre-requisite: ETC 311 or ETC 342 or CSC 332. 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 310 or equivalent or permission of instructor. Cross listed with ETC 444.

Computer Science

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 109 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 108.

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 effect programming. Prerequisites: CS 108, 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. Course programming assignments use Java and/or C++. Prerequisites: CS 109 and MAT 115.

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, 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 system, and data communication. Prerequisites: CS 240, MAT 115.

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 240 and CS 330.

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, recursion, and string processing. Prerequisite: CS 240.

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 conceptual and practical study of distributed software frameworks. Topics include socket-level distributed software programming, distributed object computing application programming interfaces, infrastructures for distributed computing, naming and directory services, transaction management, database access, security, resource management and resource pooling, persistence and state management, service discovery mechanisms, major distributed object computing frameworks. Prerequisites: CS 240, CS 330.

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: CSC 240.

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 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.

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 307 UNIX Programming Environment (2)
Promotes effective use of the UNIX* programming environment. Topics include: text editor, file system, utility programs, pipe and filter paradigm, shell language programming, internet, and interprocess communication.
**UNIX is a trademark of Bell Laboratories.*

CSC 309 Programming Methodology (4)
Current approaches to programming methodology, the study of methods for transforming classes of problems into computer-implementable representations. Topics include: program specification, introduction to correctness proofs, use of assertions for program documentation and development, and multiple representations for abstract data. Problem classes include string processing, numerical methods, and geometric algorithms. The effect of programming language features on program development will also be emphasized. Prerequisite: CSC 308. Corequisite: MAT 313.

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 311I 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.*

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.**

CSC 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.

CSC 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: CSC 332 and MAT 313.

CSC 347 Ada Software Development (4)
This course examines aspects of Ada software development, providing a thorough study of the syntax of Ada and a detailed presentation of Ada-based software design methodologies. Topics covered include: Ada statements and program units, management of Ada program libraries, semantics of Ada tasking, structured Ada-based design methodologies, including extensions of the Buhr methodology and Petri net based approaches, and object-oriented design proposals. Current software design issues such as reusability are also addressed. Prerequisite: CSC 340 or permission of instructor.

CSC 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: CSC 340.

CSC 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). Prerequisite: CSC 307,CSC 308 or equivalent.

CSC 353 Fourth-Generation Systems and Prototyping (4)
This course will familiarize the student with the concept of prototyping and and provide experience in using fourth-generation tools and application generators. The topics to be covered include: the prototyping development cycle; data modeling in prototyping; in-depth study of some 4GL and application generator system; artificial intelligence tools for prototyping; management of prototyping projects. Prerequisite: CSC 350 or permission of instructor.

CSC 354 Office Automation (4)
An examination of trends in office automation including defining requirements, data processing and communication hardware and software and associated management issues. Prerequisite: CSC 350.

CSC 357 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 CSC 355. 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: CSC 355.

CSC 361 Information Services Management (4)
An examination of contemporary issues in the management of an information services department. Topics to be selected from equipment procurement, hardware and software integration, networking, data communications and security. Prerequisite: One course in computer science.

CSC 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: CSC 309 and MAT 313.

CSC 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: CSC 307; Corequisite: CSC 430 or permission of instructor.

CSC 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: CSC 355.

CSC 415 Structure and Interpretation of Programs (4)
This course will introduce major techniques used in controlling the complexity of large programs. These techniques include: procedural and data abstractions, recursion, type hierarchies, object-oriented and stream processing system structures. The use of the scheme programming language provides the opportunity to work with procedures as first-class objects, to explore object-oriented programming and see how environments are maintained in a statically scoped block structured language. Prerequisite: MAT 313 and CSC 340 or equivalents.

CSC 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: Knowledge of FORTRAN or permission of instructor, and MAT 122.

CSC 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. Prerequisite: Basic Linear Algebra.

CSC 430 Principles of Operating Systems (4)
A study of the programs managing resources within a computer system which interact most closely with the hardware, and which present to users efficient, facile, and shared access to computing. Topics covered include processes (communication, implementation, synchronization), memory management (storage allocation, virtual memory), processor management (multiprogramming, timesharing, scheduling), and data management (input, output, file storage). Prerequisite: CSC 340 and CSC 332.

CSC 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 325 and CSC 332.

CSC 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. Prerequisite: CSC 340, knowledge of UNIX and C.

CSC 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: CSC 332 and CSC 430 and knowledge of probability and calculus.

CSC 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: Knowledge of a programming language and senior status or permission of instructor.

CSC 460 Business Systems Analysis & Design I (4)
A study of the analysis, design, and implementation of computer systems in business applications. Examples, such as invoicing and accounting systems, airline reservation systems, inventory control and point of sale systems, and payroll and employee records systems will be considered. Prerequisites: CSC 302 and 305 and 340.

CSC 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 313 and CSC 340.

CSC 484 Logic Programming (4)
The major goal of declarative programming is to build programs by just stating "what is" or "holds true" about a problem and stating as little as possible on "how to" go about solving it. Prolog has much of the flavor of this kind of programming. Covers the syntax and semantics of logic programs in general and of Prolog programs in particular, and some application areas. Emphasis is on writing Prolog programs. Prerequisite: MAT 313 and CSC 340.

CSC 487 Object-Oriented Systems (4)
This course introduces the student to the object-oriented programming paradigm. The topics to be covered include: object orientation; objects; messages; encapsulation; classes; single and multiple inheritance; object-oriented languages and programming environments (such as Smalltalk, C++, Actor); implementation issues; applications to simulation and databases. Prerequisite: CSC 340.

CSC 489 Cooperative Work-Study in Computer Science (Variable credit 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.

CSC 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. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

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 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 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.

IS 490 Special Topics in Systems (Variable credit 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 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. Prerequisites: Matriculated students only, permission of instructor and dean.

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.

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.

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 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 student only, permission of instructor and dean of subject area.

Electrical Engineering

EE 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, basic binary arithmetic and finite state machines. Logic families and digital integrated circuits and use of CAD tools for logic design. Three hours of lecture and two hours of lab per week.

EE 252 Computer Organization and Microprocessors (4)
Organization of computer systems: processor, memory, I/O organization, instruction encoding and addressing modes. Introduction to microprocessors, control unit and interrupt system design. Design of hardware and software for microprocessor applications. Assembly language programming. Microprocessor case studies. Three hours of lecture and two hours of lab per week. Prerequisite: EE 251.

