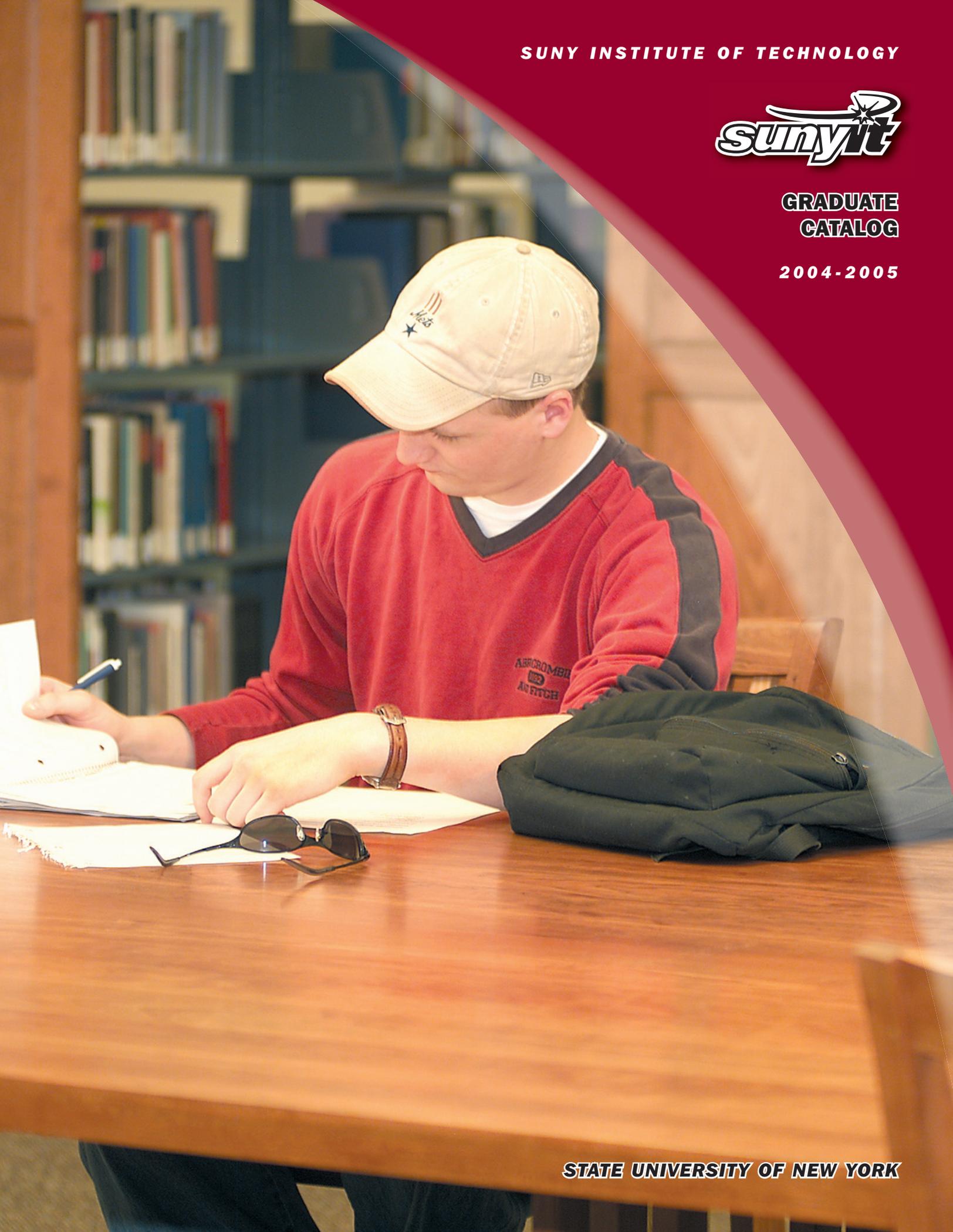


SUNY INSTITUTE OF TECHNOLOGY



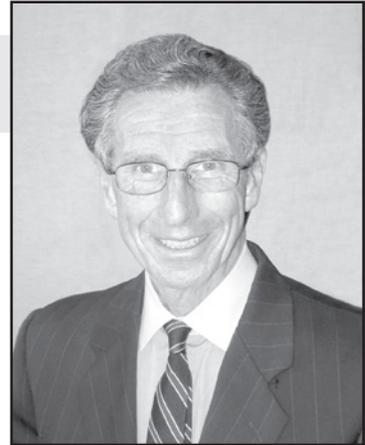
**GRADUATE  
CATALOG**

**2004-2005**



**STATE UNIVERSITY OF NEW YORK**

## President's Message



### ***Welcome!***

*The State University of New York Institute of Technology – SUNYIT – is unique among the campuses of the largest public system of higher education in the nation, the State University of New York.*

*Founded in 1966, SUNYIT provides high quality undergraduate and graduate degree programs in technology and professional studies. Opportunities abound for graduate and undergraduate students from all over the U.S. and around the world.*

*Providing what we like to call a “focused education for focused students,” SUNYIT is situated on 800 acres of Central New York’s most beautiful terrain – in the foothills of the Adirondacks. Our students and faculty enjoy 21st century academic facilities in a picturesque, natural setting.*

*This catalog will provide you with a wealth of information about our graduate degree programs, and our faculty and staff will be glad to answer any questions you may have. On behalf of the SUNYIT family, I wish you the best in all your endeavors.*

*Sincerely,*

A handwritten signature in black ink that reads "Peter A. Spina". The signature is written in a cursive, flowing style.

***Dr. Peter A. Spina***  
*President*

*The information contained in this catalog is correct at the time of printing. Changes in policies, requirements, and regulations may occur during the year.*

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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 main-frame 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.



# Graduate Student Housing

The Residential Life Office is proud to offer housing to graduate students in SUNYIT highly rated townhouse apartments.

Each apartment provides accommodations for up to four students, offering either single or double bedroom apartments.

A number of these apartments are handicap accessible. Student bedrooms are equipped with access to state-of-the-art computer network and telephone service that provides students contact with the SUNYIT community and the entire world.

A limited number of one-year Residential Scholarships are available to new students who meet the cumulative GPA requirements. Please contact the Admissions Office for details.

On-campus housing requires a room deposit of \$100 at the time an accepted student requests campus housing.

The housing deposit is not refundable after May 1 for the fall semester. However, if a student deposit is accepted after May 1, a refund request will be considered for up to 30 days after payment of the deposit. For the spring semester, the housing deposit is not refundable after 30 days following payment of the deposit. 2003-2004 semester rates for on-campus housing meal plans are as follows:

## 2003-2004 Rates

Single 19/week (includes 100 pts) *	\$3,700/semester	\$7400/year
Single 14/week (includes 100 pts)	\$3,600/semester	\$7200/year
Single 125/semester (includes 200 pts)	\$3,650/semester	\$7300/year
Single 100/semester (includes 400 pts)	\$3,675/semester	\$7350/year

Double 19/week (includes 100 pts) *	\$3,400/semester	\$6800/year
Double 14/week (includes 100 pts)	\$3,300/semester	\$6600/year
Double 125/semester (includes 200 pts)	\$3,350/semester	\$6700/year
Double 100/semester (includes 400 pts)	\$3,375/semester	\$6750/year

\*denotes default plan for students who do not identify a choice.

The Campus Life Office also provides assistance to SUNYIT students in locating housing in the Utica-Rome area; including information available apartment/housing and providing individual advisement in such diverse areas as lease reading, conflict resolution, and budgeting.

Students have found the office to be a valuable resource in securing comfortable and economical housing. Appointments may be made in the Campus Life Office throughout the year.

# Admissions

## Application Information

An application for admission to graduate study at SUNYIT must be filed, along with all supporting documents to the Admissions Office. It is suggested that fall semester applications be submitted by June 1; applications for spring semester admission should be filed by December 1.

**Admission to graduate study involves the following:**

- **Application/Application Fee**  
Submit the Graduate Application and a \$50.00 application processing fee (payable to SUNY Institute of Technology) to the Admissions Office. Applicants must indicate choice of program as well as choice of concentration (if applicable) when applying.
- **Transcripts**  
Graduates of colleges other than SUNYIT must forward official transcripts of all undergraduate and graduate work to the Admissions Office. A bachelors degree is required for consideration. A minimum 3.0 undergraduate GPA is typically required for admission.
- **GRE/GMAT Scores**  
**GRE/General Test** scores are required for Adult Nurse Practitioner, Advanced Technology, Computer Science, Family Nurse Practitioner, Nursing Administration, and Telecommunications.  
**GMAT Test** scores are required for Accountancy and Technology Management. GMAT or GRE test scores are required for Health Services Administration.
- **Professional References**  
Professional references must be submitted for an admission decision to be rendered.  
**One letter of reference is required** for the following programs: Accountancy, Computer Science, Health Services Administration and Technology Management.  
**Two letters are required** for the following programs: Information Design and Technology, Nursing Administration, Adult Nurse Practitioner, and Family Nurse Practitioner.  
**Three letters are required** for the following programs: Applied Sociology, Telecommunications and Advanced Technology (1-3 letters for MSAT).
- **Narrative Statement**  
Narrative statement of objectives for graduate study must be submitted for the following programs: Advanced Technology, Applied Sociology, Adult Nurse Practitioner, Family Nurse Practitioner, Information Design and Technology, Nursing Administration and Telecommunications. Refer to back page of this catalog.
- **Nursing Administration, Family Nurse Practitioner and Adult Nurse Practitioner applicants** must also submit: A) a transcript demonstrating successful completion of a basic statistics course, and an undergraduate health assessment course, (for Family and Adult Nurse Practitioner applicants only), and B) evidence of current licensure as a registered professional nurse in New York State.
- **Interview**  
A personal interview with a faculty member is required for MS applicants within the School of Nursing and Health Systems. A personal interview with the Admissions Office is encouraged as part of the admissions process for all graduate programs. An interview may be required for marginal applicants.

Once the Admissions Office receives all required documents, the credentials will be reviewed and a final decision will be forwarded to the applicant. After formal admission to degree standings, a student will be assigned a faculty advisor. Questions regarding admission should be referred directly to the Admissions Office at SUNYIT.

## Readmission

Students seeking readmission to SUNYIT must file a readmission petition form with the Admissions Office. Readmission is required if you have been out for three consecutive semesters.

## Change of Program

If a student currently enrolled in a specific degree program desires to change from one department/school to another, an application form for the new program must be submitted to the Admission's Office.

## Withdrawal

Students who withdraw from SUNYIT, for any reason, are responsible for officially clearing all records and obligations. Appropriate forms and procedures may be obtained from the Registrar's Office.

## Leave of Absence

Leave of absence for a specified period of time may be granted to a student not subject to academic dismissal. A student applying for a leave of absence must give a definite date for re-registration at SUNYIT. A student not returning for re-registration within the specified time will be classified as an official withdrawal. Application for a leave of absence must be made to the dean of the school in which the student is enrolled.

## Degree Requirements

Policies, procedures and degree requirements for the graduate programs are in agreement with SUNYIT policies for graduate study as stated in the Graduate Studies Policies and Procedures Manual. Within that framework, each program is autonomous in establishing specific degree requirements. Individual program policies and procedures may be reviewed in the individual program descriptions.

## Time Limit on Completing Degree Requirements

Courses completed more than seven (7) years before the term in which the degree is awarded may not be used for credit toward the advanced degree. In the event that attendance has been interrupted due to extenuating circumstances, exceptions may be made by the department/schools with approval of the Executive Vice President for Academic Affairs.

Degree requirements are determined by the catalog under which the student is initially matriculated, and remain in force if the student maintains continuous matriculation. A student who discontinues enrollment for one year or more may apply for readmission and then fulfill the degree requirements in effect at that time.

## Non-Degree Study

Students may take graduate courses for which they have met the prerequisites without formal admission to the degree program, on a space-available basis. A maximum of six credit hours is recommended for non-degree study. Permission of the dean of the school in which the graduate course is taught is required before a non-matriculated student may register. Students may choose to continue taking coursework above the six hour total, but may not take more than 12 hours before matriculating in their program of study. Graduate coursework taken while in non-degree status may be applicable to the degree program upon formal admission, **however, there is no guarantee of credit applicability or admission by completing coursework in non-degree status.**

## Transfer of Graduate Credit

1. Students seeking transfer credit, at the time of admission, must provide official transcripts to the Admissions Office at SUNYIT.
2. Only graduate courses with a grade of A or B are transferable. Transfer credit will not be included in the computation of a graduate student's grade point average.
3. A maximum of six hours of graduate work may be accepted for transfer credit by SUNYIT, with the exception of the School of Nursing and Health Systems major in Adult Nurse Practitioner, or Family Nurse Practitioner, which accepts up to nine credits. A maximum of 12 hours of graduate coursework may be accepted for Technology Management (MBA) students.
4. If, after being admitted to a degree program, a student wishes to transfer courses from another institution, he or she must submit an academic petition to his or her advisor. A petition requesting such approval must include institution name, catalog number, title, and description of each course being proposed for transfer credit. Upon completion of the course, an official transcript must be sent to the Registrar's Office at SUNYIT. A copy will be forwarded to the appropriate academic school. The maximum six-hour transfer applies.

## Residency Requirements

Students in graduate degree programs must complete at least 27 semester hours of graduate credit in residence at SUNYIT. It should be noted that bridge coursework required for the computer science program cannot be applied to this requirement.

## Full-Time/Part-Time Graduate Status

A full-time student is one who has registered for a minimum of 12 credit hours per semester. Students awarded graduate assistantships are classified as full-time students when enrolled for nine credit hours of graduate coursework per semester. The maximum student load is considered 15 graduate credit hours per semester.

A part-time graduate student is one who is registered for less than 12 credit hours per semester.

## International Students

In addition to admission requirements pertaining to graduate study, international students must also submit satisfactory scores from the Test of English as a Foreign Language (TOEFL) unless they have graduated from a U.S. College/University. The minimum acceptable score for admission is 550 for paper-based tests or 213 on the computer based exam. Students with TOEFL scores below 550 may submit other proof of English proficiency (i.e., strong GRE/GMAT scores relevant to English language proficiency, or evidence of prior successful study in an English speaking college or university). English language proficiency will be evaluated on an individual basis. International students may be required to have their transcripts evaluated by World Education Services (WES) to determine U.S. credit equivalencies. Contact admissions for information pertaining to foreign student requirements/visa. The application deadline for International Students applying for fall is June 1. The application deadline for spring applicants is November 1. This school is authorized under Federal law to enroll nonimmigrant students.

## Standardized Examinations

### Graduate Record Examination

Scores from the Graduate Record Examination (GRE/General Test) are required for the graduate programs in advanced technology, adult nurse practitioner, computer science, family nurse practitioner, nursing administration, telecommunications and Health Services Administration (or GMAT). The GRE is administered through the National Program for Graduate School Selection and the Educational Testing Service. The aptitude test is a 3 1/2-hour examination which measures general scholastic ability at the graduate level and yields separate scores for verbal, quantitative, and analytical abilities. Please note that the proper code number (2896) must be used for scores to be reported to SUNYIT.

These examinations are offered through computer-based testing. Score reports take approximately four to six weeks to reach the Admissions Office. Students should, therefore, register for the examination in time for the scores to reach the Admissions Office by the appropriate application dates.

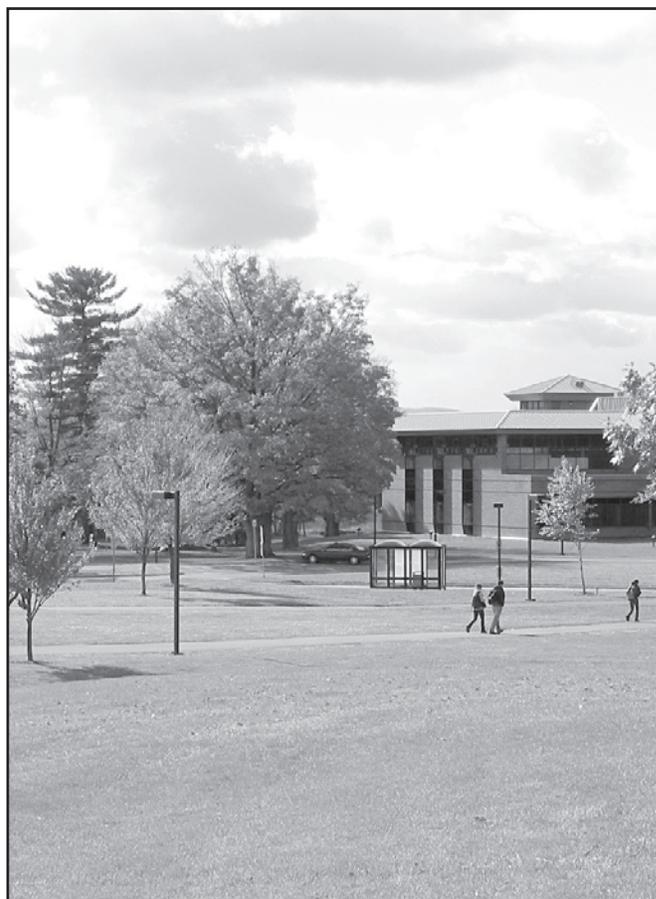
Further information may be found in the GRE Information Bulletin available at the Admissions Office, or by calling GRE at 1 800 753-3160; or on-line at [www.gre.org](http://www.gre.org).

### Graduate Management Admission Test

Scores from the Graduate Management Admission Test (GMAT) are required for the accountancy, technology management, and Health Services Administration (or GRE) programs. The GMAT is a 3 1/2-hour aptitude test designed to measure certain academic skills important in the study of management at the graduate level. This test does not measure judgment or knowledge in any specific subject matter, and those who take it are neither required nor expected to have undergraduate preparation in business subjects.

The GMAT is offered exclusively through computer-based testing. Scores are sent to the Admissions Office by the Educational Testing Service (ETS) four to six weeks after each test date. Applicants should, therefore, take care to register for the examination in time for the scores to reach the Admissions Office before the appropriate deadline dates. Please note that the proper code number (2896) must be used for scores reported to the Admissions Office at SUNYIT.

Further information may be found in the GMAT booklet, available at the Admissions Office, or by calling GMAT at 1 800 GMAT NOW; or on-line at [www.mba.com](http://www.mba.com).



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# Health & Wellness Center

The Health & Wellness Center, conveniently located in the Campus Center, provides evaluation and treatment of health-related problems for full and part-time students. The Health & 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 & 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 & 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 & 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 & 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 & Wellness Center.

The student may only receive first-aid and emergency care from the Health & 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 of New York 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 & 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 & Wellness Center, phone 315/792-7172, Fax 315/792-7371.

## Health Education

The mission of Health Education Services is to provide the students with the most valuable, current information that will prepare them to lead healthy lives long after leaving the learning environment.

- To provide the most accurate, up-to-date educational materials
- To provide proper guidance and referrals when necessary and appropriate
- To maintain confidentiality
- To listen to students concerns and/or suggestions and do the best to make the services better
- To provide students with the information and tools necessary to experience optimal health
- To make students aware of potential dangers to their health and the proper ways to avoid these consequences

### *Services include:*

- Free, confidential HIV testing- Orasure, oral fluid testing
- Alcohol & substance abuse screening & counseling
- Peer health education
- Pamphlets, brochures and other educational materials on various health topics
- Education available for all health concerns
- Appropriate guidance and referrals available

All services mentioned above are free and confidential!

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# Financial Assistance

## Academic Requirements for Financial Aid

To be eligible for financial aid you must be accepted into a degree program, be enrolled for at least six credit hours each semester for federal aid programs and 12 credit hours each semester for the Tuition Assistance Program (courses you have previously passed and are now repeating cannot be counted toward the required 12 hours), and be in good academic standing. These requirements are the same for undergraduate students. Please refer to the Undergraduate Catalog for details.