EE 301 Signals and Systems (4)
Steady state and transient analysis of linear systems; Fourier and LaPlace transforms, convolution, impulse response, transfer function. Fourier analysis. Design of elementary filter circuits. Three hours of lecture and two hours of lab per week. Prerequisite: MAT 330 and EE 260.

EE 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 lab per week. Prerequisite: EE 260, Corequisite: EE 251.

EE 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: EE 301.

EE 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.

EE 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 lab per week. Prerequisite: EE 301.

EE 377 Communications Systems (3)
Modulation and demodulation: AM, FM, PCM, SSB, TV. Noise, channel capacity, optimum detection. Design of communications systems. Prerequisite: EE 301.

Electrical Engineering Technology

ETC 101 Electrical Theory and Design (4)
An accelerated study of DC and AC circuits, Ohm's Law, Kirchoff's Laws, series and parallel circuits, power, magnetism, and phasors. Three hours of lecture, two hours of laboratory per week. Prerequisite/corequisite: MAT 111 or equivalent. Students who have an EET associate degree may not enroll in this course for credit.

ETC 102 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, two hours of laboratory per week. Prerequisite: ETC 101 or permission of instructor. Students who have an EET associate degree may not enroll in this course for credit.

ETC 104 Operational Amplifiers & Linear Electronics (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, two hours of laboratory per week. Prerequisites: MAT 120 or equivalent. Students who have an EET associate degree may not enroll for this course for credit.

ETC 105 Electrical Fundamentals (4)
Covers electrical fundamentals for non-electrical majors. It provides the essential concepts of electrical circuits, electronics, digital circuits and systems and math topics as needed to support the concepts. May not be taken for credit by graduates of associate degree programs in electrical/electronics technology. Three hours lecture and two hours of laboratory per week.

ETC 110 Digital Systems I (4)
Design of circuits using TTL devices. Applications of MUX-DEMUX circuits. Analysis of semiconductor RAM and ROM memories. Three hours of lecture, two hours of laboratory per week. Prerequisite: ETC 101 or permission of instructor. Students who have an EET associate degree may not enroll in this course for credit.

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. 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. Prerequisite: ETC 302 and ETC 310 or equivalents.

ETC 311 Advanced Digital Systems Design (4)
In depth study in Digital Systems Design using the 80386 CPU in Virtual-Mode, and related applications. Study, analysis and applications of peripherals such as: i8251A PCI (Programmable Communication Interface), and i8225A PPI (Parallel Peripheral Interface), i8257A DMA (Direct Memory Access, and i8259A (Interrupt Controller). Extensive design of memory configurations using Static and/or Dynamic RAMs configurations. Introduction to i80387 architecture and related applications. Three hours lecture, two hours of lab. Prerequisite: ETC 310 or equivalent. Cross listed with CET 311.

ETC 316 Communication Transmission Techniques (4)
Study of signals, modulation techniques (analog and digital), transmissions lines, microwave techniques and devices, antennas. Optical fiber, wireless and data communication are also introduced. Three hours of lecture, two hours of laboratory per week. Prerequisite: ETC 302 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, two hours of laboratory per week. Prerequisite: ETC 304 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, two hours of laboratory per week. Prerequisite: ETC 310 or permission of instructor. No prior microprocessors background needed. Cross listed with CET 342.

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 301.

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, two hours of laboratory per week. Prerequisite: One physics course with optics and/or permission of the instructor.

ETC 412 Digital Systems Design III (4)
Advanced study analysis and design of digital systems, using the core architecture of the i80386 Processor in PVM (Protected Virtual Mode) and the i80387 Co-Processor. Hardware and software development making use of tools from various sources and/or emulators. Implementation of system analysis and troubleshooting with 386-Debuggers. Three hours of lecture, two hours of laboratory per week. Prerequisite: ETC 311.

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, 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, two hours of laboratory per week. Prerequisites: ETC 310 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, two hours of laboratory per week. Prerequisite: ETC 310 or equivalent or permission of instructor. Cross listed with CET 429.

ETC 431 PC Integration and Maintenance (4)
This course stresses the upgrading and repair of IBM PC 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. Pre-requisite: ETC 311 or ETC 342 or CSC 332. 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, 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, two hours of laboratory per week. Prerequisite: MAT 122.

ETC 444 Special Topics in Microprocessor/Digital (Variable Credit 1 to 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 310 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 lab per week. Prerequisite: ETC 342 or ETC 311 or equivalent.

ETC 446 Programmable Logic Devices (2)
Study the application and digital system design using Programmable Logic Devices. Course will utilize PLD design and simulation packages provided by integrated circuit manufacturers. Prerequisites: ETC 310 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 lecture and two hours lab. Prerequisite: ETC 310 or equivalent or permission of instructor.

ETC 465 Microprocessor Based Robotics Design (4)
Microprocessor-based design applied to the field of robotics control. Development of hardware and software based on Intel Microcontroller devices and study of their related interface with 16-bit and/or 32-bit CPU's. Prerequisite: ETC 311.

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. Prerequisites: 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, 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 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, 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 Credit 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 101 English Composition (4)
An introductory expository writing course. Students will write a variety of short essays, culminating in a research essay. Emphasis on close observation and reading, discovering worthwhile topics, and evaluation of evidence.

ENG 305 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.

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.

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.

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.

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.

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.

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.

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.

ENG 361 Film Direction: Alfred Hitchcock (Variable credit 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.

ENG 362 Aging in Literature and Film (4)
Examines attitudes about and toward aging as represented in a range of literary and cinematic forms. The film viewing, reading, writing, and class discussion will focus on notions of the aging self, interpersonal relationships, and issues of health and mortality as characterized and depicted in these literary and cinematic forms.

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).

ENG 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. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

Environment

ENV 100 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. Does not meet General Education Laboratory Science Requirement.

ENV 115 Introduction to Physical Geology (4)
An introduction to the nature and origin of minerals and rocks, the structure of the earth, the processes of weathering, glaciation, beach formation, and mountain building, and the concepts of geologic time and plate tectonics. Does not meet General Education Laboratory Science Requirement.

ENV 210 Weather and Climate I (4)
The principles of meteorology and atmospheric science are developed, emphasizing the special characteristics of Central New York State. These are related to national and global patterns of climate. The course makes heavy use of guided individual analysis of weather on a daily basis by the use of the college's meteorological and environmental laboratory equipment. The theoretical basis of meteorology is developed in conjunction with observation of weather as it occurs. Meets General Education Laboratory Science Requirement.

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.