## Aid Programs

- **Federal College Work-Study Program**
- **Tuition Assistance Program**
- **Federal Perkins Loan**
- **William D. Ford Federal Direct Loan Program**

More detailed information about the aid programs and the application procedures is contained in SUNYIT's financial aid booklet or on the website at [www.sunyit.edu/administration/offices/finaid](http://www.sunyit.edu/administration/offices/finaid).

## Graduate Assistantships

Assistantships are awarded each academic year to selected students. These awards may include a New York State tuition scholarship and/or a cash stipend. Students awarded graduate assistantships are classified as full-time students when enrolled for nine credit hours of graduate coursework per semester. Graduate assistants generally enroll for 9 credit hours per semester and are assigned teaching, research, or administrative responsibilities for 10-20 hours per week.

Students interested in a graduate assistantship should complete the "Application for Graduate Assistantship" form in the back section of this catalog. This automatically establishes an assistantship application file for the applicant. Additional material may be required to complete the assistantship application. Candidates will be contacted by the screening committee if such materials are necessary. A 3.0+ undergraduate GPA is required to be considered for an assistantship.

Recommendations for assistantship are made to the Provost/Vice President for Academic Affairs through a selection process involving each dean. All graduate assistantship appointments and notifications will be made by the Provost/Vice President for Academic Affairs. The assignment of an assistantship will not be made prior to a formal admission decision.

A student may receive a maximum of two years of support from state funding while pursuing the master's degree (upon discretion of the department and academic standing). A 3.0 GPA within the graduate program must be maintained while on the assistantship. Exceptions to this policy should be directed to the Provost/Vice President for Academic Affairs.

Once the assistant has been selected, the formal appointment to the position will be processed through the Office of Human Resources.

Graduate assistants are expected not to engage in outside employment during the term of their appointment. Exceptions based on educational need (not financial need) may be authorized by the Provost/Vice President for Academic Affairs after being recommended by the student's department/school chairperson and the dean of the appropriate academic school.

Graduate assistants may not hold two assistantships or other similar awards of any kind concurrently.

Graduate assistants are expected to provide their usual services during the period of the academic year except for holidays and recesses. However, assistants in certain administrative offices

or departments/schools may be expected to provide services over the entire period (including recesses), provided this arrangement is understood by the student at the time of the appointment.

Each assistant and his or her supervisor must certify that the assistant has satisfactorily fulfilled the assignment and duties of his or her position. The attendance sheet should be signed at the end of each month and kept by the supervisor. At the end of each semester, it is to be returned to the Office of Human Resources. In addition, a brief report outlining duties and responsibilities, and performance evaluation must be submitted by the supervisor to the Provost/Vice President for Academic Affairs at the end of each semester.

## Underrepresented Graduate Fellowship Program

A limited number of Underrepresented Graduate Fellowships are available (pending SUNY funding) to full-time students who qualify for admission, with a minimum GPA of 3.0. The Underrepresented Graduate Fellowship Program assists African-American, Hispanic/Latino American and Native American students with tuition and stipend support. (Stipend dollars are considered as income and therefore are taxable.)

Please contact the Admissions Office for additional information.

## Graduate Opportunity Program

The Graduate Opportunity Program is for former EOP, HEOP, CD, and SEEK program graduates and reflects SUNYIT's concerted efforts to expand educational opportunities to under-served constituencies. The graduate tuition scholarship will provide students with financial support to help cover the cost of tuition. The number of awards is subject to the availability of funds. Questions should be directed to the Coordinator of Special Programs at SUNYIT.

## Graduate Residential Scholarships

Graduate students attending full-time and planning to live in one of the residence halls are eligible to be considered for a Graduate Residential Scholarship. The scholarship is for one year and is non-renewable. The amount and number of awards is subject to the availability of funds.

Students interested in being considered for a Graduate Residential Scholarship, should indicate their desire to live in on-campus housing on the Application for Graduate Admissions form. Please apply early, as scholarships are limited. Questions should be directed to the Admissions Office.

## Private Scholarships and Fellowships

Several source books list scholarships and fellowships awarded by private organizations. A few of these may be available through your library. They include: The College Blue Book Scholarships, Fellowships, Grants and Loans; Directory of Financial Aids for Women; The Grants Register; and Scholarships, Fellowships and Loans.

In addition, you may access, an on-line searchable database of scholarships at <http://www.finaid.org>.

## International Student Financial Aid

International students are not eligible for financial aid through the New York State Aid Programs or through the Federal Title IV Aid Programs. International students interested in financial aid funding should visit the following internet sites: [www.edupass.com](http://www.edupass.com), [www.iie.org](http://www.iie.org), [www.isoa.org](http://www.isoa.org), [www.iefaf.org](http://www.iefaf.org), and [www.iefc.com](http://www.iefc.com).

### For more information: Financial Aid Office

SUNY Institute of Technology  
P.O. Box 3050, Utica, NY 13504-3050  
(315) 792-7210  
e-mail: [finaid@sunyit.edu](mailto:finaid@sunyit.edu)  
Internet: [www.sunyit.edu](http://www.sunyit.edu)

# Tuition, Fees and Refunds

## Planned Tuition Increase for Graduate, MBA, and Out of State Students

The State University of New York is planning a 3% - 5% tuition increase for the 2004-05 year for Graduate, MBA, and Out of State Students. This increase cannot be implemented until the New York State budget is passed. Students should anticipate being billed for the additional tuition amount as soon as the necessary approvals are in place.

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

<b>Undergraduate</b>	<b>Full-Time</b>	<b>Part-Time</b>
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	\$447 per semester	\$35 per credit hr.

<b>Graduate</b>	<b>Full-Time</b>	<b>Part-Time</b>
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	\$427 per semester	\$35 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:

	<b>Full-time</b> (Per Semester)	<b>Part-time</b> (Per Credit Hour)
College Fee	12.50	.85
Intercollegiate Athletics	135.00	11.25
Student Activities	85.00	5.00
Health Services	110.00	9.20
Technology Applications	104.50	8.70
	<b>\$447.00</b>	<b>\$35.00</b>

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

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

### Undergraduate/Graduate - 15 Week Schedule (Full Semester)

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

### Undergraduate/Graduate - Quarter or 10 Week Term

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

### Undergraduate/Graduate - 8 Week Term

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

### Undergraduate/Graduate - 7 Week Term

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

### Undergraduate/Graduate - 5 Week Term

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

### Undergraduate/Graduate - 4 Week Term

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

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

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

Please check with the 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 ( $.2 \times \$1000$ ) and the unearned portion is \$800 ( $.8 \times \$1000$ ). \$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. ( $\$1987.5 \text{ tuition} \times .8 \text{ unearned \% applied to institutional costs} = \$1590$ )

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

## Schedule of Other Fees and Charges

**Combined Room and Board Rates 2004-05**  
**Per Semester**

Room	Meal Plan	Basic
Single	19/week (includes 100 pts)*	\$3,895
Single	14/week (includes 100 pts)	\$3,790
Single	125/semester (includes 200 pts)	\$3,845
Single	100/semester (includes 400 pts)	\$3,870
		Double
	19/week (includes 100 pts)*	\$3,580
Double	14/week (includes 100 pts)	\$3,475
Double	125/semester (includes 200 pts)	\$3,530
Double	100/semester (includes 400 pts)	\$3,555

\* 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	\$169/sem.	Optional
ID Card Replacement Fee	\$15	\$15
Late Registration Fee	\$40	\$40
Orientation Fee — paid once during first semester		
<i>freshman</i>	\$70	\$70
<i>transfer</i>	\$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	\$25
HVCC Technology Fee — HVCC students only	\$100	\$7.50 cr. hr.
HVCC Parking Fee — HVCC students only	\$64.80	\$5.40 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 for students admitted after May 1 within 30 days of the date of deposit.

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

Part-time and EOP students are not required to submit a tuition deposit.

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 a dormitory room 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 prior to attendance. It is the student's responsibility to insure that the waiver form is on file, as the charge becomes final on the last day to waive. Waiver forms will then no longer be accepted and the student is responsible for the payment of the insurance fee. **Part-time students may purchase coverage if they so desire.** Waiver forms must be submitted on the Web **each semester prior to attendance.**

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

1. Press the Medical Insurance Waiver link at the bottom of the Registration Page,
2. Complete the *Medical Insurance Waiver Form*,
3. Press *SUBMIT/Wait for message: "Your waiver has been successfully submitted."*

The cost of Student Medical Insurance will be deducted from your bill after approval by Health Center Director.

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

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

The cost of Student Medical Insurance will be deducted from your bill after approval by Health Center Director.



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

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

Since both the international and domestic insurance plans are obtained through prior arrangement with insurance agencies independent of the State University of New York, cost per year is variable based on experience rating for the program. Students will be charged the appropriate rate at the time they begin 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.....	\$338 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):

<i>Time Period</i>	<i>Full-time</i>	<i>Part-time</i>
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](http://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](http://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](http://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](http://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.

## FERPA

### Family Educational Rights and Privacy Act of 1974

The Family Educational Rights and Privacy Act of 1974 prohibits the release of privileged information to anyone except authorized personnel. If a student wishes another individual such as parents or spouse to have access to privileged information regarding their account, they must complete the release form obtained from the Student Account's Office or online at [www.sunyit.edu](http://www.sunyit.edu) and return it to the Student Account's Office before any information will be released. It is only necessary to complete this release one time if there are any changes to this information you must notify us immediately.



## 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.

# Academic Procedures and Policies

Information on advisement, progression, retention, grading policies, course load, and procedures for processes such as add/drop, change of graduate status, advancement to candidacy, etc., can be obtained from the appropriate academic school.

## Academic Standards

Each graduate degree student must maintain an overall academic grade point average of 3.0 (B grade). A student may, through the advisor, submit a petition to the school to repeat a maximum of two (2) courses in which a C grade is received.

If a student does not receive a passing grade in a course, which is a prerequisite for another course in the program, the student may not proceed to take other course(s) until the prerequisite has been met.

## Grading System

Letter grades are used for the final rating in all courses. The grades and an interpretation of the quality of work follow:

A	Excellent	4.0	Quality Point Per Credit Hour
A-		3.67	Quality Point Per Credit Hour
B+		3.33	Quality Point Per Credit Hour
B	Good	3.0	Quality Point Per Credit Hour
B-		2.67	Quality Point Per Credit Hour
C+		2.33	Quality Point Per Credit Hour
C	Passing	2.0	Quality Point Per Credit Hour
F	Failing	0.0	Quality Point Per Credit Hour
I	Incomplete	This grade is granted by the instructor when a student has failed to complete course requirements on schedule. An incomplete grade must be removed by mid-semester of the following regular semester unless the student has applied in writing and has received an extension for a specified time. Approval of requests for renewal will be at the option of the faculty member and school dean. Any incomplete grade not removed within the stated time will become an F grade at the next semester midpoint.	
IP	In Progress	Passing	This grade 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. practicums, internships, research, etc. An IP grade that is not removed by the end of the following semester will be recorded as an F grade.
S	Satisfactory	Upon receipt of a Satisfactory grade the student will receive credit for the registered number of semester hours.	
U	Unsatisfactory	With an Unsatisfactory grade, the student must register again for the requisite number of semester hours in order to receive credit toward degree requirements.	
W	Withdraw	Students who find it necessary to withdraw from a course must notify the Registrar's Office within the approved time frame to receive a W for the course.	

## Academic Probation and Dismissal

At the end of each semester, the academic standing of each matriculated graduate student will be reviewed by the graduate program committee in the student's major department. Students with a GPA

below 3.0 and who have two (2) or more C (or below) grades, will be placed on academic probation.

Students with a GPA of 2.3 or below, and who have more than three (3) C or lower grades, will be academically dismissed. A student may be academically dismissed without first being on academic probation. The dismissal decisions can be appealed to the school graduate program committee. Results of this review will be communicated in writing to the Registrar's Office.

## Auditing

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. Students taking courses for audit must register 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 college transcript.

## Dual Master's Degrees

1. A student possessing a master's degree from another institution may earn a second master's degree from SUNYIT by completing the specific degree requirements and the college residency requirement.
2. A student may earn two master's degrees from SUNYIT. The student must satisfy all degree requirements for each program. A student wishing to complete more than one master's degree may transfer a different set of courses for each degree but in no case is a student allowed to transfer more than 6 credit hours for each degree. A student may use up to 9 credits, taken at SUNYIT, to apply towards the 27 hour residency credit requirement of the second degree program. A student may satisfy both requirements simultaneously.

## 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.

<i>HEGIS</i>	<i>Classification</i>	<i>Degree</i>
0502	Accountancy	M.S. Master of Science
0925	Advanced Technology	M.S. Master of Science
2208	Applied Sociology	M.S. Master of Science
0506	Business Management	M.S. Master of Science
0701	Computer and Information Science	M.S. Master of Science
1203	Family Nurse Practitioner	M.S. Master of Science
	Family Nurse Practitioner	Advanced Certificate
1202	Health Services Administration	M.S. Master of Science
0799	Information Design and Technology	M.S. Master of Science
1203.10	Nursing Administration	M.S. Master of Science
	Adult Nurse Practitioner	M.S. Master of Science
	Adult Nurse Practitioner	Advanced Certificate
0599	Technology Management	M.B.A. Master of Business Administration
0799	Telecommunications	M.S. Master of Science

## Continuous Registration: Computer Science Thesis

All graduate students must maintain continuous registration, equal to or greater than one credit while doing their final thesis, project, or capstone experience. Students registered for CSC 599 Thesis can do this by maintaining continuous enrollment in CSC 599. All other students must register for CMT 600 - Continuous Registration. This may be taken up to six semesters at which time it is expected that all program requirements will have been met.

# Graduate/Undergraduate Academic Calendars

## Fall Semester 2004\*

August 27	(Fri)	New Student Orientation / Registration
August 30	(Mon)	ALL CLASSES BEGIN Add / Drop and Late Registration Begin - No Fees Charged
September 3	(Fri)	Last Day to Register Without Late Fee for Fall 2004 Courses
September 4	(Sat)	Saturday Classes Are in Session
September 6	(Mon)	LABOR DAY HOLIDAY - No Classes
September 7	(Tues)	Add / Drop and Late Registration Fees Begin (Students Must Obtain Instructor's Signature to Add a Course)
September 13	(Mon)	Last Day to Add a Course or Drop Without Academic Record
September 14	(Tues)	Withdrawal (W Grade) from Courses Begins
October 9-12	(Sat-Tues)	Mid Semester Break
October 19	(Tues)	Last Day of Classes for First Half Semester Courses
October 20	(Wed)	First Day of Classes for Second Half Semester Courses Incomplete Grades from Spring & Summer 2004 Revert to "F" Grades
November 1	(Mon)	Last Day to File for May 2005 Graduation
November 5	(Fri)	Last Day to Officially Withdraw (W Grade) From Courses
Nov. 15-19	(Mon-Fri)	Advance Registration - Spring 2005 (Matriculated Students see Academic Department for Advising Schedule)
Nov 24-28	(Wed-Sun)	THANKSGIVING HOLIDAY RECESS* *(Recess begins at 8:00 am, Wednesday, November 24th)
Nov 25-26	(Thurs-Fri)	College Closed for ALL Business
November 29	(Mon)	Classes Resume
December 11	(Sat)	Classes End
December 13	(Mon)	Final Exams Begin
December 16	(Thurs)	Final Exams End
December 18	(Sat)	December Recognition Ceremony- 1:00 PM
December 20	(Mon)	Final Grades Due - 2:00 PM

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

## Spring Semester 2005\*

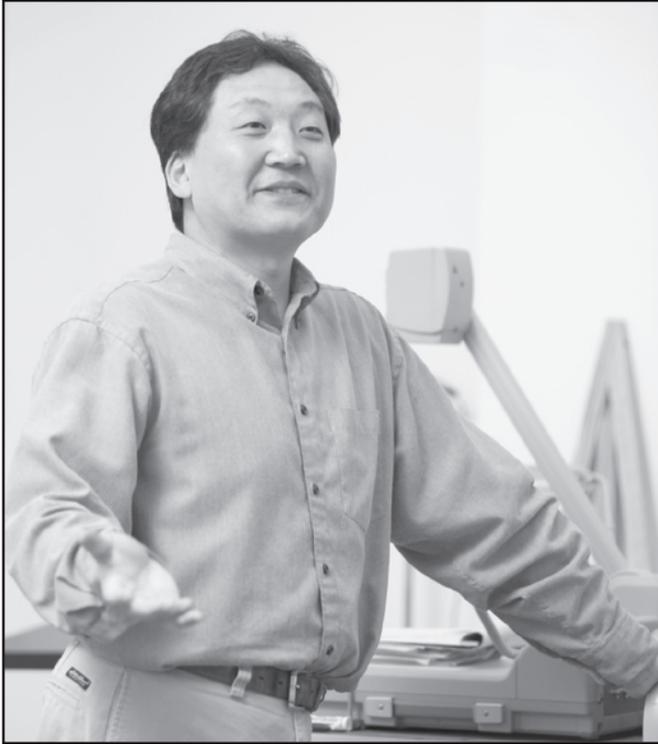
January 28	(Fri)	New Student Orientation / Registration
January 31	(Mon)	ALL CLASSES BEGIN Add / Drop and Late Registration Begin - No Fees Charged
February 4	(Fri)	Last Day to Register Without Late Fee for Spring 2005 Courses
February 7	(Mon)	Add / Drop and Late Registration Fees Begin (Students Must Obtain Instructor's Signature to Add a Course)
February 11	(Fri)	Last Day to Add a Course or Drop Without Academic Record
February 14	(Mon)	Withdrawal (W Grade) from Courses Begins
March 18	(Fri)	Last Day of Classes for First Half Semester Courses
March 20-27	(Sun-Sun)	SPRING BREAK
March 28	(Mon)	Classes Resume First Day of Classes for Second Half Semester Courses (See Reverse Side for Calendar) Incomplete Grades from Fall 2004 Revert to "F" Grades
April 1	(Fri)	Last Day to File for August 2005 Graduation
April 15	(Fri)	Last Day to Officially Withdraw (W Grade) from Courses
April 18-22	(Mon-Fri)	Advance Registration - Summer and Fall 2005 (Matriculated Students: See Academic Department for Advising Schedule)
May 14	(Sat)	Classes End
May 16	(Mon)	Final Exams Begin
May 19	(Thurs)	Final Exams End
May 21	(Sat)	Commencement - 10:00 AM
May 24	(Tues)	Final Grades Due - 2:00 PM
June 1	(Wed)	Last Day to File for December 2005 Graduation

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

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# Master of Science in Accountancy

On Campus and Online



## Overview

The Master of Science in Accountancy program is offered by the School of Management both on campus, as well as online. It is registered to satisfy the 150 hour licensure requirement for New York State. It was developed in response to two demands. The first was the increasing number of accountants who held undergraduate degrees in accounting and wanted to continue developing in a wide range of professional accounting careers. These careers included public accounting, corporate accounting, not-for-profit accounting and government accounting. Additionally, in view of the 150 credit hour education requirement established by the American Institute of Certified Public Accountants (AICPA) starting in the year 2000, the program was developed to qualify students to sit for professional accounting examinations that lead to credentials such as the CPA (Certified Public Accountant) and the CMA (Certified Management Accountant) designations.

The program is primarily intended for students who have the equivalent of an undergraduate degree in accounting. Students who may not have a background in accounting but desire an opportunity to broaden their capabilities and specialize in this area are afforded the option of doing so. These students would be required to include additional preparatory work in their program and would do that under the guidance of the program director.

The School of Management participates in the “SUNY Learning Network,” a consortium of campuses who have joined together to offer graduate and undergraduate on-line courses. Currently, it is possible to complete the M.S. Accountancy program entirely on-line (via the World Wide Web). On-line course information is available in the SUNY Learning Network Course Guide and in the Institute of Technology course schedule.

The Master of Science in Accountancy degree is one of three graduate business degrees offered by the school. The others are the MBA in Technology Management and the Master of Science in Health Services Administration and are described elsewhere in this catalog.

## Mission Statement

To be a regionally recognized School of Management that emphasizes quality teaching, an applied curriculum, specialized programs, advanced technology, and scholarly contributions. Each area incorporates ongoing assessment of our objectives for continuous quality improvement. Our primary mission is as a teaching school, emphasizing high quality undergraduate education enriched through research activities at the undergraduate and graduate levels. The School of Management serves traditional and non-traditional students, distance-learning students, and responds to the needs of organizations in our local community.

## Quality Assurance

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 Accreditation Plan was accepted by the AACSB Board of Directors in September of 2002. The Candidacy period is typically five years.

## Admissions Criteria

Students graduating from undergraduate accounting programs registered as CPA preparation programs will typically have no prerequisite foundation coursework. **Students without a baccalaureate degree in accounting will be required to complete coursework in accounting, business law, finance, statistics, economics, general business, and liberal arts as appropriate to prepare for the MS degree course requirements.**

Admitted students lacking these proficiencies should consult with the program director to determine appropriate course selection. Prerequisite skills may be fulfilled in a variety of ways including transfer courses, courses at SUNYIT, and College-Level Entrance Program (CLEP) or Regents College Degree (RCD) examinations with appropriate knowledge, but no other documentation.

## Admissions Guidelines

Scores from the GMAT (Graduate Management Admissions Test) will follow the AACSB (American Assembly of Collegiate Schools of Business) recommended guideline:

A total of 1,000 points based on 200 x undergraduate GPA + GMAT score.

## Second Degree

Students may also obtain a second degree, Master of Business Administration (MBA) in Technology Management, by completing five additional Technology Management Courses.

BLW	570	Business Law, Ethics, & Intellectual Property Rights
MIS	615	E-Commerce and Entrepreneurship
TIM	500	Project Management
TIM	530	Managing New Product Design & Development
TIM	585	Cases in Technology and Innovation Management

## The Program

The degree program is a 33 semester hour program requiring completion of 9 three-credit hour core courses and 2 three-credit hour electives. The program will accommodate both full-time and part-time students. Conveniently scheduled night, Saturday, and online classes meet the needs of working professionals; the diverse selection of course offerings also makes full-time study possible. Students who intend to pursue full-time study can complete the program within an 18 month period. A program of study will be developed with the program director which responds to student desires and the plan for course schedules.

## Program Requirements

A total of 33 credit hours distributed as follows:

10 Core Courses (30 hours)

1 Elective Course (3 hours)

ACC	585	Financial Reporting/Analysis
ACC	611	Advanced Income Tax Research
ACC	630	Fund Accounting
ACC	650	Advanced Auditing Theory
ACC	685	Advanced Financial Accounting Theory
FIN	685	Seminar in Accounting & Finance
BUS	505	Multinational Economics of Technology
FIN	525	Financial Management Problems
MGS	511	Quantitative Business Analysis
MIS	515	Management Information Systems
		One Elective

Students must attain a grade point average of 3.0 for all graduate courses included in their program. No more than three "C" grades, regardless of overall grade point average, will be counted toward graduation.

## Course Descriptions

### ACC 585 Financial Reporting/Analysis (3)

Investigates business objectives through financial analysis, cash budgeting, and ratio analysis. Additional topics may include capital budgeting, utility analysis, basic portfolio concepts, the capital asset pricing model, and the study of efficient markets. Long-term financing strategies of the corporation, including the theory of valuation for corporate securities, capital structure theory, dividend policy, and analysis of overall cost of capital to the corporation.

### ACC 611 Advanced Income Tax Research (3)

Focus on the study of federal tax legislation and IRS regulation of corporations, partnerships, estates and trusts. Special attention is given to capital gains and losses, normal tax and surtax, income and deductions for domestic, international, and multinational corporations. Tax research will be conducted through the analysis of IRS rulings on court cases.

### ACC 630 Fund Accounting (3)

Accounting principles and procedures as applied to not-for-profit entities are covered. In addition, the accounting standards and reporting requirements that relate to not-for-profit entities will be reviewed and analyzed.

### ACC 650 Advanced Auditing Theory (3)

Advanced review of auditing standards and techniques, computerized auditing systems, SEC regulations, legal liability, and professional ethical standards.

### ACC 685 Advanced Financial Accounting Theory (3)

An examination and analysis of Generally Accepted Accounting Principles (GAAP). The course reviews Financial Accounting Standards (FAS) in detail and includes a critical review of the research that is at the theoretical foundations of GAAP. In addition, the process by which the Financial Accounting Standards Board promulgates new FAS will also be analyzed.

### BUS 505 Multinational Economics of Technology (3)

Managerial economics is the application of economic theory and methodology to decision-making problems encountered by public and private institutions in a multinational setting and within the framework of technology innovation. Emphasis is on the identification and selection of alternative means of obtaining given objectives as efficiently as possible. It is a special branch of economics bridging the gap between abstract theory and managerial practice. Areas of study will include managerial economics and economic theory, statistical and econometric applications, demand, supply, markets, costs, profits and government and business.

### MIS 515 Management Information Systems (3)

Strategic uses of information that affect customers, markets, and products are becoming common today. Information is used to manage organizations, carry out strategy, control operations, and assist in decision-making. As a result, information is a resource with value equal to that of traditional assets such as inventory, capital, and human skills. In this course students will learn

to manage and use information systems and technology. The MIS course provides concepts, methods, and techniques to identify an organization's information needs and to employ systems to meet these needs. The course introduces business students to topics such as information systems, database management, information technology, expert systems, and decision support systems. [Formally BUS 515]

**FIN 525 Financial Management Problems (3)**

Provides the student with in-depth experience with the subject of Corporation Finance for their future development as practicing executives. Students solve cases and problems faced by financial managers in the real world, that focus on major financial decisions and such current issues as corporate governance, securities issuance, globalization, privatization, financial analysis and planning, capital budgeting, capital structure, cost of capital, valuation, dividend policy, short/long term financing, financial markets, firm performance, and corporate restructuring. Prerequisites: FIN 302/FIN 502.

**FIN 685 Seminar in Accounting & Finance (3)**

An integrating experience to apply the varied skills and knowledge accumulated through the required course work to make the student competitive in capital markets. Special emphasis will be upon mastery of body of accounting and financial knowledge including significant current development on the economic and financial scene. Students acquire greater understanding of global capital markets, demonstrate the ability to use the tools and techniques of accounting and investment analysis in the valuation of assets, and provide a synthesis of all previous related course work.

**MGS 511 Quantitative Business Analysis (3)**

This survey course addresses the study of the scientific method as applied to management decisions. The forepart of this course addresses the development of basic statistics up to hypothesis testing. Topics coverage also includes (1) bivariate regression analysis, (2) multiple regression analysis, (3) PERT and CPM, (4) linear programming (graphic method only), (5) decision making under uncertainty (including maxi-max, mini-max, and maxi-min techniques) and (6) the basic elements of forecasting (including the classical time series model).

**Elective Course Descriptions****ACC 571 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. Prerequisite: Management Accounting (ACC 305), Cost Accounting (ACC 470) or equivalent.

**ACC 591 Independent Study (3)**

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.

**ACC 595 Internship (3)**

Internship placements provide students with a field experience related to their academic preparation enabling them to apply classroom instruction to the work site. Students are placed with an organization related to their major and specific area of interest to work along with, and be proctored by, experienced professionals. These are opportunities that cannot be duplicated in the classroom environment and provide an excellent transition into the field.

**CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

**Faculty**

**Stephen Havlovic**, Interim Dean and MS Accountancy Program Director; Ph.D., Ohio State University. Industrial relations and human resource management.

**Thomas T. Amlie**, Assistant Professor; Ph.D., University of Maryland. Accounting; managerial compensation and accounting education issues.

**Sema Dube**, Assistant Professor of Finance, Ph.D., George Washington University; firm acquisitions and mergers.

**Laura Francis-Gladney**, Assistant Professor; Ph.D., Southern Illinois University at Carbondale. Managerial accounting.

**Peter Karl**, Professor; J.D., Albany Law School; M.B.A., Rensselaer Polytechnic Institute, CPA State of New York. Accounting; legal issues and taxation.

**William Langdon**, Professor; Ph.D., Syracuse University. Quantitative methods and finance.

**Hoseoup Lee**, Assistant Professor; Ph.D., University of Connecticut. Accounting; capital market theory, financial statement reporting and analysis.

**Rafael F. Romero**, Associate Professor; Ph.D., West Virginia University. Finance and economics.

**Khalil Torabzadeh**, Associate Professor of Finance, DBA, Mississippi State University; investments, mergers, acquisitions and valuations.

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# Master of Science in Advanced Technology (MSAT)

## Coordinator's Message

The Master of Science in Advanced Technology (MSAT) is an interdisciplinary program with an emphasis on practical applications. It is offered jointly by the Electrical, Industrial and Mechanical Engineering Technology Departments and incorporates the demonstrated strengths in these technologies.

The fourteen full-time faculty members in this program represent a wide range of academic, research and applied specialties. The faculty work closely with outside organizations with related interests. For example, the ongoing Educational Partnership Agreement between SUNY Institute of Technology and Air Force Research Laboratory, Rome, N. Y. afford both students and faculty a variety of opportunities for collaborative research projects and personnel exchanges. These relationships also provide for mutual sharing of computing, research and library facilities. Electrical Engineering Technology faculty are involved in research sponsored by the U.S. Air Force Office of Scientific Research and other external funding agencies. Faculty in the Mechanical Engineering Technology Department have established working relationship with the Advanced Computing Architectures/Micro-Electro Mechanical System (MEMS) group at the Air Force Research Lab (AFRL), Rome, NY. These collaborative efforts give students in this discipline, opportunities for joint projects and idea exchanges with other professionals working in these fields.

The MSAT program is designed for students interested in a high-quality interdisciplinary program that will facilitate career advancements in the advanced technology fields covered by this program.

***Daniel K. Jones, Ph.D., P.E.***  
***Program Coordinator***

## The Program

The Master of Science in Advanced Technology (MSAT) is an interdisciplinary practice-oriented program that provides a seamless path to a Master of Science degree for students who have earned an engineering, engineering technology, physics, mathematics or similar baccalaureate degree. It will be of value to individuals interested in upgrading their academic credentials and seeking career advancement in advanced technology. The American Society for Engineering Education (ASEE) has endorsed the concept of practice-oriented masters programs.

## Degree Requirements

The MSAT is a well-rounded, 33-credit program that provides the student with knowledge and practical know how. It is ideally suited for those individuals interested in gaining knowledge in computer integrated manufacturing, reliability and quality assurance, simulation, control systems, networking systems, robotic vision and finite element modeling. There is a project to culminate the effort in lieu of a thesis. The three-credit project may be completed concurrently with the course work or may occur after the tenth course is taken.

Upon approval of the advisor, the student may substitute an additional MST course for the MST 690 project.

MAT 500	Topics in Applied Mathematics
MST 502	Engineering Economics
MST 503	Special Topics in Advanced Technology
MST 520	Network Technology for Multimedia Systems
MST 576	Mechanical Design Using ALGOR and ProE
MST 580	Computer and Robotic Vision
MST 622	Intelligent Control Systems
MST 673	System Simulation
MST 680	Reliability and Quality Assurance
MST 682	Topics in Computer Integrated Manufacturing, CIM
MST 690	Project

## Course Descriptions

### **MAT 500 Topics In Applied Mathematics (3)**

This course will introduce students to several topics in the area of mathematical methods. Topics includes: complex numbers, determinants and matrices, ordinary differential equations, Fourier series, partial differentiation, multiple integrals and vector analysis.

### **MST 502 Engineering Economy (3)**

Study of the application of technical and economic analysis, with the goal of deciding which course of action best meets technical performance criteria and uses scarce capital in a prudent manner. Applied software technology will be used to analyze the economy of new product designs, structures, systems, qualities, reliabilities, and services. Prerequisite: College Algebra.

### **MST 503 Recent Advances in Technology (3)**

This course will analyze current and future trends and original research advances in the two concentration areas of the MSAT program. The course will include seminars, invited lectures and visits. It will be taught by a team of instructors.

### **MST 520 Network Technology for Multimedia Systems (3)**

The course deals with the study of networking for automated manufacturing, medical and commercial systems. Protocols, configurations, topologies, such as broadband cable and for dynamic networks are discussed. Use of optical networks for interactive video, wireless networks and virtual reality for industrial usage will also be introduced.

### **MST 530 Heating, Ventilating, Air Conditioning and Refrigeration Systems (3)**

An overview of air conditioning/refrigeration/heat pump systems, moist air properties and conditioning, indoor environmental quality: comfort and health, heat transmission in building structures/solar radiation, space heating/cooling load analysis, air distribution systems, control devices, heating/air conditioning/refrigeration circuits. Prerequisites: An undergraduate degree in Mechanical Engineering Technology/Engineering or consent of instructor.

### **MST 540 HVAC System Design (3)**

HVAC system design, Comfort Design/Product Categories, Psychrometric Theory, Applied Psychrometrics, Mechanical refrigeration, Load Estimating, Design Project. Prerequisites: An undergraduate degree in Mechanical Engineering Technology/Engineering or consent of instructor.

### **MST 550 Constant Volume System Design (3)**

Constant Volume Packaged and Split System Design, Concepts of Exposure Zoning, Occupancy Zoning and Zoning with Unzoned Systems, Outdoor Air Analysis, Packaged Equipment Familiarization and Selection, Room Air Distribution, Duct Design, Direct Digital Control (DDC) Systems, Packaged Split Systems, Refrigerant Piping Design, Design Project. Prerequisites: An undergraduate degree in Mechanical Engineering Technology/Engineering or consent of instructor.

### **MST 560 Variable Volume/Temperature (VVT) and Variable Air Volume (VAV) System Design (3)**

Variable Volume/Temperature (VVT) and Direct Expansion Variable Air Volume (VAV) System Design, Product Recognition, Applied HVAC Acoustics, Zoning and Central Equipment, VVT Air Terminal Design, VAV Air Terminal Design, Direct Expansion (DX) Coils/Air Handlers Familiarization, Split System Selection/DX Piping Design, VAV Fan Performance and Control Systems, Design Project. Prerequisites: An undergraduate degree in Mechanical Engineering Technology/Engineering or consent of instructor.

### **MST 570 Design and Analysis of Experiments (3)**

The use of experiment design early in the product cycle can substantially reduce development lead time and cost, leading to processes and products that perform better in the field and have higher reliability than those developed by using other approaches. Students will learn principles as well as implementation of experimental design in developing products and manufacturing processes that are robust to environment factors and other sources of variability.

### **MST 571 Applied Water System Design (3)**

Applied Water System design, Water Coils, Fan Coil/Air Handling Units, Control Valves, Piping System Layout, Water Pipe Sizing, Chiller Systems/Selection, Water Pumps, Cooling Towers, Design Project. Prerequisites: An undergraduate degree in Mechanical Engineering Technology/Engineering or consent of instructor.

### **MST 576 Mechanical Design with ALGOR & ProE (3)**

In-depth study of Finite Element Theory and its application. Emphasis will be given to discretization, modeling and interpretation of results. Software packages such as ALGOR and ProE will be extensively used. Two hours of lecture and two hours of laboratory per week. Prerequisites: MST 500, MAT 322 or equivalent.

### **MST 580/CSC 580 Computer and Robotic Vision (3)**

Two and three dimensional systems, image formation, sensor devices, illumination, processing of images, feature extraction & recognition, robotics inspection, actor devices.

### **MST 598 Industrial Instrumentation & Signal Processing (3)**

In-depth study of instruments and methods for measuring phenomena such as temperature, pressure, speed, and acceleration, with an emphasis on industrial applications. Topics include the generation of signals by electro-mechanical transducers, computer-based data acquisition and storage, and processing of electrical signals using techniques such as amplification, conditioning, filtering, and analog-to-digital conversion.

### **MST 622 Intelligent Control Systems (3)**

First, the traditional control techniques are introduced and contrasted with intelligent control. Fuzzy logic then, is introduced as one of the methods for representing and processing information. Advantages of fuzzy logic over other techniques are pointed out, while indicating some limitations as well.

### **MST 630 Optical Networking (3)**

Study of optical networks covering architecture, switching, protocols and optical communication techniques for implementation of high capacity broadband systems. Optical components such as fibers, filters, fiber gratings, couplers, optical amplifiers, modulators, photodetectors, add-drop multiplexers, optical cross-connects, tunable light sources and MEMS will also be studied. Prerequisite: MST 520 (Network Technology for Multimedia Systems) or permission of the Instructor.

### **MST 635 Data Hiding and Digital Watermarking (3)**

The study of steganography and digital watermarking, the techniques used in watermarking, types of transforms, spread spectrum, Mellin-Fourier transform, wavelet transform, fractals and compression techniques. Applications of steganography and fingerprinting will also be discussed. Prerequisite: MST 580/CSC 580 (Computer and Robotic Vision) or Permission of the Instructor.

### **MST 640 Dynamics of Rigid Body (3)**

In depth study of planar kinematics and kinetics of Rigid Body. Topics include translation, rotation principle of work and energy, impulse angular momentum, and gyroscope motion. Prerequisite: MTC 430 or Calculus Based Dynamics Course.

### **MST 673 System Simulation (3)**

The course addresses the following topics: Overview of computer modeling and simulation, systems and models, queuing theory, simulation of discrete and continuous systems, simulation software packages.

### **MST 680 Reliability and Quality Assurance (3)**

This course is a study of applications of reliability-maintainability models, reliability testing and analysis, and quality engineering-design, process, control and quality transformation. Prerequisite: Statistics, Statistical Quality Control or equivalent or consent of instructor.

### **MST 682 Topics in Computer Integrated Manufacturing (CIM) (3)**

An overview of the components of CIM Enterprise, System Design, Material Handling, Materials Requirement Planning (MRP), Manufacturing Resource Planning (MRPII), Manufacturing Database and Management, Expert Systems for Manufacturing. Two hours of lecture and two hours of laboratory per week. Prerequisites: An undergraduate course in CAD or CAM or CIM, or consent of instructor.

**MST 690 Project (3)**

The course deals with the design or in depth analytical or experimental study of a topic chosen from the area of advanced technology. Oral examination and formal, bound report is required. Project will be conducted under the guidance of appropriate faculty. It will be assigned on the basis of faculty interest and preparation of the students. Prerequisite: Graduate status.

**CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

**Faculty****Orlando R. Baiocchi, Professor, Ph.D., University College London.**

Electromagnetism, optics, and wave propagation.

**Daniel S. Benincasa, Assistant Professor, Ph.D., RPI.**

Audio and speech processing, digital and analog communication systems, information assurance and intelligent signal processing.

**Timothy E. Busch, Assistant Professor, Ph.D., Binghamton University.**

adversarial modeling, operationally focused simulation, multi-resolution modeling, control system reconfigurability.

**Digendra Kumar Das, Professor, Ph.D., University of Manchester Institute of Science and Technology.**

CAD/CAM/CIM, fluid/prognostics, turbomachinery and thermal sciences and MEMS.

**Heather M.B. Dussault, Assistant Professor, Ph.D., Rensselaer Polytechnic Institute.**

semiconductor and electronic system reliability, digital design and forensics, programmable microsystems, biological analogies for processing information.

**Atlas Hsie, Associate Professor, CmfGE, CQE, CRE, M.S., University of Michigan. M.S., University of Akron.**

Quality & Reliability Engineering, engineering economics, production management, CAM & robotics.

**Naseem Ishaq, Associate Professor, Ph.D., London University.**

Vision, VLSI and networking

**Daniel K. Jones, Associate Professor, Ph.D., P.E., University of Pittsburgh.**

Rehabilitation engineering and assistive technology, experimental fluid mechanics, industrial instrumentation, and signal processing.