Fitness

See Health and Physical Activity

Freshman General Education

FRC 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.

FRC 102 Nature 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.

FRC 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.

General Studies

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 304 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 humanities requirement.

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 Humanities 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 Humanities requirement.

GEN 499 General Studies Project (4)
Students 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. The student will make a presentation based on the project to the faculty advisors at the end of the course. Prerequisites: Senior status; General Studies majors only.

Geography

GOG 200 The Ocean World (4)
The study of the world's oceans from the perspective of physical geography. This course draws on several disciplines to discuss the natural environmental processes which influence the world's oceans, with an emphasis on those processes which most affect our lives. This course does not meet any science requirement.

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. Additional topics include drug, tobacco and alcohol use and abuse as well as sexually transmitted diseases. Students will be involved in 15 hours of campus outreach activities such as informational displays and social norming data collection.

HLT 210 Peer Health Education II (2)
A continuation of the information provided in HLT 200. Emphasis will be on the development of presentation, communication and interpersonal skills. Students will explore the mental, emotional, physical, social and spiritual well being of individuals and the campus population. Students will learn how to promote healthy behavior change among their peers. Additional information about nutrition, mental health, sexual health, self esteem, stress management, eating disorders, birth control, physical fitness and overall personal safety will be explored. The service learning practicum (30hrs) may include educational programs, presentations, skits, group discussions, or outreach and campus awareness events. Prerequisite: HLT 200 or equivalent.

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 lecture and two hours 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 Analysis for Health Information (3)
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.

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 lecture and two hours 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 Human Anatomy and Physiology II or completion of that course.

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.) Prerequisite: HIM 305 and HIM 306.

HIM 400 Non Hospital Health Information Management Systems (2)
Nonhospital 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.

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 Computer-Based Patient Records (3)
The course will address the definition, benefits, standards, and confidentiality/security measures for the computer-based patient 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 credit 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 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, 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 a discussion of current events in the health information management field and preparation to enter the job market. Includes a final comprehensive examination, which will comprise the entire grade for the course. The exam will be graded on a satisfactory/ unsatisfactory basis with the course grade being S or U. Prerequisites: HIM 410 and management level residency.

HIM 494 Specialty Rotation (1)
Students will rotate through various nonhospital 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 be include the health care administrator, governing boards, hospital liability, consent, procedure, malpractice, and other related topics.

HSM 311 Management for the Health Professions (3)
This course introduces the student to the broad spectrum involved in the management of health services, including the basic management structures of hospitals, nursing homes, and other health-related facilities. Concepts of management are related to the varied organizational structures within these facilities. Some problems involving the development of staffing patterns will be presented. Comparisons of management responsibilities in different types of health facilities will be made, including their similarities as well as differences.

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, the long-term care services market, demography of aging and biodemography. Students will complete a major research paper on a health economics related topic, and will analyze an ethical health care issue. Cross-listed with ECO 405.

HSM 410 Managed Care (4)
Managed care is a form of managing and coordinating the delivery of clinical services with the goal of making them more accountable in terms of appropriateness, cost effectiveness, and quality. Various types of managed care are examined from a managerial perspective. The history and nature of insurance and managed care systems are studied. Operational characteristics of delivery systems are explored, and the effects of managed care on the Medicare and Medicaid programs are delineated. The actual nature of managing managed care operations is also examined, and legal issues are explored with a view to familiarizing the health management practitioner with regulations affecting this area of management. Finally, the likely future of managed care systems is examined. Prerequisite: HSM 301.

HSM 422 Nursing Home Administration (4)
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 301, HSM 411.

HSM 423 Long-Term Care Policy and Regulations (4)
Long-term care services are expanding commensurate with the growth of the elderly population. As the service sector increases, the regulatory environment becomes more complex. This course will familiarize the student with the development of long-term care policy and corresponding applicable state/federal regulations on providers. There will be particular emphasis on nursing facilities and other service providers and consumers. Prerequisites: HSM 301 or permission of program advisor.

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 430 Ambulatory Care Administration (4)
The provision of health services has dramatically moved outside the confines of the institution. This course will examine alternative delivery systems that emphasize ambulatory care services versus inpatient institutional, and the specifics of management in an ambulatory care setting. Prerequisites: HSM 301, HSM 411.

HSM 431 Financial Management For Ambulatory Care Organizations (4)
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 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. Prerequisites: Matriculated students only, permission of instructor and dean of subject area.

HSM 492 Internship Variable Credit (4 - 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.

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.

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.

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.

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.

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.

HIS 340 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.

HIS 350 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.

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.

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.

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 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, 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.

Industrial Engineering Technology

ITC 101 Introduction to Engineering Technology (2)
Required for all freshmen in Industrial Engineering Technology. Topics covered will be ABET requirements, engineering technology as a profession, academic requirements, advisement, software packages, career opportunities, measurement systems, project management, ethics and professionalism. Cross listed with MTC 101.

ITC 111 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.

ITC 162 Computer Aided Design (4)
Students will develop basic skills in using AutoCAD software to develop mechanical drawings. Blueprint 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 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 318 Statics in Machinery (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: Introductory Physics, Algebra, Trigonometry. Cross listed with MTC 318.

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.

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, two hours 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 325 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&QS9000 Implementing and Auditing (4)
This course contains all the information that an organization needs to understand the ISO9000 series, initiate the process of implementing the standards, and audit the quality systems. Included also is information about QS9000, the American auto industry Big Three producers' 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 430 Engineering Dynamics (4)
Kinematics of particles, lines and bodies, and the kinetics of particles 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 work per week. Cross listed with MTC 430 and CTC 430.

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 lecture, four hours laboratory per week. Prerequisite: ITC 311 or permission of instructor.

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.

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 100/325 or permission of instructor.

ITC 484 Advanced Topics in Statistical Process Control
Indepth 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. Prerequisites: ITC 373 or STA 100 or consent 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. Prerequisites: ITC 373 or STA 100 or consent of instructor.

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: Consent 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. Consent of employer and Dean of Engineering Technology.

Management

MGT 305 Management Theory (3)
A study of the development of management thought and an analysis of managerial functions. Consideration is given to the essential functions of planning, organizing, coordinating, and controlling in the practice of supervisory and middle management. Includes a comparison of management schools of thought, as well as emerging theories, through examination of current literature.

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 344 Management Career Strategies (3)
Matching individual career goals with organizational needs is the goal of this course. The student considers problems of early, middle and late career stages and some strategies for overcoming the problems. Special problems of women, minorities and mid-life career changes are also studied.

MGT 407 Organization Development (4)
Addresses the history, theories, and techniques of Organization Development as applied to various types and sizes of organizations. Explores how these concepts may be utilized to favorably influence organizational performance through planned change. Examines the need for individual training and development to support overall organization goals and strategy. Topics may include: organization architecture, informal networks, needs assessment, training, change, diversity issues for organizations, and change issues for internationalized organizations. Prerequisite: MGT 307 or equivalent.

MGT 415 Industrial and Labor Relations (4)
Managerial success in many human resource oriented work environment demands 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 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, 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.

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.

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)
The development and application of concepts, programs, and practices involved in merchandising, pricing, buying, promotion, and control of retail organizations. Prerequisite: MKT 301 or equivalent.

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.

Mathematics

MAT 111 College Mathematics (4)
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 Meets General Education requirement in Mathematics. Students who have previously completed MAT 112 or higher may not enroll in this course for degree credit. Prerequisite: A course in introductory algebra.

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 111 or equivalent.

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.

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.

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.

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. Prerequisite: MAT 120 or equivalent. MAT 121 and MAT 151 cannot both be taken for credit.

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. Prerequisite: MAT 151 or equivalent or MAT 121 with permission of instructor. MAT 152 and MAT 122 cannot both be taken for credit.

MAT 323 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. Applications are included throughout the course. Prerequisite: MAT 122 or equivalent.

MAT 325 Applied Statistical Analysis (4)
(Cross-Listed with STA 325)
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. Prerequisite: MAT 121 or equivalent.

MAT 330 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 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 330 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 330 and familiarity with a computer language, or permission of instructor.

MAT 340 Matrix Methods (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 covered 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 covered 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 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 330 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 313.

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. Prerequisites: 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 323 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. Pre/corequisite: MAT 323.

MAT 440 Linear Algebra (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 323.

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. Prerequisite: MAT 323, 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. Prerequisite: 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 covered will be ABET requirements, engineering technology as a profession, academic requirements, advisement, software packages, career opportunities, measurement systems, project management, ethics and professionalism. Cross listed with ITC 101.

MTC 111 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.

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. Students cannot receive credit for both ITC 162 and ITC 362. 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 308 Mechanical Components (4)
Fundamental principles of design, working stresses, analysis and design of mechanical components such as shafting, springs, screws, belts, chains, etc. Three hours of lecture, two hours of laboratory per week. Prerequisite: MTC 318 or MTC 322 or equivalent.

MTC 318 Statics in Machinery (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: Introductory Physics, Algebra, Trigonometry. Cross listed with ITC 318.

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 322 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: Introductory Physics, Algebra, Trigonometry.

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, 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, two hours of laboratory per week.

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 325 or permission of instructor. Cross listed with ITC 373.

MTC 381 Fundamentals of High Vacuum Technology (2)
Vacuum fundamentals and terminology, pumps, gauges and hardware components, and common vacuum systems. Leak detectors, coaters, ultrahigh vacuum systems, and ion implanters from the standpoint of their component parts, general operations, and maintenance requirements. Thin films for sensors, sputtering modes and ultrahigh vacuum techniques.

MTC 382 Thin Film Technology (4)
Thin film applications of metals, alloys, and polymers. High vacuum technology for thin films. Mechanical, electrical, magnetic, optical and chemical properties. Fabrication, photolithograhpy, crystal growth and other techniques. Application in micro-circuitry, wear-resistance, sensors, packaging, solar, space, energy conservation and material selection processes.

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 lecture, two hours of laboratory per week.

MTC 398 Mechanical Measurements (2)
A junior-level laboratory course that teaches the fundamentals of 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. One hour of lecture and two hours of laboratory are required each week. Students who have had ITC/MTC 198 may not register for MTC 398.

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 362 or basic understanding of AutoCAD.

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 lecture and two hours of laboratory work per week. Prerequisite: MAT 122 or equivalent. Cross-listed with CTC 430 and ITC 430.

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 451 Engineering Heat Transfer I (2)
Introduction to heat transfer, steady state conduction-one dimension, principles of convection - natural and forced convection systems, radiation heat transfer. Study of the working principles of different types of heat exchangers. One hour lecture, two hours laboratory per week. Prerequisite: MTC 352 or equivalent or consent of instructor.

MTC 452 Engineering Heat Tranfer II (2)
Steady-state multi-dimensional conduction, unsteady-state conduction, condensation and boiling heat transfer, mass transfer, heat transfer measurement techniques and special topics in heat transfer, such as magneto-fluidynamic (MFD) systems, transpiration cooling, heat pipe, low density heat transfer and ablation. One hour lecture, two hours laboratory per week. Prerequisites: MTC 352 and MTC 451 or equivalent, or consent of instructor.

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, 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 consent 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. Prerequisite: MAT 122.

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 362 or MTC 318 and MTC 322 or equivalent.

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 are presented. Requires two hours of lecture, four hours of laboratory per week. Prerequisites: CSC 300 and MTC 306 or equivalent or consent of instructor.

MTC 470 Mechanisms of Flow and Fractures in Machine Components (4)
The course will deal with the nature of plastic flow and the fracture in solids, in general, and their applications to the crack propagation and failures in machine components etc., in particular. Roles of strengthening mechanisms to reduce failures will be emphasized. Laboratory experiments and actual case studies will be performed. Requires three hours of lecture and two hours of laboratory per week. Prerequisites: MTC 336 and MTC 318 or equivalent.

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 presentation on it. Prerequisite: PHY 101 or equivalent or permission of instructor.

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 work per week. Prerequisites: MAT 122 and a formal course in computing or consent 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 330 or equivalent or permission of instructor.

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 covered in the course are: 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, four hours of laboratory per week. Prerequisite: MTC 467 or equivalent or consent 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: Consent of employer and Dean of Engineering Technology.

Music

MUS 300 Music Appreciation (4)
Provides an introductory study of a variety of music. The course includes the works of major western composers as well as sources from other traditions. An emphasis is placed on the development of structured listening based on the elements of 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. Pre-requisite: Instructor's permission, based on student's ability to perform a musical instrument appropriate to jazz performances.