**Kevin R. Lefebvre, Assistant Professor, Ph.D., University of Connecticut.**

nanotechnology, semiconductor devices, optical networks, optical fiber, security of optical networks.

**Michael J. Medley, Assistant Professor, Ph.D., RPI.**

Adaptive signal processing, digital communications, wireless information assurance, and integrated systems.

**Salahuddin Qazi, Associate Professor, Ph.D., Loughborough University of Technology.**

Fiber optics, optical and wireless communications.

**Mohamed Rezk, Associate Professor, D.Eng., Concordia University.**

Circuit theory, computer-aided circuit design and digital filters.

**Anglo-Kamel Tadros, Associate Professor, Ph.D., University of Bradford.**

Mechanics of sheet metal forming, computer-aided engineering, finite element analysis.

**F. Andrew Wolfe, Assistant Professor, Ph.D., P.E., Rensselaer Polytechnic Institute.**

traffic flow, transportation planning, engineering interaction with society, Erie Canal archeology.

**Admissions Criteria**

1. A baccalaureate degree with an upper division major in engineering, engineering technology, physics, mathematics or a related area from an accredited college or university. Students who have earned a baccalaureate degree in a discipline other than mentioned above, but who possess significant work experience (3-5 years) in a engineering/manufacturing area will be considered for admission on an individual basis.
2. An average of B or better for the last 30 credit hours of undergraduate or graduate coursework (a GPA of 3.0 on a 4.0 point scale). Applicants with GPA below 3.0 for the last 30 credit hours may be considered if they can demonstrate graduate potential via other means.
3. Official scores on the Graduate Record Examination (GRE) within the past five years. The score required for acceptance into the program would vary depending upon the student's academic background, professional experience and letter of recommendation. Applicants without GRE scores are evaluated on an individual basis and may be admissible pending receipt of scores at a later date.
4. Applicants should have submitted evidence of personal and professional qualifications via one to three professional references.
5. Applicants should have submitted a narrative statement of professional objectives for graduate study.
6. Applicants with deficiencies may be required to take appropriate additional coursework above the 33 credit hour program total as recommended by an MSAT graduate faculty advisor. These courses will be identified at the time of admission and will be built into the student's official program of study.

**Laboratory Facilities**

SUNYIT supports a practice-oriented learning environments in all primary areas of academic offerings. The Master of Science in Advanced Technology is supported by several state-of-the-art laboratories containing a wide variety of equipment including a laboratory which is interconnected with an optical network. The laboratories are also supported with the latest software including AUTOCAD, ALGOR, SMARTCAM, MINITAB, MATLAB/SIMULINK, ProE, LabVIEW and OPNET. In addition, SUNYIT maintains extensive library holdings in support of the Master of Science in Advanced Technology program.

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# Master of Science in Applied Sociology



## Admissions

The specific admissions requirements for the M.S. in Applied Sociology are:

- A baccalaureate degree from an accredited university or college.
- A 3.0 overall GPA.
- For those without a Bachelors degree in sociology, at least 15 credits in sociology or closely related field.
- A course in Statistics with a B- or better. A student who does not meet this requirement may be admitted with a deficiency that must be removed before taking SOC 532 or SOC 533.
- Six hours of graduate credit in sociology or a closely related field can be transferred.
- The department will accept course work in a closely related field if the course content parallels core requirements of the M.S. in Applied Sociology.

## Degree Requirements

Each graduate degree student must complete 33 credits (36 credits if the student opts to take SOC 597: Seminar in Applied Sociology in lieu of a thesis or project) and maintain an overall academic grade point average of 3.0 (B grade). Regardless of the overall grade point average, no more than three C grades will count toward degree requirements. All courses resulting in a grade lower than C must be repeated.

## Curriculum

The Applied Sociology program is currently offered on a part-time basis. The program's curriculum requirements include five required courses and six elective courses. The required courses consist of Soc 510, Soc 532, Soc 533, Soc 595 (which may be waived upon the basis of relevant work experience), and either Soc 597 (two semesters) or Soc 598 (one semester) or Soc 599 (one semester).

## Required Course Descriptions

### **SOC 510 Social Paradigms and Interventions (3)**

Explores the strengths and weaknesses of the paradigms (interrelated epistemological, theoretical, and methodological ideas) that shape sociological practice. Emphasizes classic and contemporary paradigms rooted in empiricism, materialism, and subjective idealism. Encourages students to pursue integrative approaches to the formulation, execution, and evaluation of interventions.

### **ANT 531 Methods of Research: Ethnographic Data Collection and Analysis (3)**

Examines the epistemological presumptions and methodological strictures of field work/participant observation in the anthropological tradition. Compares this to Positivist and Postmodernist approaches. Trains students to use ethnographic methods and compares them with other as other qualitative methods informed by this perspective (i.e. in-depth interviewing and content analysis) in applied research and practice settings. Evaluates a range of contemporary appropriations of the ethnographic gaze from information systems development to evaluation.

### **SOC 532 Methods of Research: Survey and Experimental Design (3)**

Places emphasis on positivist approaches to social research processes in applied settings. Applies hypothesis construction, research design, and data collection and data analysis to needs assessment and evaluation requirements of organizations. Utilizes the Statistical Packages for the Social Sciences (SPSS) to construct and analyze real world databases. Prerequisite: Undergraduate Statistics with a B- or better.

**SOC 533 Methods of Research: Statistical Analysis (3)**

Reviews causal logic and uses descriptive statistics, cross-tabulation and regression analysis, as well as other relevant inferential statistical techniques, to analyze social data with emphasis upon program outcome and evaluation data. Examines the significance of the requisite assumptions and interpretation of findings for specific statistical techniques. Relies on computer based analysis using SPSS. Prerequisite: SOC 532.

**SOC 595 Practicum in Sociology (3)**

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. This requirement is waived if the student has appropriate experience in a practice setting.

**SOC 597 Seminar in Applied Sociology (3)**

Supports completion of a viable independent scholarly project. Students will work with an advisor to design, develop, conduct, and present an independent scholarly project for review and approval. A two-semester sequence allows students to develop their independent scholarly work from start to finish within a structured context. Students are required to take this two-semester course sequentially fall/spring and with instructor's permission. Grade of B or better required.

**SOC 598 Independent Project Supervision (1-3)**

Supports completion of a viable project. Students must work with an advisor to develop an acceptable project proposal, to implement that proposal, and to evaluate its result. Students will be asked to maintain on-going enrollment in project supervision by signing up for one credit each semester. A maximum of 3 credits will count for degree credit.

**SOC 599 Thesis (1-3)**

Supports completion of a viable thesis. Students must work with an advisor to develop an acceptable thesis proposal, to implement the thesis proposal, and to evaluate its effectiveness. Students will be asked to maintain on-going enrollment in thesis supervision by signing up for at least one credit after the first semester of enrollment. A maximum of three credits count toward the degree.

**Elective Course Descriptions****SOC 500 Designing Interventions (3)**

Investigates the relationship between an understanding of a problem and the development of a specific program/intervention. Techniques addressed include goal and objective formation, and the integration of the intervention into the organizational setting. Examines existing programs/interventions as to their conceptual basis and analytical approach.

**COM 500 Organizational Communication Skills for the Professional (3)**

Acquaints students with the broad array of media, both electronic (WWW, Internet, Intranet) and non-electronic (Newsletters, publications), central to the contemporary organization. Reviews basic information handling skills. Assists students in developing a personal aesthetic effective in regard to the design and development of such media, as well as facility with the various communication roles (web Master, writer, communicator, organizational designer) which professionals find themselves assuming in networked organizations. (Pending)

**SOC 521 Crime and Social Policy (3)**

Examines and evaluates criminal justice policy in the United States from historical, structural, and cross-national perspectives. Reviews theory and research supporting fundamental reconceptualizations of crime and criminal justice. Systematically explores alternatives to existing policy.

**ANT 531 Methods of Research: Ethnographic Data Collection and Analysis (3)**

Examines the epistemological presumptions and methodological strictures of fieldwork/participant observation in the anthropological tradition. Compares this to Positivist and Postmodernist approaches. Trains students to use ethnographic methods and compares them with other qualitative methods informed by this perspective (i.e. in-depth interviewing and content analysis) in applied research and practice settings. Evaluates a range of contemporary appropriations of the ethnographic gaze from information systems development to evaluation.

**SOC 534 Methods of Research:****Qualitative Research Techniques (3)**

Explores qualitative research methods including in-depth interviewing, oral history, content analysis, historical research, narrative analysis, visual data, participant observation, case study research, and others within the context of community development. Reviews models and methods of participatory and collaborative research from fields including sociology, geography, planning, natural resources, anthropology, history, community and occupational health, and community, rural and urban development, among others.

**ANT 561 Change and Information Technology in Public and Not-for-Profit Organizations (3)**

Examines ethnographically the changes currently viewed as endemic in these organizations and the opportunities as well as the dangers that these changes present. Evaluates relevant efforts at directed organizational change, the deliberate use of mechanisms to revitalize organizations or Organizational Development. Explores Automated Information Technology, the design, implementation, and revision or computer-based information systems as both a cause of and a tool to promote organizational change.

**SOC 571 Advocacy (3)**

Aims to increase the students' understanding of the complicated dynamics related to advocacy as a vehicle for influencing a public/private discourse, policies, legislation, public opinion, etc. Examines past practices involving lobbyists, grassroots, organizations, individuals, social movements and coalitions. Reviews issues related to ideology, strategies and tactics. Develops skills associated with initiating advocacy, responding to advocacy and working with advocates using readings, discussions and outside presenters. (Pending)

**SOC 572 Managed Care (3)**

Focuses upon the issues and changes that need to occur in order to implement managed care, especially the changes that need to take place within the various governmental agencies, provider agencies and with consumers as Medicaid Managed Care is implemented. Examines special needs, plans job functions, contracting practices, outcomes orientation vs. process orientation and decision making functions. (Pending)

**SOC 573 Participation, Social Programs and Applied Sociology (3)**

Examines the importance of participation by applied sociologists with clients and lay persons. Emphasis on the identification of circumstances which are most likely to encourage participation. Examines conceptual and theoretical issues of participation in the context of problem cases involving poverty, unemployment and work, housing, community development, crime, alcohol and drug abuse, etc. (Pending)

**SOC 574 Drug Epidemics (3)**

Explores the conditions under which societal-wide drug epidemics (rapid rises in the use of psychoactive substances) occur. Examines in detail the current resurgence of drug use among youth that began among the youngest drug users in the early 1990s. Employs national trend data to determine onset conditions, the sociological characteristics of groups that led the epidemic, the pathways through which drug use expands in specific age groups, and the consequences of rising rates of drug use by the youngest users. Emphasizes empirically based identification of strategic points for societal intervention. Serves as an introduction to aggregate data analysis.

**SOC 580 Ethics and Corruption in the Public Service (3)**

Promotes the perspective that public service that is both ethical and effective requires careful study of the rules and institutions that have grown up to prevent, detect and punish official corruption. Considers the parameters of public integrity in several applied settings including the provision of human services. Takes a broad look at those aspects of modern public administration that are part of the ethics apparatus and that impinge on the operation of all public agencies. (Pending)

**SOC 590 Selected Topics in Sociology (3)**

Provides students with the opportunity to investigate selected sociological subject matter. Topics will typically illustrate the application of sociological and anthropological theory and research to social services or criminology. Students may receive credit in a future semester for different topic areas.

### **SOC 591 Independent Study in Sociology (3)**

Provides an opportunity for students to go beyond the existing curriculum. Requires an application and the agreement of a faculty advisor. (Pending)

### **SOC 596 Proposal and Grant Writing Seminar (3)**

Explores all aspects of the proposal process from the most basic questions about form and style to the task of seeking funding and support, or committee approval, to what to do after the proposal is approved or funded. In particular, the focus is on developing, designing, preparing, and presenting effective research proposals to university review committees and funding bodies.

### **CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

## **Sample Course Rotation**

The M.S. in Applied Sociology is a cohort program. A cohort will be recruited every two years. Students are expected to take courses during the evenings in the following sequence.

### **Semester I**

**SOC 510** Social Paradigms and Interventions - R\*

**SOC 500** Designing Interventions

### **Semester II**

**Soc 532** Methods of Research: Survey  
And Experimental Design - R

**Soc 521** Crime and Social Policy

**OR**

**Soc 595** Practicum in Sociology - R

### **Summer Session I**

**Soc 534** Methods of Research:  
Qualitative Research Techniques

### **Semester III**

**Soc 533** Methods of Research:  
Statistical Analysis - R

**Soc 574** Drug Epidemics

**OR**

**Soc572** Managed Care

### **Semester IV**

**Soc 596** Proposal and Grant Writing Seminar

**Soc 590** Selected Topics in Sociology

**OR**

**Soc 580** Ethics and Corruption in Public Services

### **Summer Session II**

**Soc 571** Advocacy

### **Semester V**

**SOC 598** Independent Project Supervision - R

**OR**

**SOC 599** Thesis - R

**OR**

**SOC 597** Seminar in Applied Sociology - R

### **Semester VI**

**SOC 597** Seminar in Applied Sociology (Continued)

\*R = Required Course, all other courses are electives

## **Full Time Faculty**

**Kenneth Mazlen**, Ph.D., M.A., A.B. Specializes in social theory, white-collar crime, environmental crime and interested in promoting participation of criminologists in the public debate about crime. Current research on unemployment and crime.

**Alphonse Sallett**, Ph.D., B.A. Specializes in social theory, criminology and the sociology of drug use. Current work on resolving paradigm conflicts in criminology, drug education, and the epidemiology and etiology of drug use among youth.

**Veronica Tichenor**, Ph.D., M.A., B.A. Specializes in marriages and families, particularly issues of power and violence, sociology of community, and intersections of race, class, and gender. Current research examines violence and identity construction among poor, black adolescent girls.

**Linda Weber**, Ph.D., M.S., B.S. Specializes in social practice, medical sociology and social psychology. Current research in health promotion, creation of trust and at-youth risk.

## **Adjunct Faculty**

**Frank Anechiarico**, Ph.D., M.A., A.B. Currently professor of government at Hamilton College. Specializes in official corruption, organizational theory and urban politics.

**Burt J. Danovitz**, Ph.D., M.A., B.S.W. Currently the executive director for the Resource Center.

**Philip R. Endress**, M.B.A., M.S.W., B.S. Currently the commissioner of the Oneida County Department of Mental Health in Utica, NY. Specializes in behavioral health care, administrative practices and managed care systems.

**Bill J. Harrell**, Ph.D., B.A. Currently professor emeritus in the Department of Sociology and Anthropology at the SUNY Institute of Technology. Specializes in sociological theory, especially the relation of social structure to the logic of social thought and values.

**Leta D. Smith**, Ph.D., M.A., B.A. Currently the president of Forensic Mental Health, Inc. Specializes in forensic mental health services and alternatives to incarceration.

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# Master of Business Administration (MBA) in Technology Management

On Campus and Online



## Overview

The Master of Business Administration (MBA) degree in technology management is the most widely awarded and recognized graduate degree in the field of business. The MBA is a degree that offers both a broad and integrative perspective across business functions, and a chance to specialize in a field of the individual's choice. It also responds to the current needs of the local business community by combining a rigorous study of management topics with a unique focus on technology and innovation management. The MBA is the ultimate degree for applied business.

The MBA is traditionally a two-year (full-time) curriculum designed to prepare generalists for corporate management. Every student in the MBA program will be individually advised by the MBA Program Director. The high technology infrastructure at the Institute of Technology campus provides an ideal environment to integrate technology into the management curriculum.

Only full time faculty who hold doctorates teach classes in the MBA program. They are actively engaged in basic, applied, and action research, and represent out school at national, international, and regional conferences.

The MBA is one of the three graduate business degrees offered by the school. The others are the Master of Science in Accountancy and the Master of Science in Health Services Administration and are described elsewhere in the catalog.

## Mission Statement

To be a regionally recognized School of Management that emphasizes quality teaching, an applied curriculum, specialized programs, advanced technology, and scholarly contributions. Each area incorporates ongoing assessment of our objectives for continuous quality improvement. Our primary mission is as a teaching school, emphasizing high quality undergraduate education enriched through research activities at the undergraduate and graduate levels. The School of Management serves traditional and non-traditional students, distance-learning students, and responds to the needs of organizations in our local community.

## Quality Assurance

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 Accreditation Plan was accepted by the AACSB Board of Directors in September of 2002. The Candidacy period is typically five years.

## The Program

The program stresses the use of modern techniques to analyze and develop business solutions and prepare students for upper-level management jobs. The focus of the coursework is on the use of quantitative and qualitative analyses in conjunction with financial, accounting, and economic principles to solve current and future business challenges. Students have an opportunity to concentrate in one of five areas of specialization: Accounting and Finance, E-Commerce and Marketing, Human Resource Management, Health Services Management, or an individually designed concentration (Management).

Our program will provide opportunities for individuals who cannot travel to campus to pursue such a degree. Further, the unique technology flavor of this degree should result in an educational experience not possible in any of these other programs.

## Program Options

### Weekday Option

The course schedule for the MBA is designed primarily to accommodate working professionals. Full-time study may be pursued by students and be completed in three semesters. Most of the courses are scheduled in the evening. The optimum time for full-time students to enter the program is the fall semester since a number of the courses are offered in a sequence of fall-spring-summer. Therefore, entering any semester other than the fall may prevent the full-time student from pursuing the core sequence in a timely fashion. Part-time students may enter in the fall, spring, or summer semester and take electives or alternative core courses. Students may supplement their study with weekend courses or online courses when available. An assessment during the admission process will aid in determining an optimal entering point.

### Online Option

To accommodate the working professional who is unable to travel to campus to take coursework, all courses in the MBA program are also offered online via the world-wide-web in an asynchronous mode. The School of Management uses the SUNY Learning Network for its course management and technical support. Students are able to work on their classes with a great deal of flexibility and within the confines of their personal circumstances.

## Admissions Criteria

Students from four-year programs that have earned a bachelor's degree will typically have no prerequisite foundation coursework. Other students will be required to complete an appropriate four-year degree to be prepared for graduate studies. Admitted students will consult with the MBA Program Director to determine appropriate course selection.

## Admissions Guidelines

Scores from the GMAT (Graduate Management Admissions Test) will follow the AACSB (American Assembly of Collegiate Schools of Business) recommended guideline:

A total of 1000 points based on 200 x undergraduate GPA + GMAT score.

## MBA Program Guidelines

1) Online courses are reserved for students living more than 50 miles from campus. Students who select the on-campus mode will be required to take all classes on campus except for a maximum of two classes that may be taken online. Students who select the online mode will be required to take all classes online except for a maximum of two classes that may be taken on campus.

2) All students must undergo an on-campus residency requirement prior to graduation from the program. The residency requirement will be part of the TIM 685 capstone experience, and will require students to come to campus for one weekend for testing, seminars, oral interview, and group presentations. The weekend dates and times will be set toward the end of the semester by the faculty teaching TIM 685. The purpose of the campus residency is to ensure program quality and integrity, and to help fulfill assessment functions related to oral, interpersonal, and presentation skills.

## Degree Requirements

### Program Requirements

There is a total of 48 credit hours that must be completed. They are distributed as follows:

Technology Management Core Courses:	18 credit hours
Business Management Core Courses:	21 credit hours
Specialized Concentration Courses:	9 credit hours

**Common Core Courses**

All students must complete the following thirteen core courses.