Nursing

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 (3)
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 324 Contemporary Nursing Practice (2)
Principles of wellness, teaching and learning, and family theory are applied to the assessment, planning and delivery of nursing care to individuals and families with health needs. The health risk of individuals and families across culturally diverse communities and those who experience health protective and health promotion needs are identified. Models of health protection, disease prevention, and health restoration are explored and applied. A variety of contemporary topics that include traditional, complementary, and alternative strategies are presented. A comprehensive health teaching plan is emphasized that demonstrates research and principles relevant to health restoration and health promotion. Prerequisites: Matriculated status, NUR 313, NUR 314, BIO 350, current New York Registered Professional Nurse license. Pre/corequisites: Cultural Anthropology, Developmental Psychology.

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 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 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. Prerequisite: NUR 390, Corequisite: NUR 324, NUR 344.

NUR 455 Community Health Organization (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, NUR 390. Pre/Corerequisite: NUR 324.

NUR 474 Community Health Nursing (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/Corequisites: Sociology elective.

NUR 480 Special Topics in Nursing (Variable credit 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 credit 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.

NUR 493 Nursing Research Seminar (4)
The synthesis of knowledge from nursing theories, the arts, and sciences provides a basis for the examination of nursing research within culturally diverse populations. In this culminating course, students develop further skills in critical thinking, decision making, and clinical judgment as they learn to critically analyze qualitative and quantitative research designs. The application of these findings is discussed as it relates to quality nursing services within the health care delivery system. Professional standards of practice, the moral obligation to safeguard human subjects, and the ethics of care are emphasized as professional nurses participate in research activities. Professional socialization is reexamined and students reflect on past and present views of self as a developing professional. Integration of nursing theories is discussed as the students present their personal philosophy of nursing. At the end of NUR 493, the student must be within eight credits of degree completion. (Restricted to students matriculated prior to Fall 2003.)

Philosophy

PHI 330 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.

PHI 340 Ethics (4)
An examination of the central concepts and issues of ethics, the nature of ethical questions and logic as understood in Western and other cultural traditions, and methods used to make ethical decisions. Students will study major ethical theory systems, theories of moral development, and applications of ethical concepts. Students may not receive credit for both PHI 340 and PHI 350.

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.

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. Satisfies the General Education Laboratory Science Requirement. Prerequisite: MAT 111 or equivalent.

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. Satisfies the General Education Laboratory Science Requirement. Prerequisite: PHY 101 or equivalent.

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 122 or equivalent.

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.

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 300A Introduction to Physics I (4)
A general introduction to mechanics, fluids, and thermodynamics, intended for a non-technical audience. Emphasis is on learning basic principles of physics through real-life examples and a hands-on study of everyday objects. Students with majors in Engineering Technology and Photonics will NOT receive credit for this course. Satisfies the General Education Laboratory Science Requirement.

PHY 300B Introduction to Physics II (4)
A general introduction to wave phenomena, electromagnetism, optics and modern physics, intended for a non-technical audience. Basic principles of physics are studied through real-life examples and a hands-on study of everyday objects. Special coverage provided on the physics of modern light wave communication. Students with majors in Engineering Technology and Photonics will NOT receive credit for this course. Satisfies the General Education Laboratory Science Requirement. Pre-requisite: PHY 300A or equivalent.

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. Prerequisites: MAT 120 and PHY 102 or PHY 202 or their equivalents.

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. Prerequisites: PHY 325 and MAT 122 and PHY 102 or PHY 202 or their 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 lecture, two hours lab per week. Cross-listed as PHO 380. Prerequisites: optics course and Calculus II.

PHY 401 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 122 or equivalent and one year of general physics.

PHY 415 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: Differential Equations (MAT 330) and one year of general physics.

PHY 420 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. Prerequisite: PHY 201 or equivalent.

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 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 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 politial system and the role of citizens in political process. Examination of democratic theory and political philosophy in the American context.

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.

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.

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.

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.

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.

POS 352 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.

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 303 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.

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 303 or equivalent.

PSY 310 Research Methods in Psychology (4)
This lecture and laboratory course will provide actual experience in the use of a variety of methods of research design and data analysis. Students design four research projects, in small groups, by selecting an appropriate sampling procedure, and devising a method of collecting and analyzing data. It will introduce the students to recent developments in research and ethics in research. Prerequisites: STA 100 or equivalent and PSY 305 or permission of instructor.

PSY 315 Life-span Developmental Psychology (4)
Examines the physical, cognitive, social, and emotional developments of individuals from conception to death. Special attention will be given to the environmental and biological factors that contribute to normal development in childhood, adolescence, adulthood, and aging. Prerequisite: PSY 303 or equivalent.

PSY 322 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 prevalent disorders as well as their prevention. Prerequisite: PSY 303 or equivalent.

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 303 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 303 or equivalent.

PSY 342 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 303 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 303 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 303 or equivalent.

PSY 362 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 303 or equivalent.

PSY 364 Psychology of Aging (4)
Examines psychological changes and processes associated with old age. Special emphasis is given to personality, sensory and cognitive aspects of the behavior of aging individuals. Prerequisite: PSY 303 or equivalent or permission of instructor.

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 303.

PSY 373 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 303 or equivalent or permission of instructor.

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.

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 SSC 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 303 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 342 or permission of instructor.

PSY 425 Cognitive Psychology (4)
A survey of thinking and problem solving. The course will follow the history of psychological theory on thinking and problem solving, 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 362 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 342 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 342 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 303 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 322, 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 322 or PSY 331 or equivalent, or permission of instructor.

PSY 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 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 3 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. Meets Humanities or Social/Behavioral Science 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. Meets Social/Behavioral Science requirement.

STS 490 Topics in Science, Technology and Society
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. Meets Humanities or Social Behavioral Science requirement.

STS 491 Independent Study (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.

SOC 300 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.

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 300 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 300 or an introductory anthropology or sociology course.

SOC 322 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 300 or an introductory anthropology or sociology course.

SOC 332 Methods of Inquiry (4)
A lecture and laboratory course providing 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 300 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 300 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 300 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 300 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 300 or an introductory anthropology or sociology course.

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 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 300, or an introductory anthropology or sociology course.

SOC 466 Worker Social Psychology (4)
Presents previous and current sociological perspectives on the self-concept, consciousness, and alienation of the worker, both blue and white collar, in industrial society. Analyzes the impact of changes in labor processes on such social psychological factors. Explores recent efforts to influence worker social psychology, such as teams, vertical organization, and workers' self-management. Prerequisite: ANT 301 or SOC 300 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 300 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.

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 301 Elementary Spanish (3)
Designed to give the beginning student an awareness of how members of another culture communicate and live. Student achieves this by using language skills of listening, speaking, reading, and writing. The process entails study of pronunciation, basic grammar, selected vocabulary, and the culture that the language represents.

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. May not be taken for credit by students who have passed MAT 121 or equivalent.

STA 325 Applied Statistical Analysis (4)
(Cross Listed with MAT 325)
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. Prerequisite: MAT 121 or equivalent.

Telecommunications

TEL 300 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 301 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 300.

TEL 305 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 300.

TEL 307 Broadband ISDN and ATM (4)
A course dealing with the topics of broadband network technology, protocols, and implementation issues. Students should have an adequate background in the basics of telecommunications which the prerequisite provides in order to benefit from this course. Students completing this course will be exposed to all facets of the growing broadband network technology and services industry. In addition to lecture and current reading material, students will further their understanding of a single broadband topic in completing a research paper to be presented to their classmates at the end of the course. Prerequisite: TEL 305.

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 300 and TEL 301.

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 lecture, one hour lab. Prerequisites: TEL 305, 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 300.

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 305.

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 TEL381, 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. Prerequisite: TEL 305 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 305 and TEL 381.

TEL 400 Wireless Telecommunications (4)
Investigate 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. Prerequisite: TEL 301 and TEL 305.

TEL 410 Telecommunications of Still and Moving Images (4)
Past, present, and future practice in television, teleconferencing, and facsimile are surveyed. Technical details of these areas including transmission methods. Digital compression techniques. The high definition and fully digital future. Includes regulatory and market topics, as well as technical discussion. Prerequisites: TEL 301 and TEL 305, or permission of instructor.

TEL 416 Digital Telephone Switching Systems (4)
Digital telephone switching systems design and operations are covered. Programming several different systems, networking switching systems together in a laboratory environment, testing and troubleshooting are also included. Three hours of lecture and a two hour lab component per week. A self-paced computer training program is also included. Prerequisite: TEL 301.

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 300. (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 305

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 305.

TEL 435 Call Center Management Strategies (4)
Call center management provides an overview of the strategies and solutions necessary to successfully manage an incoming call center. This will include a perspective on the application of both theory and technology which enable organizations to provide cutting edge telecommunications services in support of call center operations. Prerequisite: TEL 300 and TEL 301.

TEL 450 Integrated Network Systems Management (4)
An advanced technical telecommunications course in the methodologies and practices of integrated network management. Study of network transmission methods suitable for integration, topical systems design techniques using software tools, enterprise network management strategies, and integrated network systems applications will provide the appropriate detailed knowledge a student will need to partake in this industry trend. Prerequisite: TEL 305.

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 300 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 supervisors' evaluations and one site interview required. Required contact hours min. 150. Prerequisite: Permission of instructor.

Theater

THR 300 Theater Production (2)
This is a studio course in theater, similar to studio classes in drawing or painting; the focus, therefore, is on production of a work of art — in our case, a theater production. Using the varied talents and abilities of the class, we will mount a production of polished scenes, one-acts, full length play, or an interactive educational play about current issues. Members of the class will provide the artistic and technical staffing for the production, under the overall guidance of the studio teacher. Additional assistance may also be provided by student volunteers not enrolled for credit. Because theater is an art which draws upon many areas of skill and intelligence, some reflective work will be done to document each person's personal journey. Some readings will supplement the artistic work to provide a framework for understanding theater as an art form in contemporary society. There will be some class visits to area theaters and/or productions as these opportunities become available.

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Ph.D. Virginia Polytechnic Institute

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Ph.D. Syracuse University

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M.A. University of Pennsylvania
Ph.D. Massachusetts Institute of Technology

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Ph.D. New School for Social Research

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Ph.D. University of Montreal

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Ph.D. Iowa State University

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M.S. Lehigh University
Ph.D. Lehigh University

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B.Sc. University of Rio Grande do Sul
M.S. University of Rio De Janeiro
Ph.D. University College London

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B.S. Oklahoma State University
M.S. University of Washington
P.E., New York State

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A.S. Mohawk Valley Community College
B.S. M.S. Clarkson University
Ph.D. Rensselaer Polytechnic Institute

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B.A. Boston College
M.S. State University of New York at Binghamton
Ph.D. State University of New York at Binghamton
"Ernest W. Goodell Research & Creativity Award, 1990"

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Ph.D. University of Manchester Institute of Science & Technology

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P.E. New York State

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M.E. Rensselaer Polytechnic Institute
Ph.D. Rensselaer Polytechnic Institute

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M.B.A. University of Illinois
Ph.D. University of Buffalo
"The State University Chancellor's Award for Excellence in Teaching, 1989"

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Ph.D. North Carolina State

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B.S. National Taiwan University
M.S. University of Akron
M.S. University of Michigan

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B.Sc. Panjab University
M.Sc. Panjab University
Ph.D. London University

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B.Ch.E. The Cooper Union
Ph.D. Cornell University

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B.A. State University of New York at Geneseo
M.S. State University of New York at Stony Brook
Ph.D. State University of New York at Stony Brook

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Ph.D. University of Pittsburgh

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M.S.E.E. Electrical Engineering University, St. Petersburg, Russia
M.A. City University of New York Graduate School and University Center
Ph.D. City University of New York Graduate School and University Center

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Ph.D. University of Connecticut at Storrs

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M.S. Rensselaer Polytechnic Institute
Ph.D. Rensselaer Polytechnic Institute

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M.S. Syracuse University
Ph.D. Wayne State University

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Ph.D. University of Wisconsin

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"Ernest W. Goodell Research & Creativity Award, 1992"

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M.S. Panjab University
Ph.D. Loughborough University
"Ernest W. Goodell Research & Creativity Award, 1993"

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D. Eng. Concordia University
"The State University Chancellor's Award for Excellence in Teaching 1995"

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Ph.D. Bradford University

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M.S. Syracuse University

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M.A. Naval War College

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M.S. Rensselaer Polytechnic Institute
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Ed.M. Northeastern University

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Ph.D. University of Illinois

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"The State University Chancellor's Award for Excellence in Professional Service, 1982"

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"The State University Chancellor's Award for Excellence in Teaching, 1998"

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M.S. University of Maryland

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M.A. Trinity University
Ph.D. Michigan State University

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Ed.D. State University at Buffalo

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State University of New York

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 most diverse system of public higher education.

When founded in 1948, the University consolidated 29 state-operated but unaffiliated institutions whose varied histories of service dated as far back as 1816. It has grown to a point where its impact is felt educationally, culturally and economically the length and breadth of the state, the country and the world.