Course Name	Course Number	Credits
<i>Technology Management Core Courses</i>		
Project Management	TIM 500	3
Managing New Product Design & Development	TIM 530	3
Business Law, Ethics, & Intellectual Property Rights	BLW 570	3
E-Commerce and Entrepreneurship	MIS 615	3
Cases in Technology and Innovation Management	TIM 585	3
Strategic Planning	TIM 685	3
<b>Total Technology Management Core Courses</b>		<b>18</b>

*Business Management Core Courses*

Accounting for Managers	ACC 520	3
Human Resource Management	HRM 518	3
Management Information Systems	MIS 515	3
Marketing Survey Design and Data Analysis	MKT 510	3
Multinational Economics of Technology	BUS 505	3
Financial Management Problems	FIN 525	3
Quantitative Business Analysis	MGS 511	3
<b>Total Business Management Core Courses</b>		<b>21</b>

Students must maintain a grade point average of 3.0 for all graduate courses included in their program. No more than three “C” grades, regardless of overall grade point average, will be counted toward graduation.

**Students may transfer up to four classes (12 hours), if applicable, from another graduate or MBA program at another university.**

**Course Descriptions**

**Technology Management Core Courses**

**TIM 500 Project Management (3)**

Reviews traditional project management techniques and project based organizational structures. Special attention is given to the integration of project management with technology and strategic objectives. Organizational issues, project tracking, the project manager, and project management techniques are examined both from the conceptual and the applied aspects. The potential for transferring knowledge gained from projects to multiple areas in the organization is also covered. Students will experience computer application software to support and implement project management activities.

**TIM 530 Managing New Product Design and Development (3)**

Regardless of the industry or business involved, careful attention must be given to the way new products are designed and developed. Various aspects of product design and development are studied; including the functions of research and development, marketing, finance, design, manufacturing, and technical specifications. Special attention is given to the tools and methodologies necessary in the creation and development of a new product. An important focus of this course is on the challenges and perspectives presented by products that result from high technology environments or are themselves “high technology products.”

**BLW 570 Business Law, Ethics, and Intellectual Property Rights (3)**

Designed to provide the student with the legal environment of business transactions including court structure and procedure, contracts, sales, commercial paper, secured financing, and property transactions. Covers the ethical aspects of business with particular emphasis to intellectual property (IP) rights as they relate to technology innovation and high technology environments. The IP issues which will be addressed include copyrights, patents, trademarks, software, domain names, licenses, royalties, and business processes.

**MIS 615 E-Commerce and Entrepreneurship (3)**

**Also Available Online**

E-Commerce provides entrepreneurs with a vast, evolving medium for engaging in all phases of business activity. New business opportunities are evolving with the introduction of new technological developments. Students will study such evolving trends, learn about existing standards and methods to analyze web-based activity, and develop Web business strategies for launching their own business activities on the Internet.

**TIM 585 Cases in Technology and Innovation Management (3)**

**Also Available Online**

Key areas of management, production and distribution will be examined and the impact of rapid technological advances on them will be analyzed. Appropriate responses will be developed and discussed. Primary method of instruction is “Case Studies” and seminar discussions.

**TIM 685 Strategic Planning (3) Also Available Online**

This is the capstone strategy course that covers the economics and strategy of technology and innovation management. An integrating experience using case studies to apply the various skills and knowledge accumulated throughout the required coursework in business and technology management. Special emphasis will be upon how organizations fit within the social, political, and economic environments. Managerial strategies to optimize achievement of objectives in high technology environments will also be covered. [Formerly BUS 685]

**Business Management Core Courses**

**ACC 520 Accounting for Managers (3) Also Available Online**

The objective of this course is to familiarize students with the basic principles of short-term financial planning. Topics coverage shall include (1) trends flow statement development and analysis, on both cash and working capital bases, (2) common size analysis, (3) index analysis, (4) cash budgeting, (5) working capital management, (6) pro forma statement development and analysis, and (7) general forecasting methodologies (including subjective, historical, and causal techniques).

**HRM 518 Human Resource Management (3)**

**Also Available Online**

Manage human resources more effectively improving analysis and planning. Focus on the development of state-of-the-art systems which support basic business objectives, as well as foster good working relations between employees and managers.

**MIS 515 Management Information Systems (3)**

**Also Available Online**

Strategic uses of information that affect customers, markets, and products are becoming common today. Information is used to manage organizations, carry out strategy, control operations, and assist in decision-making. As a result, information is a resource with value equal to that of traditional assets such as inventory, capital, and human skills. In this course students will learn to manage and use information systems and technology. The MIS course provides concepts, methods, and techniques to identify an organization’s information needs and to employ systems to meet these needs. The course introduces business students to topics such as information systems, database management, information technology, expert systems, and decision support systems. [Formerly BUS 515]

**MKT 510 Marketing Survey Design and Data Analysis (3)**

Provide prospective managers with an understanding of marketing survey procedures and data analysis techniques. Various quantitative and strategic approaches in marketing are introduced and applied in case studies and problem solving. Topics of this course include: formulation of marketing survey design, comparison of survey designs, preparation of marketing data, quantitative techniques of marketing decision analysis, managerial aspects of coordinating survey projects, and the implementation of derived strategy.

**BUS 505 Multinational Economics of Technology (3)**

**Also Available Online**

Managerial economics is the application of economic theory and methodology to decision-making problems encountered by public and private institutions in a multinational setting and within the framework of technology innovation. Emphasis is on the identification and selection of alternative means of obtaining given objectives as efficiently as possible. It is a special branch of economics bridging the gap between abstract theory and managerial practice. Areas of study will include managerial economics, economic theory, statistical and econometric applications, demand, supply, markets, costs, profits, government and business.

### **FIN 525 Financial Management Problems (3)**

#### **Also Available Online**

Provides the student with in-depth experience with the subject of Business and Corporation Finance for their future development as practicing executives. Students solve cases and problems faced by financial managers in the real world, that focus on major financial decisions and such current issues as corporate governance, securities issuance, globalization, privatization, financial analysis and planning, capital budgeting, capital structure, cost of capital, valuation, dividend policy, short/long term financing, financial markets, firm performance, and corporate restructuring.

### **MGS 511 Quantitative Business Analysis (3)**

#### **Also Available Online**

This survey course addresses the study of the scientific method as applied to management decisions. The forefront of this course addresses the development of basic statistics up to hypothesis testing. Topic coverage also includes (1) bivariate regression analysis, (2) multiple regression analysis, (3) PERT and CPM, (4) linear programming (graphic-method only), (5) decision making under uncertainty (including maxi-max, mini-max, and maxi-min techniques) and (6) the basic elements of forecasting (including the classical time series model).

## **Concentration in Accounting and Finance**

### **FIN 532 Investment Strategy (3) Also Available Online**

Introduces current technological trends market microstructure, and strategies for investment management in the financial market. Topics include (1) stock/securities market structure, (2) risk-return tradeoffs on instruments, (3) auction, negotiation, online trading mechanisms, (4) mutual fund investments, (5) asset pricing and valuation theory, (6) security/industry/company analysis, (7) stock market/equity/technical/financial statement analysis, (8) capital market theory, (9) combining stocks with other alternative investments, and (10) portfolio management.

### **ACC 585 Financial Statement Analysis and Reporting (3) Also**

#### **Available Online**

This course examines the production and use of corporate financial reporting for purpose of evaluating firm performance and financial position. Emphasis is given to the role of financial statement information in efficient capital markets and to the ability of accounting data to predict a firm's future performance. Selected topics include: (i) firm's accounting choices and the assessment of earnings quality; (ii) the effects of accounting alternatives on common stock prices; and (iii) the use of financial information in evaluating default risk and in identifying potentially bankrupt firms.

### **FIN 685 Seminar in Accounting & Finance (3)**

An integrating experience to apply the varied skills and knowledge accumulated through the required course work to make the student competitive in capital markets. Special emphasis will be upon mastery of body of accounting and financial knowledge including significant current development on the economic and financial scene. Students acquire greater understanding of global capital markets, demonstrate the ability to use the tools and techniques of accounting and investment analysis in the valuation of assets, and provide a synthesis of all previous related course work.

## **Concentration in E-Commerce and Marketing**

### **MKT 550 Marketing Research and Technology (3)**

Explore applications of modern technology and research methods in marketing including Internet-based marketing. Marketing intelligence and information research structure is closely examined. Advantages and disadvantages of marketing decisions are compared through scientific research methods and technology.

### **MKT 640 Seminar in Marketing Management (3)**

Emphasizes a managerial approach in marketing decision making in the modern technology environment. Topics in this course include marketing mix, marketing problem solving, marketing staff arrangement, direct marketing, marketing plan implementation. Students learn these topics and many other relative subjects through teamwork and course projects.

### **MKT 650 Marketing Quantitative Methods (3)**

Designed for prospective managers to investigate the structure of representative marketing models, to determine the critical factors in marketing decisions, and to assess the accuracy of managerial applications through various decision analysis methodologies. Focused areas of this course include: explanation of marketing decision procedures, interpretation of quantitative results, and implementation of marketing decisions.

## **Concentration in Human Resource Management**

### **HRM 620 Compensation (3)**

Often referred to as one of the most important elements of the work place environment, the subject of compensation is examined in this course across a broad spectrum. Current theories, models and concepts are presented and analyzed in an effort to provide the basis for development of an equitable and effective pay system. Key topics included are motivation theory, performance appraisal, legal bases for pay and internal and external pay equity.

### **HRM 615 Labor Relations (3)**

A complete understanding of the history and development of labor management relations is critical for managers in both union and non-union organizations. Places special emphasis on the behavioral and economic underpinnings which set the stage for labor management relations in today's work settings. The structure, process and institutional framework within which these relations occur are also studied.

### **HRM 650 Human Resource Information Systems (3)**

#### **Also Available Online**

The need to integrate human resource management with the overall stream of strategic decisions and techniques demands the support of a current and responsive human resource information system. Although the course recognizes that human resource information systems can run the gamut from paper and pencil manual systems to the most sophisticated mainframe systems, the emphasis is on microcomputer applications to which the student will be able to relate based on the comprehensive course curriculum. Concepts developed in the course focus on bridging the needs of the most senior executives in an organization with those of the operating personnel manager.

## **Concentration in Health Services Management**

### **HSM 500 Health Care Systems (3) Also Available Online**

Health care delivery in the United States is a dynamic, evolving and extremely complex system; comprised of a myriad of providers and payers. The system is further complicated by significant government involvement in both delivery and payment. It is also important for the health professional to understand the biostatistics that measure a population's health, and the utilization statistics that measure its use of health care. This course will address the multiple components of the health care delivery system, the rationale for its patterns and practices and the basic statistics necessary to assess and measure its utilization.

### **HSM 525 Health Care Marketing/Strategic Planning (3) Also**

#### **Available Online**

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 that provides guidance and support to these efforts. Course will address many of the planning and marketing variables that should be addressed, as well as how to coordinate these activities.

### **HSM 535 Financial Management for Health Care**

#### **Organizations (3) Also Available Online**

Students will acquire a working knowledge of cash flow projections, budgeting, cost accounting and control 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. An extensive accounting case analysis problem involving a not-for-profit entity will be assigned. Students will be required to submit an in-depth written report, which will reflect this organization's financial viability.

### **Individually Designed Concentration**

Any three courses other than technology core or business core classes

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## Electives

### **BUS 595 MBA Internship (3)**

Internship placements provide students with a field experience related to their academic preparation enabling them to apply classroom instruction to the work site. Students are placed with an organization related to their major and specific area of interest to work along with, and be proctored by, experienced professionals. These are opportunities that cannot be duplicated in the classroom environment and provide an excellent transition into the field.

### **CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

## Faculty

**Stephen Havlovic, Interim Dean and M.B.A. Program Director,**  
Ph.D., Ohio State University.

**John W. Barnes,** Associate Professor of Marketing, Ph.D., Arizona State University.

**Sema Dube,** Assistant Professor of Finance, Ph.D., George Washington University.

**Laura Francis-Gladney,** Assistant Professor of Accounting, Ph.D., Southern Illinois University at Carbondale.

**Peter A. Karl III,** Professor of Law and Tax, JD Albany Law School, CPA.

**William Langdon,** Professor of Quantitative Methods, Ph.D., Syracuse University.

**Allen Hall,** Associate Professor of Organizational Behavior, Ph.D., University of Iowa.

**Richard Havranek,** Associate Professor of Human Resource Management, Ph.D., Syracuse University.

**Edward Petronio,** Associate Professor of Strategy, Ph.D., Syracuse University.

**Rafael Romero,** Associate Professor of Economics, Ph.D., West Virginia University.

**Thomas Amlie,** Assistant Professor of Accounting, Ph.D., University of Maryland, CMA.

**Lisa Calongne,** Assistant Professor of Human Resource Management, Ph.D., Virginia Polytechnic Institute.

**Joseph Gerard,** Assistant Professor of Technology Management, Ph.D., University of Georgia.

**Kimberly Jarrell,** Assistant Professor of Marketing and Technology Management, Ph.D., Syracuse University.

**Raihan Khan,** Assistant Professor of Technology Management, Ph.D., Syracuse University.

**Hoseoup Lee,** Assistant Professor of Accounting, Ph.D., University of Connecticut, CPA.

**David McLain,** Assistant Professor of Technology Management, Ph.D., University of Wisconsin - Madison.

**Khalil Torabzadeh,** Associate Professor of Finance, DBA, Mississippi State University.

**Janice Welker,** Assistant Professor, Ph.D., Saint Louis University. Managed care, economics and capstone course.

**Robert Yeh,** Assistant Professor of Marketing, Ph.D., Purdue University.

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# Master of Science in Computer and Information Science

## Chairman's Message

The Master of Science program in Computer and Information Science provides students with a strong theoretical and application-oriented education. Graduates from the program have been equally successfully in entering the work force and continuing their graduate education. Students from this program have gone on to pursue their doctoral degrees from institutions such as Binghamton University State University of New York, Cornell University, University of Massachusetts, Northwestern University, Syracuse University and the University of Southern California.

The Computer Science Department is the largest within the School of Information Systems and Engineering Technology. The thirteen full-time faculty members have diverse areas of academic expertise. They support the graduate program and two undergraduate programs, while continuing to pursue research and scholarly activities in their respective areas of interest.

The Computer Science Department has the distinction of having used a distance learning environment to offer a Master of Science degree to seven Russian students residing in Moscow. This first ever international venture required the collaboration of two institutions of higher education located half a world apart and contained a series of historic firsts. One of the most noteworthy of the several innovations involved the use of Internet technology by four students in Moscow to defend their theses to the faculty at SUNY Institute of Technology.

The program regularly offers a wide variety of courses including systems theory, formal languages, artificial intelligence, computer vision, and courses emphasizing information storage and retrieval. The courses are complemented by several state-of-the-art laboratories employing a variety of computing environments. A description of the computing resources is located in the section entitled Academic Computing Facilities.

The program is also supported by extensive library holdings. Over 200 journal titles maintained by the library directly support the graduate program in Computer and Information Science.

The Master of Science in Computer and Information Science program is designed for full and part-time students seeking a quality education in preparation for employment and career advancement in this rapidly developing field.

*Roger Cavallo, Ph.D.,  
Professor and Chair  
Computer and Information Science Department*

This program is designed to provide students with a broad overview of the major areas in the discipline and in-depth specialization in one area. Course offerings stress the principles and problem solving methodology required by computing professionals working in industry, business and education.

## Admissions Criteria

Some computer science background is required for admission to the program. However, students with an insufficient background may amend this deficiency by taking designated "bridge" courses. These courses are intended to provide students with fundamental knowledge in mathematics and computer science as appropriate and serve to prepare students for advanced coursework. Although some students may be advised to take up to five bridge courses, only two of these may be counted toward the elective component of the degree requirements. The use of bridge courses allows students with technical backgrounds other than computer science to complete their graduate program within a reasonable period of time.

## Bridge Courses

CSC 500	Discrete Structures
CSC 501	Continuous Methods in Computer Science
CSC 502	Machine Structures (Also listed as CS 220)
CSC 503	Data Structures (Also listed as CS 240)
CSC 504	Computational Methods in Linear Algebra (Also listed as CS 421)

Students who need to make up deficiencies or enroll in bridge courses should consult with a graduate advisor to determine appropriate course selection. GRE general test scores are also part of the admission criteria. Information on this test appears in the general information section of this catalog.

## Degree Requirements

The basic requirements are completion of 33 semester hours of graduate study including successful completion of either a project (CSC 598 – 3 credits) or a thesis (CSC 599 – 6 credits).

1. Coursework in which a B (3.0) average must be maintained shall include:

### CORE COURSES (3 courses)

CSC 511:	Formal Methods in Programming
CSC 521:	Analytical Models for Operating Systems
CSC 531:	Automata, Computability & Formal Languages
CSC 541	Information Storage and Access
CSC 551	Introduction to Systems Theory

### ELECTIVES (6-7 courses)

#### A. Designated Electives (minimum of 4):

Courses selected from the designated graduate electives of the department (see list at right).

#### B. General Electives:

Up to two courses, which may be chosen from among computer science courses or any of the graduate offerings of SUNYIT. Bridge courses and transferred courses count as General Electives.

2. "No formal defense is required for the project – students present their results informally at a colloquium or as invited speakers in a class related to their topics."

## Regular Offerings (COMP SCI PG36)

### CSC 511 Formal Methods in Programming (3)

Formalisms for program expression; data and control abstractions and their interrelation are considered. Advanced control constructs including backtracking and nondeterminism, concurrent programming, the effects of formal methods for program description. Major approaches and techniques for proving programs correct are described. Prerequisite: CSC 500; CSC 503; coursework in two high-level languages.

### CSC 512 Theory of Programming Languages (3)

A formal treatment of both programming languages (translation and compiler design concepts, formal semantics) and programming concepts; theoretical aspects of topics such as parsing and translation specifications presented along with those based on consideration of programs as machine independent entities. Prerequisites: Discrete Structures; Data Structures; coursework in two high-level languages.

### CSC 513 Compiler Construction (3)

An introduction to the major methods used in compiler implementation. The parsing methods of LL(k) and LR(k) are covered, as well as finite state methods of lexical analysis, symbol table construction, internal forms for a program, run time storage management for block structured languages, and an introduction to code optimization. Prerequisites: Discrete Structures and CSC 531.

### CSC 515 Object-Oriented Software Development (3)

An exposition of current object-oriented software design methodologies. Topics covered include object modeling, component protocols, interaction and visibility graphs, class design and inheritance graphs, data dictionary design, object persistence, exception handling, application frameworks and design patterns. These general concepts are illustrated with examples from currently practice methods such as Booch, OMT and Fusion. General software engineering principles, including reusability, are also discussed. Prerequisites: CSC 500 and CSC 503, or equivalent.

### CSC 516 Functional Software Development (3)

An exposition of the fundamental principles underlying the applicative programming paradigm. Topics covered include lambda and general calculi, techniques of functional programming, types in functional languages, correctness of functional programs, and parallelism. A survey of major functional languages is also provided, along with representative applications. Prerequisites: CSC 500 and CSC 503, or equivalent.

### CSC 521 Analytical Models for Operating Systems (3)

Review of major concept areas of operating systems principles, including networks of operating system modules, pipelining, and parallelism; development of approaches and examination of the major models that have been used to study operating systems and the computer systems which they manage. Introduction to the fundamentals of queueing theory; Petri nets, dataflow diagrams, and other models of parallel behavior will be studied. Prerequisites: Discrete Structures, Probability and Statistics, Linear Algebra, Calculus.

### CSC 522 Computer Networks and Distributed Processing (3)

A study of networks of interacting computers, including basic network topologies, equipment configurations, and local networks. The problems, rationales, and possible solutions for both distributed processing and distributed databases will be examined. Major national and international protocols will be presented. Prerequisite: Discrete Structures.

### CSC 523 Parallel Computing & Computers (3)

Algorithms and programming for parallel programming environments. Application to several architectures, including: virtual parallel environments; tightly and loosely coupled multiprocessors; pipelined and array processors.

### CSC 524 Real Time Systems (3)

An introduction to the problems, concepts, and techniques involved in computer systems which must interface with external devices. These include process control systems, computer systems embedded within aircraft or automobiles, and graphic systems. Areas will include data acquisition, analog-digital conversion, digital signal processing, and operating systems software for these systems. Prerequisites: Calculus, Linear Algebra.