As a comprehensive public university, State University of New York provides an excellent educational experience to the broadest spectrum of individuals. More than 403,000 students are pursuing traditional study in classrooms and laboratories or are working at home, at their own pace, through such innovative institutions as the SUNY Learning Network and Empire State College, for more than 25 years a leader in non-traditional education, distance learning, and assessment of prior learning.

State University's research contributions are helping to solve some of today's most urgent problems. At the same time, contracts and grants received by University faculty directly benefit the economic development of the regions in which they are located.

State University researchers pioneered nuclear magnetic resonance imaging, introduced time-lapse photography of forestry subjects, isolated the bacteria that causes Lyme disease, developed the first implantable heart pacemaker, and researched ways to control blood pressure that laid the ground work for many new and important discoveries, including the impotence drug Viagra, and the treatment of deadly diseases. Other University researchers continue important studies in such wide-ranging areas as breast cancer, immunology, marine biology, sickle-cell anemia, and robotics, and make hundreds of other contributions, inventions and innovations for the benefit of society.

The University's program for the educationally and economically disadvantaged, consisting of Educational Opportunity Programs (EOP) and Educational Opportunity Centers (EOC), has become a model for delivering better learning opportunities to young people and adults traditionally bypassed by higher education. Over the past 30 years, almost 482,000 New York State residents have been served.

EOPs and EOCs currently serve thousands of students at 47 State University campuses, providing counseling and tutoring to improve scholastic performance, and support services in such areas as academic planning, housing and financial aid.

The 30 locally-sponsored two-year community colleges operating under the program of the State University offer local citizens programs that are directly and immediately job-related as well as degree programs that serve as job-entry educational experience or a transfer opportunity to a baccalaureate degree at a senior campus. In the forefront of efforts to meet the accelerating pace of technological developments and the requirements of continuing educational opportunity, they provide local industry with trained technicians and help companies and employees in retraining and skills upgrading.

State University's involvement in the health sciences and health care is extensive and responsive to the rapid changes in society and the growing needs identified by the state's public health community.

Hundreds of thousands of New York's citizens are served each year by medical and health sciences faculty and students in University hospitals and clinics or affiliated hospitals.

The University's economic development services programs provide research, training and technical assistance to the state's business and industrial community through Business and Industry Centers, the New York State Small Business Development Center, the Strategic Partnership for Industrial Resurgence, Rural Services Institutes, the Trade Adjustment Assistance Center, Technical Assistance Centers, Small Business Institutes, Centers for Advanced Technology, and international development.

State University libraries, the major resource which supports the teaching and research activities of its students and faculty, are an important community resource too. Annual attendance at the University's libraries is more than 20 million students, faculty and public citizens. More than 20 million volumes and government documents are available, including nearly 10,000 CD-ROMS and other computer files. Most of the libraries provide Internet access and most library catalogs are accessible on the Internet.

The University passed a major milestone in the mid-1980s when it graduated its 1 millionth alumnus, and currently numbers 1.9 million graduates on its rolls. The majority of the University's alumni reside and pursue careers in communities across New York State, contributing to the economic and social vitality of its people.

State University of New York is governed by a Board of Trustees, appointed by the governor, which directly determines the policies to be followed by the 34 state-supported campuses. Community colleges have their own local boards of trustees whose relationship to the State University Board is defined by law.

Campuses of the State University of New York

University Centers/ Doctoral Granting Institutions

University Center at Albany
University Center at Binghamton
University Center at Buffalo
University Center at Stony Brook
College of Environmental Science and Forestry
College of Optometry
College of Ceramics at Alfred University
State University Heath Science Center at Brooklyn
State University Health Science Center at Syracuse
College of Agriculture & Life Sciences
College of Human Ecology
College of Veterinary Medicine
School of Industrial & Labor Relations

University Colleges

College at Brockport
College at Buffalo
College at Cortland
College at Fredonia
College at Geneseo
College at New Paltz
College at Old Westbury
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam
College at Purchase
Empire State College

University Colleges of Technology

College of Agriculture and Technology at Cobleskill
College of Agriculture and Technology at Morrisville
College of Technology at Alfred
College of Technology at Canton
College of Technology at Delhi
College of Technology at Farmingdale
SUNY Institute of Technology
Maritime College

Community Colleges

Adirondack Community College
Broome Community College
Cayuga Community College
Clinton Community College
Columbia-Greene Community College
Corning Community College
Dutchess Community College
Erie Community College
Fashion Institute of Technology
Finger Lakes Community College
Fulton-Montgomery Community College
Genesee Community College
Herkimer County Community College
Hudson Valley Community College
Jamestown Community College
Jefferson Community College
Mohawk Valley Community College
Monroe Community College
Nassau Community College
Niagara County Community College
North Country Community College
Onondaga Community College
Orange County Community College
Rockland Community College
Schenectady County Community College
Suffolk County Community College
Sullivan County Community College
Tompkins Cortland Community College
Ulster County Community College
Westchester Community College