### CSC 525 Distributed Systems (3)

This course concerns distributed multiprocessor systems in their fullest scope. It considers both the functional and analytical structures of specialized processors performing portions of the same task, nonspecialized processors with limited number of states sharing a common memory, and multicomputers geographically distributed but linked through a communications network. It provides a foundation to evaluate the economics and feasibility of distributed systems. Prerequisite: CSC 522.

### CSC 531 Automata, Computability and Formal Languages (3)

The stress in this course is on formal models of computation and the development of students' skills in utilizing rigorous concepts and definitions in computing environments to analyze broad classes of problems situations. Classical concepts from theoretical computer science (such as state minimization, formal languages and their acceptors, and the theory of computable functions) will be reviewed and/or developed. Prerequisite: Discrete Structures.

### CSC 532 Applied Combinatorics and Graph Theory (3)

A study of combinatorial and graphical techniques for complexity analysis including, generating functions, recurrence relations, Polya's theory of counting, planar directed and undirected graphs, and NP-complete problems. Applications of the techniques to analysis of algorithms in graph theory, and sorting and searching. Prerequisite: Discrete Structures.

### CSC 533 Theory of Computation (3)

A survey of formal models for computation, providing the basis for a rigorous understanding of the capacities and the limitations of computing devices. Includes Turing Machines, partial recursive functions, recursive and recursively enumerable sets, the recursion theorem, abstract complexity theory, program schemes, and concrete complexity. Prerequisites: Discrete Structures, CSC 531 co-requisite.

### CSC 534 Combinatorial Optimization (3)

A study of the class of algorithms for optimization of combinatorial structures. Complexity of problems such as linear programming and the traveling salesman problem. NP-completeness, approximation algorithms, worst-case and probabilistic analysis of algorithms, and local search. Prerequisite: Discrete Structures.

### CSC 535 Error Correcting Codes (3)

An introduction to coding for reliable data storage and transmission. Topics include linear, BCH, Cyclic, Reed-Mueller, and Reed-Justensen codes; dual codes and their weight distribution; encoding and decoding algorithms. Prerequisites: Discrete Structures, Linear Algebra.

### CSC 541 Information Storage and Access (3)

Review of database and database management concepts. Advanced data structures, file structures, databases, and processing systems for access and maintenance. For explicitly structured data, interactions among these structures, accessing patterns, and design of processing/access systems. Data administration processing system life cycle, system security. Prerequisite: Discrete Structures.

### CSC 542 Information Systems Design (3)

Introduction to the formalization of the information systems design process. Concepts and theories relating to module design, module coupling, and module strength with emphasis on techniques for reducing a system's complexity. The course is intended to be especially useful for those working in a technically advanced information systems environment. Prerequisite: CSC 551.

### CSC 543 Distributed Database Systems (3)

A consideration of the problems and opportunities inherent in distributed databases on a network computer system. Includes file allocation, directory systems, deadlock detection and prevention, synchronization, query optimization, and fault tolerance. Prerequisites: Discrete Structures, CSC 522, CSC 541 co-requisite.

### CSC 544 Computer Graphics (3)

An introduction to modeling and rendering used in 3D computer generated imaging. Topics include: animation; parallel and perspective projections; geometric and viewing transformations; bicubic spline surfaces; color and shading models; hidden surface removal, and ray tracing. Prerequisite: Linear Algebra.

**CSC 545 Logic Programming (3)**

A study of the syntax, the declarative and procedural semantics of logic programs and an introduction to logic programming using the language PROLOG. Prerequisite: Discrete Structures.

**CSC 546 Multimedia Information Processing (3)**

Designed to explore current research issues related to multimedia information processing and management. Students will learn the conceptual bases of dealing with data/information and semi-structured data management. Major topics may include (but are not limited to) information retrieval models, video processing techniques for content analysis, pattern analysis techniques related to information retrieval, query formation and intelligent query processing. Successful completion of the course will help students to do research in the emerging areas of multimedia information processing. Prerequisites: Linear algebra and programming skill in C++, JAVA, C, or MATLAB.

**CSC 551 Introduction to Systems Theory (3)**

This course develops a conceptual basis and techniques for the study of systems and system properties useful in all areas of computer science. Some of the properties covered are: behavior, state, dynamics, organization, structure, hierarchy, feedback regulation and control, complexity, information, communication, and performance. The course also develops a number of examples and emphasizes the ability to use the abstract systems concepts to model and study information processing systems. Prerequisite: Discrete Structures.

**CSC 552 Introduction to Information Theory (3)**

Basic results of information theory with application to storage, compression, and transmission of data; entropy and entropy-based measures. Block and variable length codes, noiseless and noisy channels, channel capacity. Real and computer-simulated data studies to illustrate problems of statistical characterization of sources and channels. Prerequisites: Probability and Statistics, Linear Algebra, Calculus, Discrete Structures.

**CSC 553 Data Security (3)**

Theories and techniques for encrypting and decrypting stored and transmitted data. Topics include classical cryptographic methods, stream and block ciphers, public key systems, the Data Encryption Standard, automata-theoretic and shift-register models of security systems, analog security systems. Prerequisite: Discrete Structures.

**CSC 554 Modeling and Simulation (3)**

Discrete and continuous techniques for modeling and simulating complex systems. Model formulation; class of models; statistical simulation; simulation languages; model-based simulation; model stability, verification and interpretation; and decision support systems. Prerequisites: Probability and Statistics, Linear Algebra.

**CSC 555 Models and Metrics for System Performance Evaluation (3)**

Issues involved in developing quantitative indices of merit assessment. General framework and principles for systems evaluation; study of appropriate metrics for software systems, software development cycle, hardware-software complexes, command and control systems. Prerequisites: Probability and Statistics, CSC 551.

**CSC 556 Pattern Recognition and Image Processing (3)**

Design of automated and interactive classification systems. Feature extraction methods, linguistic and relational representation of objects, inductive inference, maximum likelihood decisions; measures of quality; transform methods, fast algorithms, image operations such as enhancement, smoothing, sharpening, windowing, filtering. Prerequisites: Discrete Structures, Linear Algebra, CSC 552.

**CSC 557 Artificial Intelligence (3)**

Survey of basic concepts and techniques of artificial intelligence. Knowledge representation, constraints and capabilities of different notational systems; search strategies; problem representation and problem solving methods; expert systems. Applications and illustrations from medicine, science, robotics, computer vision. Prerequisite: Discrete Structures.

**CSC 558 Operations Research (3)**

An introduction to the theory of linear programming, network analysis, dynamic programming and integer programming with emphasis on computer implementation. Prerequisites: Linear Algebra, Discrete Structures.

**CSC 559 Fuzzy Sets and Systems (3)**

A study of uncertainty, vagueness, and inexactness. This course presents: 1) a historical perspective; 2) fundamental principles of fuzzy logic, an extension to two-valued logic, and fuzzy systems theory; 3) application areas for uncertainty theory.

**Other Courses****CSC 507 Data Analysis**

Selection and implementation of research strategies, including selection and application of proper statistical techniques using a personal computer as a research and decision-making tool. Students will attain proficiency in the use of a commercial statistical analysis package in the solution of quantitative research problems. Designed to support graduate programs in nursing administration and telecommunications; not intended for computer science graduate students.

**CSC 580 Computer and Robotic Vision (3)**

This course is designed to give the student an insight into the intrinsic image information and the internal model of vision systems. Classification of objects is performed by extracting linear curves and regions in images, using boundary information, texture analysis and 3D scene analysis. Geometric and relationship structures involving complex symbolic descriptions of image and world structures are studied and various applications are introduced. Cross-listed with MST 580.

**CSC 581 Seminar in Computer Science (3)**

Students must choose from a list of topics and explore the literature, make formal presentations, and submit a final report on the topics. Prerequisites: Advanced graduate standing and permission of instructor.

**CSC 585 Special Topics (variable credit)**

Topics will vary from semester to semester. In-depth development of topics reflecting current research areas of faculty. Example topics: remote sensing, cartographic systems, models of the brain, modeling of sociotechnical systems, adaptive programming, optimization models and methods, decision theory and decision support systems, mathematical systems theory, fuzzy systems and fuzzy programming, high-level computer architecture, legal issues in computing.

**CSC 591 Independent Study (variable credit)****CSC 598 Project (3)****CSC 599 Thesis (1-6 credits)****CSC 600 Colloquia in Computer Science (3)**

Speakers from fields in computing and its applications present their current research activities and findings. Students are required to attend a designed number of colloquia each semester and to write reaction papers to those presentations in areas of their interest. May be taken repeatedly, but it does not count toward the 33 credit hour requirement for the M.S. degree.

**CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

**Bridge Courses****CSC 500 Discrete Structures (3)**

This course provides the mathematical tools which serve as a basis for the description and understanding of the major components of computer science. Topics include: sets, relations (binary, n-ary), relational algebra, functions, properties of relations, propositional and predicate calculus. The presentation of this and other material is based on its utility for describing and investigating the objects of study in computer science, e.g., abstract models of machines (finite state automata- deterministic, nondeterministic, pushdown stores-Turing Machines), of strings and languages, etc. Counting techniques, recurrence relations and algorithm analysis will be studied-algebraic structures (monoids, groups, etc.; Boolean Algebras, lattices) and mapping between them; operations on n-ary relations suitable for database design; fundamentals of the study of switching circuits; proof techniques and an introduction to proving program correctness, elements of graph theory; and an introduction to the study of fuzzy sets and systems.

**CSC 501 Continuous Methods in Computer Science (3)**

Basic techniques of numerical computation. Topics include: computer arithmetic and error control, solution of non-linear algebraic equations including some non-linear optimization, polynomial interpolations including splines, curve fitting, integration, and an introduction to differential equations. Emphasis will be on non-formal settings with a view toward applications.

**CSC 502 Machine Structures (3)**

Computers as a hierarchy of levels. Coverage includes digital logic, microprogramming, and conventional machine levels. Emphasis is given to those aspects of computer hardware that affect programming. Prerequisite: Permission of instructor.

**CSC 503 Data Structures (3)**

A study of data structures through programming assignments and then in a language independent setting. The levels of data description and their roles in data structure design are examined. Prerequisite: Permission of instructor.

**CSC 504 Computational Methods in Linear Algebra (3)**

Computational aspects of linear algebra including linear optimization models are explored. Topics include different algorithms for solution of sets of linear algebraic equations, the eigen-value problems, linear programming, clustering techniques, and software requirements. Prerequisite: Permission of instructor.

**Faculty**

**Bruno Andriamanalimanana**, Associate Professor; Ph.D., Lehigh Combinatorics, Coding Theory, Cryptography.

**Roger Cavallo**, Professor; Ph.D., SUNY Binghamton Systems Theory, conceptual modeling, probabilistic database theory.

**Raymond Jesaitis**, Professor; Ph.D., Cornell Distributed Systems, numerical methods.

**Ernie Johnson**, Assistant Professor; Ph.D., SUNY Stony Brook Logic Programming, Software Engineering.

**Rosemary Mullick**, Associate Professor; Ph.D., Wayne State Operating Systems, computer networks, artificial intelligence, instructional computing.

**Jorge Novillo**, Professor; Ph.D., Lehigh Combinatorics, data security, bio-computing, artificial intelligence.

**Michael Pittarelli**, Professor; Ph.D., SUNY Binghamton Systems science, artificial intelligence, combinatorial search, database theory.

**Ron Sarner**, Professor; Ph.D., SUNY Binghamton Data modeling, statistical inference in the social sciences, instructional computing.

**Sam Sengupta**, Professor; Ph.D., Waterloo Systems modeling, computer networks, system forensics, distributed systems, operating systems.

**Scott Spetka**, Professor; Ph.D., UCLA Distributed databases, operating systems, system administration.

**Mohammed Yeasin**, Assistant Professor; Ph.D., Indian Institute of Technology, computer vision, pattern recognition, multimedia, medical image analysis, human-computer interface.

**Heather Dussault**, Adjunct Assistant Professor; Ph.D., Rensselaer Polytechnic Institute Computer Architecture, Computer Forensics, Graphics, Gaming.

**Naseem Ishaq**, Adjunct Associate Professor; Ph.D., London Computer Vision, information assurance, computer-aided design.

**Kevin Kwiat**, Adjunct Professor; Ph.D., Syracuse Computer architecture, distributed systems, information assurance, architecture.

## 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](http://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](http://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, Hydrain, 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.

### Computer Science Laboratories

The Computer Science department maintains 5 labs which contain a mix of operating systems and software. These labs are interconnected on a 100mbps high speed network and supported by multiple file servers 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, addi-

tional servers support the Computer Science department WWW site (www.cs.sunyit.edu), databases (MySQL, PostresSQL, and Oracle), 16 lines for dialup connections, and many other services. The Computer Science network is maintained with the assistance of student administrators.

**DogNET UNIX Labs (Kunsela HaR C012, C107, C122)** - provide access to UNIX workstations (named after dogs). Twenty-Five workstations (currently Pentium IV/3.0GHz with 17" flat-panel monitors) are in the C012 classroom lab. These machines run on the FreeBSD operating system and provide access to over 500 programs for Internet access, multimedia applications, publishing, language compilers, etc. The C012 lab is open for use when classes are not in session and for extended night and weekend hours. The C107 UNIX lab contains SUN Ultra5 workstations running the latest version of the Solaris operating system. This lab is used for computer science courses in operating systems, networking, web development, and system administration.

**MS Windows Labs (Kunsela C014 and C228)** - provide access to the Windows operating system and software. The C014 classroom lab contains twenty-five workstations (currently Pentium IV/2GHz) and is open for use when classes are not in session. The C228 special purpose lab contains 2 workstations and is ideal for small groups working collaboratively on projects. All systems in both labs run the latest version of the Microsoft Windows operating system. They support 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, Proglog, LISP, ML-ObjectCaml, APL. Application software includes Microsoft Office, Frontpage, Publisher, Visio, Matlab and Maple. Both labs are both open for extended night and weekend hours.

### 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.

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# Master of Science in Health Services Administration

On Campus and Online



## Overview

The Master of Science in Health Services Administration degree promotes the use of management and organizational theory, an understanding of health care delivery, reimbursement and financing systems, and applied research to formulate, implement, and evaluate managerial decisions in a health care setting. Areas of focus in the curriculum include management, health policy, legal topics in health care, financial management, health marketing and strategic planning, quantitative methods of data collection and analysis, and research methods.

The Master of Science in Health Services Administration is an internationally recognized degree, and is widely regarded as an outstanding graduate degree in the field of health care management. The program of study integrates both major topical areas in health care management (such as law, finance, marketing), which are essential given the increasing business orientation of health care, and applied health care research (i.e., quantitative analysis and research design methods). Upon completion of the program, a graduate will have the necessary academic training to assume a mid- to upper-level management position in a health care setting (e.g., practice management, managed care, acute care, long-term care, insurance groups, public health). Graduates will also be prepared to take the national nursing home administrator examination for licensure as a nursing home administrator.

The Master of Science in Health Services Administration Program is primarily intended for students who have academic preparation in the liberal arts, the applied sciences (e.g., students with a Bachelor's degree in nursing), or business, and seek a career in health care administration. These students will benefit from the health services administration focus of the curriculum, which is designed specifically to meet the educational needs and career goals of persons with a desire to apply management techniques to organizations in a health care setting.

The School of Management participates in the SUNY Learning Network; this is a consortium of campuses who have joined together to offer graduate and undergraduate on-line courses. Currently, it is possible to complete the Master of Science in Health Services Administration program entirely on-line (via the World Wide Web). On-line course information is available in the SUNY Learning Network Course Guide and in the College's course schedule.

## Admissions Guidelines

Students admitted to the Master of Science in Health Services Administration Program are expected to be proficient in two general areas common to graduate programs in health management upon admission, including accounting and statistics. Students will also be required to demonstrate computer competence with spreadsheets, word processing and databases by the end of the first semester. Competence may be determined by coursework or work experience. Admitted students lacking these proficiencies should consult with a graduate advisor to determine appropriate course selection. Prerequisite skills may be fulfilled in a variety of ways including: transfer courses, courses at SUNYIT, and College-level Entrance Program (CLEP) or Regents College Degree (RCD) examinations for students with appropriate knowledge, but no official documentation.

An application for admission to the Master of Science in Health Services Administration Program must be filed, along with all supporting documents, with SUNYIT's Admissions Office.

## Admission Criteria

- A baccalaureate degree from an accredited university or college.
- A 3.0 or higher overall G.P.A.
- A course in statistics with a C or better; a course in accounting with a C or better. A student who does not meet this requirement may be admitted with a deficiency.
- GMAT or GRE

Scores from the GMAT (Graduate Management Admissions Test) will follow the AACSB (American Assembly of Collegiate Schools of Business) recommended guideline: A total of 1,000 points based on 200 x undergraduate GPA + GMAT score.

SUNYIT will use prior academic achievement and the GMAT or GRE as the basic guide to determine admissibility, except in the following cases:

1. The applicant has demonstrated, through exceptional performance in a management career, that his or her undergraduate grades were not indicative of academic performance.
2. Conditional admission may be allowed for promising candidates who do not perform well on the GMAT or GRE. Students must maintain at least a B average in the first three courses completed in order to remain matriculated.

## Second Degree

Students may also obtain a second degree, Master of Business Administration (MBA) in Technology Management, by completing five additional Technology Management Courses.

BLW	570	Business Law, Ethics, & Intellectual Property Rights
MIS	615	E-Commerce and Entrepreneurship
TIM	500	Project Management
TIM	530	Managing New Product Design & Development
TIM	585	Cases in Technology and Innovation Management
TIM	685	Strategic Planning

## The Program

The program may require up to 45 graduate hours of study depending on the individual student's prior coursework and professional experience. In an effort to recognize and accommodate the expected diversity of baccalaureate backgrounds of the targeted student population, a flexible degree program was created. The program allows internal flexibility through the advisement process to address variations of student direct job related experience and specialized learning. The Master of Science in Health Services Administration Program is designed for non-business or health service administration baccalaureate students who typically need a series of background or prerequisite courses. Students who document either previous academic training or occupationally developed expertise will be given special consideration of selected coursework or prerequisite waiver. However, no student will graduate with less than 33 hours of completed graduate coursework within the Master of Science in Health Services Administration Program.

## Program Requirements

### Core

**Health Systems** (3 hours required)

### Course Requirements

**HSM 500-Health Care Systems**

**Policy** (3 hours required)

**Economics** (3 hours required)

**Law** (3 hours required)

**Management** (3 hours required)

**Accounting & Finance** (6 hours required)

**Marketing & Planning** (3 hours required)

**Quantitative Methods** (3 hours required)

**Research Methods** (3 hours required)

**Integrative Capstone** (3 hours required)

In addition to the Core Courses, students will be required to also complete at least six hours of electives:

**MSHSA Electives**  
(6 hours required)

**Electives**

**Health Services Administration**

**HSM 501-Health Policy**

**HSM 505-Health Economics**

**HSM 509-Legal Issues in Health Care**

**HRM 518 - Human Resource Management** or other organization management course

**FIN 525-Financial Management Problems**  
**HSM 535-Financial Management of HCO** (HSM 435)

**HSM 525-Health Care Marketing and Strategic Planning** (HSM 425)

**MGS 511-Quantitative Business Analysis**

**HSM 680 Research Methods for HSA**

**HSM 685-HSA Environments and Strategies**

### Course Selection

**HSM 510-Alternative Methods of Health Care Delivery**

**HSM 522-Nursing Home Administration**

**HSM 530-Ambulatory Care Administration**

**HSM 531-Financial Management for Ambulatory Care Org**

**HSM 699-Thesis in Health Services Administration**

**HSM 592 - Special Topics in Health Services Management**

**Other Graduate Electives**

Any course offered in the MBA program or MS Accountancy program.

*Other graduate courses are available*

## Requirements Notes

1. An introductory statistics and accounting course are required for this curriculum. Students will also be required to demonstrate computer competence with spreadsheets, word processing and databases by the end of the first semester. Competence may be determined by coursework or work experience.
2. In some cases undergraduate courses that will satisfy a Core Course Requirement. This determination will be made upon admission.
3. At least 3 credits must be Health Services Administration electives, however, students with a special interest may petition to complete the elective requirement without a health related elective.

## Internship

Students without any health related experience will be required to complete a six-credit hour internship. The determination for this requirement will be made upon admission by the Program Director.

## Degree Review for Master's Students

After completing 12 graduate credit hours, all students will be evaluated to determine whether their academic progress has been satisfactory to admit them into candidacy. Students who are not

admitted into Candidacy will not be allowed to continue in the program. The Program Director will use a student's G.P.A. to evaluate his or her academic performance. Students with a G.P.A. of 3.0 or higher will be admitted into candidacy. The Program Director will take one of the following actions for students whose G.P.A. is below a 3.0: (1) require the student to complete additional (i.e., remedial) coursework to enhance the student's skills in a specific area, e.g., writing, statistics; (2) allow the student to take one to two more graduate courses and require the student to obtain specific minimum grades, e.g., a B+, or higher to continue in the program; or (3) dismiss the student from the program and provide the student with academic/career advisement as appropriate.

### **Distance Learning**

The Health Services Management Program embarked on its distance learning efforts in 1998 in an effort to make its Programs available and accessible to working professionals and persons who are place-bound and do not have HSM degrees at the undergraduate or graduate levels in their area. The Program chose a web-based asynchronous learning mode which allow students to work on their classes with a great deal of flexibility and within the confines of their personal circumstances. All that is required is a computer, an Internet connection and the desire to pursue a health services degree. Some basic computer skills are necessary. The Health Services Management Program uses the SUNY Learning Network (SLN) for its course management and technical support.

### **Graduate Distance Learning Guidelines**

- For students planning to complete a substantial number of credit hours online, or the Capstone Course online, a campus residency of 1-3 days, for testing and seminars, will be required. The number and duration of residencies will be determined based upon the number of online credit hours completed. The residencies will be available each May.
- The purpose of the campus residency is to ensure program integrity and identify areas of student weakness. Students may be advised of the need to repeat selected coursework or engage in other such academic activities that will satisfy the reviewing panel's concerns. Each residency will be for one credit and will be graded on a pass-fail basis. The credit will not apply to the student's degree program.
- The first campus residency will be scheduled after the completion of 12 credit hours of Master of Science in Health Services Administration coursework completed online. Additional credit hours, but no more than six, will be permitted prior to the campus residency with permission of the student's advisor.
- Any student who is completing degree requirements both on campus and online will be required to schedule a campus residency after the completion of nine credit hours of Master of Science in Health Services Administration coursework online and a total of 15 credit hours. Additional credit hours will be permitted prior to the campus residency with permission of the student's advisor. A second residency will be required if the student completes nine additional credit hours online.
- The second residency will be required at the conclusion of the student's coursework and/or prior to engaging in an internship. During the second residency a student presentation will be required that will include the major project completed for the Capstone Course – HSM 685.
- A residency will be required if a student completes the Capstone Course – HSM 685, online.
- The scheduling of campus residencies will be done in consultation with the student's advisor.
- At the conclusion of the student's fourth online course, a minimum GPA of 3.0 is required. A lower GPA will result in academic counseling and may require the student to withdraw from the distance learning program. No more than two Cs will be permitted during the online program.

## **Course Descriptions**

### **HSM 500 Health Care Systems (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. It is also important for the health professional to understand the biostatistics that measure a population's health; and the utilization statistics that measure its use of health care. This course will address the multiple components of the health care delivery system, the rationale for its' patterns and practices and the basic statistics necessary to access and measure its utilization.

### **HSM 501 Health Policy (3)**

Federal and state governments, as well as many health care organizations, engage in ongoing and significant decision-making which will determine the course of health care. The purpose of this course is to present the process, intent and consequences of policy. Past, present and potential policy decisions will be studied. Prerequisite: HSM 301 and HSM 310 or permission of program advisor.

### **HSM 502 Finance for Health Care Organization (3)**

Departmental operations will be examined to enable management to organize and coordinate the efforts of each service and achieve cost effective patient care. Operational problems will be solved through the use of cash flow analysis, capital budgeting, capital finance (sources and management), feasibility analysis and cost determination. Special emphasis will be placed on the regulation affecting financing of health care, understanding alternative reimbursement systems and the applications of decision support systems. Prerequisite: Accounting 301 or its equivalent, and FIN 302 or its equivalent.

### **HSM 505 Health Economics (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. Prerequisite: BUS 501 or equivalent.

### **HSM 507 Organizational Management for Health Organizations (3)**

Uses seminar methods to address advanced management topics. Content areas included are the role of the manager, control, organizational design, professional integration, adaptation, and accountability as these topics relate to health care management. Research and case studies will be the primary methodology for course preparation and student requirements.

### **HSM 509 Legal Issues in Health Care (3)**

Exploration of legal issues that affect the operation of health care facilities. Topics covered include medical malpractice, licensure, staff privileges, federal/state regulatory mechanisms, health organization liability, risk management, decisions at the end of life and obligations to patients and the community. Preventative measures will be examined that minimize risks to health, safety, and the environment. A special emphasis will be on legal issues that improve operational performance and regulatory compliance.

### **HSM 525 Health Care Marketing/Strategic Planning (3)**

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 that provides guidance and support to these efforts. Course will address many of the planning and marketing variables that should be addressed, as well as how to coordinate these activities. Prerequisite: HSM 500.

### **HSM 535 Financial Management for Health Care Organizations (3)**

Students will acquire a working knowledge of cash flow projections, budgeting, cost accounting and control 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. An extensive accounting case analysis problem involving a not-for-profit entity will be assigned. Students will be required to submit an in-depth written report, which will reflect this organization's financial viability. Prerequisite: ACC 301 or its equivalent.

### **HSM 680 Research Methods for Health Services Administration (3)**

Covers conceptualization of health services research, statistical modeling, sampling, techniques, research design, data collection, literature review, and ethical issues in health services research. Students will complete a research design proposal which addresses a health services research problem. Prerequisite: MGS 511 or MBA statistics course.

### **HSM 685 Health Services Administration Environments and Strategies (3)**

Provides students with the theoretical framework and background to analyze the environment in which health care organization operate and to determine how organizations in the health care sector develop and implement strategies to achieve short term and long term goals. Strategic management theory will be used to integrate knowledge across functional areas of management. Students will work in teams to complete a major strategic management related project for a health care organization in the community. Students will develop individual case studies in ethics to examine the ethical implications of management. Prerequisites: HSM 501, HSM 525, HSM 600, minimum cumulative GPA of 3.0, or permission of instructor. (Note: Students must obtain a grade of B or better in this course to be eligible to graduate.)

### **Health Services Administration Electives**

#### **HSM 510 Alternative Methods of Health Care Delivery (3)**

Alternative Methods of Health Care Delivery provides a framework for understanding the meaning of the term "alternative health care delivery" and explores applicable methods from several health care arenas including the evolution of managed care, the expansion of alternative and complementary medicine modalities into mainstream medicine and the international health care scene. The course presents theories, principles and methods for investigating, evaluating and conducting business using the discussed methods of health care delivery. It is designed to introduce students as current and future health care administrators to the concepts and dynamics of alternative health care delivery methods as a basis for monitoring organizational, legislative, and reimbursement changes – be it in acute care, long term care, physician practice management or some similar field. Prerequisite: HSM 500.

#### **HSM 522 Nursing Home Administration (3)**

Aging of the United States population has expanded the need for long-term care services. This course will examine the nursing home as an integral part of the long-term continuum. This course is intended to provide the foundation necessary for students preparing for an internship and subsequent careers as nursing home administrator.

#### **HSM 523 Long Term Care Policy and Regulation (3)**

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 students with the development of long-term care policy and corresponding application of state/federal regulations for providers. There will be particular emphasis on nursing facilities and other service providers and consumers.

#### **HSM 530 Ambulatory Care Administration (3)**

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 services, and the specifics of management in an ambulatory care setting.

#### **HSM 531 Financial Management for Ambulatory Care Facilities (3)**

A course designed to assist the health care executive understand various financial issues in dealing with managed care organizations. Specifically, the course will focus on financial reimbursement issues which executives must understand to provide strategic financial and operational direction to their organizations. Topics to be covered include fee-for-service (RBRVS) methodologies, financial risk shifting via capitation methodologies, risk contracting issues, and various cost accounting methodologies to adequately prepare for negotiating managed care contracts. Prerequisite: HSM 535.

#### **HSM 592 Special Topics in Health Services Management (1-3)**

A study of a selected topic of interest to students interested in the field of health care administration, which will enhance the student's ability to work in the health care field. Topics may be repeated in future semesters or may change from semester to semester. Grading method will vary depending upon topic.

### **HSM 699 Thesis in Health Services Administration (3)**

The thesis option in health services administration requires that a student integrate knowledge and expertise developed in the specialized core curriculum. Students will develop a paper that addresses a convincing research question in the health care field, and is supported with primary and/or secondary data. Topics might include improving the delivery health care services to a subgroup of the population, or advancing health services delivery in an organization or a geographic region. Prerequisite: permission of instructor and the completion of statistics and research methods coursework.

### **HSM 692 Internship (3-9)**

Internship placements provide students with a field experience related to their academic preparation enabling them to apply classroom instruction to the work site. Students are placed with an organization related to their major and specific area of interest to work along with, and be protored by experienced professionals. These are opportunities that cannot be duplicated in the classroom environment and provide an excellent transition into the field. Prerequisite: Permission of Program Director.

### **Other Electives**

#### **ACC 571 Advanced Management Accounting (3)**

Students will learn techniques for budgeting, cost/volume/profit analysis, activity-based costing, constrained optimization, variance analysis, and others. Students will analyze advanced management accounting topics through problems, essays, and case studies. Finally, students will present the results of their analysis both orally and in writing.

#### **ACC 630 Fund Accounting (3)**

Accounting principles and procedures as applied to not-for-profits entities are covered. In addition, the accounting standards and reporting requirements that relate to not-for-profit entities will be reviewed and analyzed.

#### **MIS 515 Management Information Systems (3)**

Strategic uses of information that affect customers, markets, and products are becoming common today. Information is used to manage organizations, carry out strategy, control operations, and assist in decision-making. As a result, information is a resource with value equal to that of traditional assets such as inventory, capital, and human skills. In this course students will learn to manage and use information systems and technology. The MIS course provides concepts, methods, and techniques to identify an organization's information needs and to employ systems to meet these needs. The course introduces business students to topics such as information systems, database management, information technology, expert systems, and decision support systems. [Formally BUS 515]

#### **CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

## **Faculty**

**Stephen Havlovic**, Interim Dean and Professor of Human Resource Management, Ph.D., Ohio State University. Quality of work life, coping with work-related stress and quantitative research methods.

**William Langdon**, Professor of Quantitative Methods, Ph.D., Syracuse University. Quantitative methods and finance.

**James H. Morey**, Associate Professor, M.B.A., George Washington University; CPA State of New York. Hospital merger/consolidations; nursing home establishment, expansion and acquisition, and operational analysis.

**Gary D. Scherzer**, Associate Professor, M.P.H., University of Tennessee. Public health, planning, marketing, health policy.

**Janice Welker**, Assistant Professor, Ph.D., Saint Louis University. Managed care, economics and capstone course.

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# Master of Science in Information Design and Technology



## Computer Laboratories

The program has two high-end computer laboratories that will be used, in part, to support the graduate program: a Windows-based Pentium facility and an Apple system G4 lab. The Windows-based laboratory has 22 PCs for use with computer graphics, digital photography, computer visualization, animation, Web design, and desktop publishing. The laboratory has four group work areas for collaboration. The Macintosh Lab has 20 G4 dual processor machines with DVD video inputs. In addition to having all the capabilities of the PC lab, it also supports digital video. Both laboratories have high-end color as well as black and white output devices and scanners.

## Admissions Criteria

1. A baccalaureate degree from an accredited university or college.
2. A minimum overall GPA of 3.0.
3. For those without a bachelor's degree in communications, rhetoric, journalism, English, linguistics, computer science, or a related field, at least 15 credits in appropriately related courses.
4. Recent letters of recommendation from two individuals, preferably from a professional supervisor and a faculty member.
5. A portfolio documenting preparation for graduate study, including,
  - a) An essay describing what you can bring to this program and why you wish to pursue this degree.
  - b) Additional selected materials supporting your preparation for graduate study.

## Degree Requirements

The IDT program is currently offered on a part-time basis. Students interested in pursuing the program full-time, should consult with the program coordinator. The M.S. in Information Design and Technology consists of 33 credits, including four core courses, electives, and a thesis or project, as follows. Students must receive a "B" (3.0) or better in all core courses. Over the course of their studies, students can only apply two "C" grades in courses taken toward the degree.

### 1. CORE COURSES

12 credit hours

1. IDT 501 Information Design Theory
2. IDT 534 Visual Communication
3. IDT 505 Computing Environments
4. A Graduate-level research methods course, chosen from current research methods offerings in consultation with an advisor. Current offerings include:

CSC 507	Data Analysis
SOC 532	Methods of Research: Survey and Experimental Design
SOC 533	Methods of Research: Statistical Analysis
SOC 534	Methods of Research: Qualitative Research
ANT 531	Ethnographic Data Collection and Analysis

**2. ELECTIVES**

12 credit hours

*Electives may be used to satisfy course prerequisites.*

IDT 503	Human Factors in Information Design
IDT 531	Technical Editing
IDT 534	Visual Communication
IDT 535	Typographic Design and Communication
IDT 541	Instructional Design
IDT 545	Change Theory and Information Technology
IDT 553	Principles of Design for Desktop and Electronic Publishing
IDT 555	Ethical and Legal Issues of the Information Age
IDT 575	Internship
IDT 585	Seminar in Emerging Technologies
IDT 590	Topics in Information Design and Technology
IDT 591	Independent Study

**3. UNRESTRICTED ELECTIVES**

6 credit hours

In consultation with adviser, students choose two additional graduate-level electives or an internship and one elective.

**4. THESIS/PROJECT**

IDT 599	Thesis/Project	3 credit hours
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Working with faculty member teaching the course, or an adviser, students either write a thesis or complete a project for the program.

**Course Descriptions**

**IDT 501 Information Design Theory (3)**

Examines the role of theory in effective communication and information design. Explores theoretical approaches and practices from several disciplines (communication, cognitive science, instructional design). Applies front-end analysis and information design strategies and practices. Students work on communication and design problems from instructional environments, business, or government, and present their findings orally, visually, and in writing.

**IDT 503 Human Factors in Information Design (3)**

Provides students with theoretical frameworks and background needed to analyze the relationship between computer environments and the people who use them. The factors that relate to the design and use of instructional media will be considered. Factors as diverse as ergonomics, software screen design, readability, usability, web testing, and user-centered and contextual analysis will be considered to optimize the effectiveness of information design and instructional media. Students will develop and build an interface designed to carry out a sequence of well-defined tasks based on user/system requirements and project methodology guidelines and research information.

**IDT 505 Computing Environments (3)**

An introduction to computer operating systems and computer networks for communication specialists. Contemporary operating systems will be examined including installation, the user interface, simple troubleshooting, networking

and internetworking. Network design, architectures, administration, and support will be considered within the context of a variety of professional environments.

**CSC 507 Data Analysis (3)**

A survey of research design and data analysis. Focus on the practical issues involved in carrying our research in a variety of settings. Sources of research questions, hypothesis formulation, research designs, strategies to control for extraneous influences, appropriate computerized statistical analyses (descriptive and inferential) drawing appropriate conclusions, and alternate explanations are considered.

**SOC 532 Methods of Research: Survey and Experimental Design (3)**

Places emphasis on positivist approaches to social research processes in applied settings. Applies hypothesis construction, research design, data collection and data analysis to needs assessment and evaluation requirements of organizations. Utilizes the SPSS to construct and analyze real world databases.

**SOC 533 Methods of Research: Statistical Analysis (3)**

Reviews casual logic and uses descriptive statistics, cross-tabulation and regression analysis, as well as other relevant inferential statistical techniques, to analyze social data with emphasis upon program outcome and evaluation data. Examines the significance of the requisite assumptions and interpretation of findings for specific statistical techniques. Relies on computer-based analysis using SPSS.

**ANT 531 Methods of Research: Ethnographic Data Collection and Analysis (3)**

Examines the epistemological presumptions and methodological strictures of field work/participant observation in the anthropological tradition. Compares this to Positivist and Postmodernist approaches. Trains students to use ethnographic methods and compares them with other qualitative methods informed by this perspective (i.e. in-depth interviewing and content analysis) in applied research and practice settings. Evaluates a range of contemporary appropriations of the ethnographic gaze from information systems development to evaluation.

**IDT 531 Technical Editing (3)**

Focuses on editing in the context of rhetorical theory, analyzing the strategies and purposes of editing for various documents and audiences. Emphasis falls on the editor as supervisor and manager who must understand the design and production process of complete documents. A major component of the course addresses the skills and issues of editing for on-line communication and publication.

**IDT 534 Visual Communication (3)**

Explores the theoretical and practical use of graphics as a form of visual communication. Topics include visual perception and forms, design theory, chart and graph theory, relationships between formatted text and graphics, and color and design concepts. Students will apply theory to the design of visuals in communication.

**IDT 535 Typographic Design and Communication (3)**

Investigates typographic variables and methods of organization. Verbal, visual and vocal message-making is explored through the marriage of meaning and form. This facilitates the development of an aesthetic vocabulary combined with an increased sensitivity to language. Issues of hierarchy, readability, and syntax will be examined through a series of projects. The assignments range from realistic, client-based problems to highly abstract, heuristic exercises.

**IDT 541 Instructional Design (3)**

Students will learn about the fundamentals of instructional design, its variations and impact on learning outcomes. Several contemporary ID models will be examined. Students will ultimately adopt a personal approach to instructional design.

**IDT 545 Change Theory and Information Technology (3)**

Examines the theoretical framework of change theory and research in various fields and issues facing individuals or institutions engaged in change. Students will discuss the elements of the change process, the roles of participants in the process and implications for change agents or agencies. Students will apply knowledge of diffusion and diffusion research to a planned, ongoing or past diffusion effort, preparing recommendations or post-mortem analysis of the process. Desirability and unintended consequences of innovations will also be discussed. Non-matriculated students need permission of dean to enroll.

**IDT 553 Principles of Design for Desktop and Electronic Publishing (3)**

An advanced consideration of communication theory as it relates to visual language and the ways designers use and readers process such information. Analyzes the strengths and limits of various media and applies design principles applicable to each medium and to the integration of visuals with language and sound. Students analyze and evaluate selected readings and examples and use publishing techniques to design and produce printed material and they design a Web site.

**IDT 555 Ethical and Legal Issues of the Information Age (3)**

Analyzes ethical and legal issues related to information technologies. Examines the ways that technology challenges traditional ethical and legal concepts and raises old issues in new ways. Topics reflect recent patterns and developments, with particular emphasis on how technological developments shape, and are shaped by, the economic and political structure and organization of communication systems. Examines the role ethical and legal factors play in the day-to-day work of designers, producers and consumers using a series of contemporary issues as case studies.

**IDT 585 Seminar in Emerging Information Technologies (3)**

Takes an in-depth look at emerging technologies including but not limited to multimedia, distance learning, networking and the Internet. Reviews technical, social, economic and political factors associated with new and emerging information technologies. Examines trends in the development and diffusion of emerging information technologies. Explores, through practical application, use of emerging information technologies in educational settings.