Index of Courses

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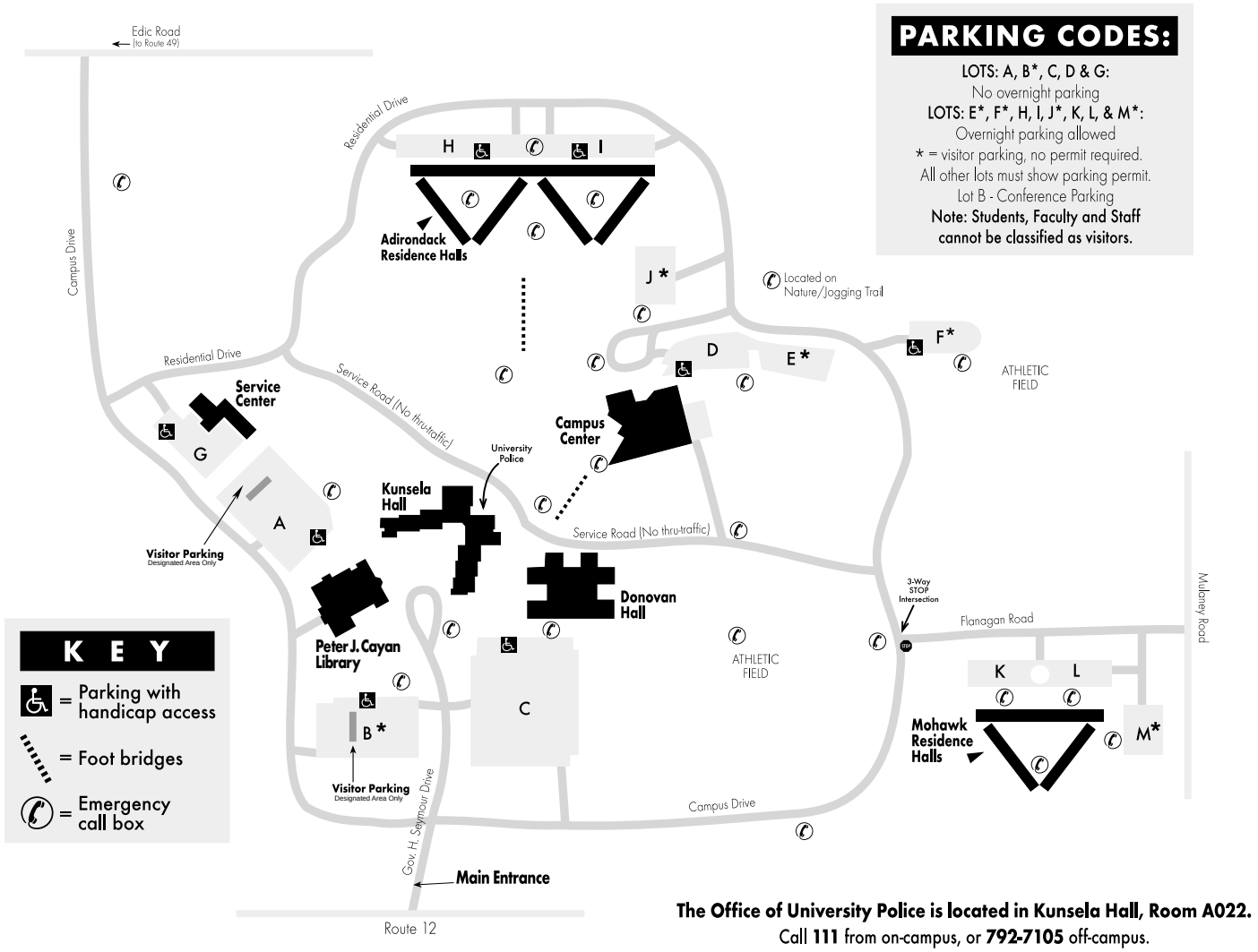
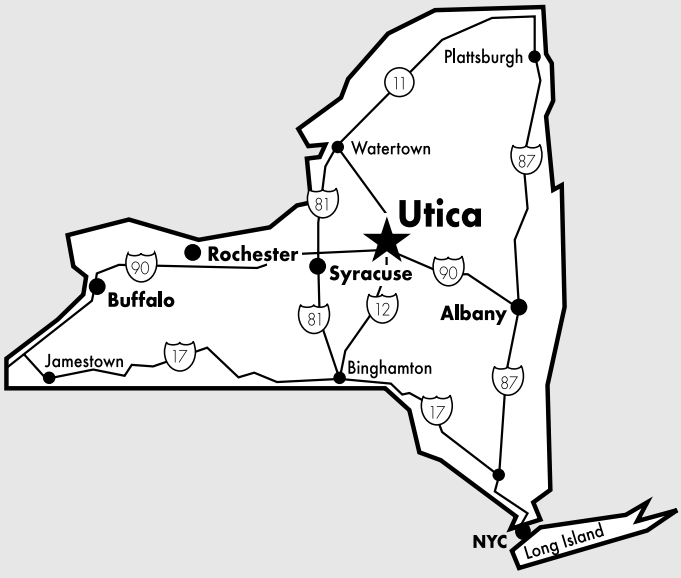
Listing of Campus Offices

Offices	Building/Room	Phone
Admissions	Kunsela Hall A108	(315) 792-7500
Alumni Affairs	Kunsela Hall A231	792-7110
Athletics	Campus Center 125	792-7520
Bookmark (Campus Bookstore)	Campus Center 229	792-7257
Business (Bursar)	Kunsela Hall A210	792-7412
Campus Life	Campus Center 221	792-7530
Career Services	Donovan Hall G172	792-7165
College Association	Kunsela Hall C104	792-7341
College Relations & Development	Kunsela Hall A231	792-7113
Computing Services	Kunsela Hall C030	792-7440
Counseling & Special Programs	Campus Center 208	792-7805
Facilities	Service Bldg. 102	792-7456
Financial Aid	Kunsela Hall A217	792-7210
Food Service	Campus Center 115C	792-7224
Grants	Kunsela Hall A010	792-7270
Health & Wellness Center	Campus Center 217	792-7172
Human Resources	Kunsela Hall A011	792-7191
Instructional Resources	Kunsela Hall A012	792-7180
Learning Center	Donovan Hall G155	792-7310
Library	Peter J. Cayan Library	792-7245
President	Kunsela Hall A225	792-7400
Print Shop	Kunsela Hall A002	792-7204
Registrar	Kunsela Hall A209	792-7265
Residential Life & Housing	Adirondack Halls CC2	792-7810
School of Arts and Sciences	Donovan Hall 2123	792-7333
School of ISET	Donovan Hall 1191	792-7234
School of Management	Donovan Hall 1101	792-7429
School of Nursing & Health Systems	Donovan Hall 1143	792-7295
Student Activities	Campus Center 221	792-7530
Student Association	Campus Center 209	792-7135
University Police	Kunsela Hall A022	792-7106
Veteran's	Kunsela Hall A209	792-7265
Vice Pres. for Academic Affairs	Kunsela Hall A221	792-7200
Vice Pres. for Administration	Kunsela Hall A225	792-7300
Vice Pres. for Resource Development	Kunsela Hall A235	792-7113
Vice Pres. for Student Affairs	Campus Center 208	792-7505

Campus Map/Directions



The Office of University Police is located in Kunsela Hall, Room A022.
Call **111** from on-campus, or **792-7105** off-campus.



Directions

From the New York State Thruway: Take exit 31. Follow signs to Route 790. Take 790 to Routes 8/12 north and follow signs to SUNYIT (Horatio Street/Mulaney Road exit).

From the North: Take Routes 8/12 south and follow signs to SUNYIT (Horatio Street/Mulaney Road exit).

From the South: Take Routes 8/12 north and follow signs to SUNYIT (Horatio Street/Mulaney Road Exit).

From the East: Take Route 5 to Routes 8/12 north and follow signs to SUNYIT (Horatio Street/Mulaney Road exit).

From the West: Take Route 5 or Route 49 to Routes 8/12 north and follow signs to SUNYIT (Horatio Street/Mulaney Road exit).