**IDT 590 Selected Topics in Information Design and Technology (3)**

Provides students with the opportunity to investigate selected topics in information design and technology. Topics will typically illustrate the application of theory and research. Students may receive credit in a future semester for different topic areas.

**IDT 591 Independent Study (1-3)**

**IDT 592 Internship (3)**

Application of theory to real-life situations through placement in an appropriate work-related setting. Requires completion of assigned projects under the joint supervision of a faculty member and a professional supervisor. Prerequisite: Faculty will determine on a case-by-case basis if student is adequately prepared for an internship. The student will be required to make a proposal for an internship and IDT faculty will review each request.

**IDT 599 Thesis/Project (3)**

Students complete an in-depth quantitative or qualitative empirical study of a topic chosen by the student from the area of information design and technology. Students will work individually on projects and will act as a resource for other students working on their thesis, reviewing their work, offering comments and suggestions, and sharing ideas. At the completion of the course, students will present their final paper to the college community. This is a capstone course for students who are close to graduation in Information Design and Technology. Students must have already taken or are currently taking a research methods course. They should take the course after taking all core courses. Permission of the instructor is required for admission to the class.

**CMT 600 Continuous Registration (1)**

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

## FACULTY

**Mona de Vestel**, Instructor, MPS, New York University, Tisch School of the Arts. Interactive online education and the use of technology in the classroom.

**Walter Johnston**, Associate Professor, Ph.D., Cornell University. Technical writing and editing.

**Russell L. Kahn**, Associate Professor, Ph.D., University at Albany. Social, political, business and educational implications of the Web, Web design, and computer software documentation.

**Rosemary J. Mullick**, Associate Professor, Ph.D., Wayne State University. Research design and methodology, parallels between human cognition and artificial intelligence, comparisons of computer languages.

**Michelle L. Sammon**, Assistant Professor, M.F.A., Rochester Institute of Technology. Graphic design and typography, conceptual and visual systems in digital media and Web design, history and philosophy of aesthetics.

**Ronald Sarner**, Distinguished Service Professor, Ph.D., State University of New York at Binghamton. Data modeling, statistical inference, instructional computing.

**Steven Schneider**, Associate Professor, Ph.D., Massachusetts Institute of Technology. Computer-mediated communication and computer-mediated instructional systems.

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# Master of Science in Nursing

## Accreditation

The M.S. in Nursing program is registered by the New York State Education Department and is accredited by the Commission on Collegiate Nursing Education (CCNE, 1 Dupont Circle NW, Washington, DC, 202-887-6791).

## Mission

The mission of the School of Nursing and Health Systems is to provide nursing education at the baccalaureate and master's level 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 aspires to professional excellence in teaching, practice, scholarship, and service to the University and 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.

## Statement of Purpose and Program Goals

The graduates of this program are prepared at beginning and advanced levels of their practice to utilize theory, leadership, and research as the foundation of their practice. They are prepared to continue their education and to deliver quality nursing services that embrace the ethical code and legal standards of the profession to individuals, families, groups, and communities. The goals are to:

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 clients, families and within culturally diverse communities.
5. Promote the development of faculty in teaching, practice, community service, and scholarship within the nursing profession, community, and university.

## Program Outcomes for the Master of Science in Nursing Degree

Derived from the School of Nursing and Health Systems goals are the program outcomes specific to the Master of Science in Nursing degree to prepare the graduate for advanced professional practice. At the completion of the master's program, the graduate will be able to:

1. Apply knowledge gained from theoretical and empirical knowledge in nursing and from related arts, natural, social, and behavioral sciences to advanced practice in nursing.
2. Synthesize concepts of community, teaching and learning, wellness, health promotion, leadership, and management in advanced practice to meet health care needs of individuals, families, groups, and culturally diverse communities.
3. Utilize critical reflection, collaboration, research, and caring in the delivery and administration of health care.
4. Integrate the code of ethics and standards of advanced specialty practice in decision making and independent judgments.
5. Collaborate and partner with consumers, providers, and organizations to provide meaningful services for others.
6. Demonstrate commitment to ongoing personal and advanced professional development through professional involvement, lifelong learning, and fostering an appreciation for doctoral study.

## Sigma Theta Tau International

Iota Delta Chapter of Sigma Theta Tau International Honor Society of Nursing, 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, foster high professional standards, encourage creative work, and strengthen commitment to the ideals and purposes of the profession. Eligibility is determined by scholastic achievement, evidence of professional potential, and/or marked accomplishment in the field of nursing.

## Admission Requirements

To be considered for matriculation in the master's program, potential candidates must:

- Hold a baccalaureate degree with a major in nursing from an NLNAC or CCNE accredited program.
- Have a minimum 3.0 grade point average (on a 4.0 scale) for the last 30 hours of undergraduate or graduate level coursework.
- Demonstrate successful completion of a course in descriptive statistics.
- \*Submit official scores from the Graduate Record Examination,
- Currently be licensed or eligible for licensure as a Registered Professional Nurse in New York State.
- For Adult & Family Nurse Practitioner applicants only, demonstrate successful completion, within five years prior to NUR 566 enrollment, of an undergraduate health assessment course; for those whose undergraduate health assessment course was more than five years ago, NUR 514 (2 credits) is available.
- Have completed a minimum of one year's work experience as a professional nurse.
- Submit two letters of recommendation from professional nurses such as recent employers, faculty with whom the applicant has

- studied, or any other individual who can give evidence of the applicant's past and potential contribution to the profession,
- In writing, discuss concisely their reasons for seeking admission to the master's program, identify immediate and long-term professional goals, and relate intended contributions to the professional field after completion of the master's program (please type response in a maximum of two double-spaced pages on the form provided at the back of this catalog).
- Participate in a personal interview with a member of the full-time faculty.

\* *under revision*

## Admission Procedures

Once the Admissions Office receives the completed application, the applicant's credentials will be reviewed by faculty in the School of Nursing and Health Systems. This review occurs approximately February 1, June 1, October 1, and December 1. Selection is based on the applicant's qualifications and potential for growth and contribution to nursing. Applicants will be notified of the selection decision.

## Matriculation Requirement: Health Clearance

All students must meet the health requirements of the nursing program and health agencies. Satisfactory health clearance must be complete and on file in the School of Nursing and Health Systems prior to participation in each of the placements in agency settings for practical and/or clinical experiences. **Clinical clearance must be validated prior to the first scheduled clinical agency experience. Attendance at clinical activity without prior clinical clearance will result in clinical failure.**

## 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.

## Degree Requirements

- Adult nurse practitioner majors must complete a minimum of thirty-nine (39) semester hours of study, family nurse practitioner majors must complete a minimum of forty-five (45) semester hours of study, and nursing administration majors must complete a minimum of thirty-three (33) semester hours of study applicable toward the Master of Science in Nursing degree.
- Final responsibility rests with the student to assure all requirements are satisfied for the advanced degree. It is also the responsibility of the student to file an application for conferral of the advanced degree with the Registrar's Office at the beginning of the anticipated final semester of study.
- Graduate students may repeat a graduate nursing course only once.
- Graduate students may have no more than two Cs on their record at the time of graduation. Nurse practitioner students must receive a minimum grade of B in all components of all Nurse Practitioner major courses.

- Adult nurse practitioner and family nurse practitioner majors must complete and pass a comprehensive final examination at the completion of their program of study.

## Accelerated B.S./M.S. Programs for Professional Registered Nurses

This program offers qualified registered nurses the opportunity to earn both the B.S. and M.S. in Nursing within a shortened timeframe. The curriculum combines elements of the B.S. program with the M.S. program and streamlines the B.S. program by substituting three accelerated courses. These courses combine elements of both the undergraduate and graduate core courses 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. Upon completion the graduate will be eligible to seek advanced practice certification in that specialty area. (For more information, see the *SUNYIT Undergraduate Catalog*.)

## Master of Science in Nursing with a Major in Adult Nurse Practitioner

The Adult Nurse Practitioner Program is designed to prepare expert advanced practice primary care clinicians capable of providing care to adults in primary care settings. The program builds on the undergraduate foundation and develops advanced assessment, planning and evidence-based clinical management skills. The program emphasizes clinical competence through theoretical understanding and practical application to primary care practice. Clinical expertise is acquired through clinical placements in a variety of public, private, and community-based primary care agencies. The ANP student will complete 720 hours of clinical practice in this 39 credit-hour program of study. In addition, the program provides a strong foundation for doctoral study and research.

### Program of Study

	<i>Credits</i>
NUR 500 Theoretical Foundations for Nursing Practice	3
NUR 503/ Advanced Nursing, Health Policy, and the Health System	3
or	
NUR 504A Advancing Leadership in Health Care	4
NUR 555 Clinical Pharmacology	3
NUR 560 Nursing Research Methods	3
NUR 566 Advanced Practice Nursing Lecture	3
NUR 567 Advanced Practice Nursing Clinical	2
*BIO 570 Pathophysiology	3
NUR 574 Adult Health Promotion and Disease Prevention Across the Lifespan	2
NUR 582 Beginning Level Adult Clinical	2
NUR 653 Adult Primary Health Care I	2
NUR 658 Women's Health Care	2
NUR 669 Adult Primary Health Care II	3
NUR 672 Intermediate Level Adult Clinical	3
NUR 682 Advanced Level Adult Clinical	3
NUR 692 Culminating Seminar for Nurse Practitioners	2
	<b>39</b>

\* *for accelerated R.N. to B.S. / M.S. program only.*

## Master of Science in Nursing with a Major in Family Nurse Practitioner

The Family Nurse Practitioner Program is designed to prepare expert advanced practice primary care clinicians capable of providing care to families in primary care settings. The program builds on the undergraduate foundation and develops advanced assessment, planning, and evidence-based clinical management skills. The program emphasizes clinical competence through theoretical understanding and practical application to primary care practice. Clinical expertise is acquired through clinical placements in a variety of public, private, and community-based primary care agencies. The FNP student will complete 800 hours of clinical practice in this 45 credit-hour program of study. In addition, the program provides a strong foundation for doctoral study and research.

### Program of Study

	<i>Credits</i>
NUR 500 Theoretical Foundations for Nursing Practice	3
NUR 503/ Advanced Nursing, Health Policy, and the Health System	3
or	
*NUR504A Advancing Leadership in Health Care	4
NUR 531 Family Theory	2
NUR 555 Clinical Pharmacology	3
NUR 560 Nursing Research Methods	3
NUR 566 Advanced Practice Nursing Lecture	3
NUR 567 Advanced Practice Nursing Clinical	2
BIO 570 Pathophysiology	3
NUR 572 Family Health Promotion and Disease Prevention Across the Lifespan	3
NUR 580 Beginning Level Family Clinical	2
NUR 652 Family Primary Health Care I	3
NUR 658 Women's Health Care	2
NUR 668 Family Primary Health Care II	4
NUR 670 Intermediate Level Family Clinical	3
NUR 680 Advanced Level Family Clinical	4
NUR 692 Culminating Seminar for Nurse Practitioners	2
<i>* for accelerated R.N. to B.S. / M.S. program only.</i>	45

## Advanced Certificates in Adult Nurse Practitioner & Family Nurse Practitioner

The School of Nursing and Health Systems is authorized by the New York State Education Department to offer advanced certificates in both adult and family nurse practitioner to registered nurses who already possess both baccalaureate and master's degrees in nursing from accredited programs. Admission requirements for these post-master's certificate programs are the same as for the School's graduate program (except applicants must have a minimum 3.2 grade point average (on a 4.0 scale) for all graduate level work completed and they do not have to submit scores from the Graduate Records Examination).

Requirements for the advanced certificate in adult nurse practitioner total 30 credits; in family nurse practitioner, 36 credits. Enrollees follow the same program of study for the master of science in nursing in their respective major except they are not required to take NUR 500, NUR 503, and NUR 560. The faculty realize that students in the post-master's certificate programs will come with a variety of backgrounds and experience. Students will need to meet with an advisor early in the course of study to determine specific clinical needs. Every effort will be made to provide students with both necessary and desired clinical experiences.

*\* for accelerated R.N. to B.S. / M.S. program only.*

## Master of Science in Nursing with a Major in Nursing Administration

The Nursing Administration Program is designed to prepare professional leaders who will creatively advance the practice of nursing and facilitate the delivery of cost-effective care through the application and testing of administrative knowledge and skills. The Nursing Administration student will complete a practicum in a nursing administration role selected from a variety of health care agency options. This 33 credit-hour program provides a strong foundation for doctoral study and research.

### Program of Study

	<i>Credits</i>
NUR 500 Theoretical Foundations for Nursing Practice	3
NUR 503/ Advanced Nursing, Health Policy, and the Health System	3
or	
*NUR504A Advancing Leadership in Health Care	4
CSC 507 Data Analysis	3
NUR 610 Nursing Administration Seminar	3
NUR 611 Nursing Administration Practicum	3
HRM 518 Human Resource Management	3
NUR 522 Financial Management for Nurse Managers	2
NUR 524 Program Planning and Development	2
NUR 526 Legal and Regulatory Issues in Nursing	2
NUR 560 Nursing Research Methods	3
MGT 607 Organizational and Management Theory	3
NUR 624 Grant Proposal Seminar	3
	33

*\* for accelerated R.N. to B.S. / M.S. program only.*

## Post Baccalaureate Advanced Certificate in Nursing Administration

The School of Nursing and Health Systems is authorized by the New York State Education Department to offer a post-baccalaureate Advanced Certificate in Nursing Administration. The certificate program is designed to meet the needs of nurses who hold a baccalaureate degree in nursing and who also currently hold nurse-manager positions. These students may opt to continue working toward the master's degree after completion of the certificate. An additional 15 credits of coursework would be required to earn the M.S. in Nursing Administration. The program is also intended for graduates of the ANP/FNP programs and other area nurses who hold a variety of graduate degrees in nursing and who seek additional skills and knowledge in leadership and management for enhancement or advancement in their expanded roles. Successful completion of the Advanced Certificate in Nursing Administration would enable eligible students to sit for the American Nurses Credentialing Center's Nursing Administration National Board Certification Exam.

Admission requirements for the post-baccalaureate and post-master's certificate are the same as for the School's graduate program. Course requirements for the post-baccalaureate or post-master's certificate in nursing administration total 18 credits. Enrollees may complete the certificate program in four consecutive terms of part-time study (fall, winter, spring, summer) within one calendar year.

### Program of Study

Fall:	MGT 607 Organizational and Management Theory (3)
	HRM 518 Human Resource Management (3)
Spring:	NUR 522 Financial Management for Nurse Managers (2)
	NUR 524 Program Planning and Development (2)
	NUR 526 Legal/Regulatory Issues in Nursing (2)
Summer:	NUR 610 Nursing Administration Seminar (3)
	NUR 611 Nursing Administration Practicum (3)

Total: 18 credits

## Course Descriptions

(and prerequisites, pre/corequisites where required)

### Core Courses

#### **NUR 500 Theoretical Foundations for Nursing Practice (3)**

Historical influences that have impacted upon the development of nursing are explored. Theory-based nursing is emphasized as students discuss and critically reflect upon the relevance and significance of nursing as an art and science. Philosophical views of selected nurse theorists and their theories are critically examined for application to nursing practice, administration, and research. Nursing theory within the paradigm of people, health, nursing, and environment are applied to the practice of nursing and promotion of health, research, moral reasoning, and standards of professional nursing. Personal philosophies of nursing are explored and drawn from these theories as students critically reflect upon their personal values and transforming practice in the advanced practice role of professional nursing.

#### **NUR 503 Advanced Nursing, Health Policy, and the Health System (3)**

Students learn to evaluate and integrate power, management, and leadership theories in the implementation of advanced nursing practice for culturally diverse communities, families, and individuals within the health care delivery system. Essential tools to facilitate the development of strategies to impact on health care policies and quality management are discussed. The historical and current role of the caring and learned profession of nursing is explored. Trends in the macrosystem are critically evaluated for their political and social impact on health care delivery systems and the environment. Political implications and the action of the advanced nurse as clinician, administrator, leader, manager, change agent, and consultant are analyzed and researched. The central focus is the development of advanced professional practice.

#### **NUR 560 Nursing Research Methods (3)**

The research process for quantitative and qualitative research studies is critically examined. The methods of scientific inquiry, problem identification, use of underlying theories and conceptual models, research design, measurement, data collection and analysis, and ethical considerations are applied to the development of a research proposal. Critical analysis of existing research studies and student reports are used to further refine the development of research skills. The significance of research findings to practice environments in health care systems, administration, and ongoing research activities are identified as they relate to evidence based practice in nursing. Critical reflection upon one's developing role as a professional in advanced practice is explored as it relates to participation and collaboration in research activities within health care systems and communities.

### Core Courses for both Adult and Family Nurse Practitioner Majors

#### **NUR 555 Clinical Pharmacology (3)**

Pharmacology and therapeutics for primary, acute and long-term care patients are emphasized with the focus on the clinical application of the major classifications of drugs. Disorders, symptoms and diseases affecting people throughout the lifespan are examined from a comprehensive pharmacological management perspective. The legal parameters for prescription writing and protocols are included. Theory and research findings related to current treatment modalities and the complexities of compliance are applied.

#### **NUR 566 Advanced Practice Nursing Lecture (3)**

Health assessment will focus on the caring and in-depth assessment expertise needed by nurse practitioners: history taking; communication; physical and mental examination; psychological, cultural, and social assessment. Advanced assessment skills needed to develop clinical problem solving, critical reflection, and decision making will be discussed. Knowledge from the behavioral and health sciences, nursing theory, and research will be drawn upon to assist the student in formulating therapeutic interventions that will promote, maintain, or restore health for people and communities.

Prerequisites: matriculated status and undergraduate health assessment course within the past five years or NUR 514. Pre/Corequisites: NUR 500, BIO 570, and for family nurse practitioner majors NUR 531. Corequisite: NUR 567.

#### **NUR 567 Advanced Practice Nursing Clinical (2)**

Data about the assessment, diagnosis, management, and evaluation of common and simple problems facing client populations will be explored through clinical experiences and computer simulations. Students will master advanced assessment skills needed to develop critical reflection and decision making and will demonstrate their clinical and decision making expertise in on-campus laboratory experiences and in faculty supervised clinical experiences in communities of culturally diverse people.

Prerequisite to the faculty supervised clinical experiences: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file. Corequisite: NUR 566

#### **BIO 570 Pathophysiology (3)**

Identify the physiological basis of common and specific health and disease states encountered in primary care nursing practice and distinguish those processes that are ongoing in the human body that can be altered by interventions from those that cannot.

#### **NUR 658 Women's Health Care (2)**

Theory, research, and pathophysiology are applied to the evaluation and management of women who experience a variety of acute and chronic health problems throughout their lifespan. Emphasis is on health promotion and disease prevention activities in primary care settings. Basic areas explored are gynecological examinations, disease screenings, management of normal pregnancy, and care of the pregnant woman during prenatal and postpartum visits.

Critical reflection will assist the student in exploring the advanced roles of case manager, educator, and consultant to enhance the health and well-being of women and their families from a variety of socioeconomic and cultural backgrounds.

Prerequisites: for adult nurse practitioner majors, NUR 574, NUR 582; for family nurse practitioner majors, NUR 572, NUR 580. Pre/Corequisites: NUR 503/504A; for adult nurse practitioner majors, NUR 653 and three (3) credits of NUR 672; for family nurse practitioner majors, NUR 652 and three (3) credits of NUR 670.

#### **NUR 692 Culminating Seminar for Nurse Practitioners (2)**

Seminar provides opportunity for the student to critically reflect upon personal and professional values. Benner's Model of Novice to Expert is used as a framework for students to self examine their ongoing development in clinical proficiency as they advance toward achieving professional excellence. Standards and scope of practice specific to the role of the nurse practitioner are emphasized. Relevant issues related to legal and regulatory constraints within a competitive and challenging health care system are also examined at the local, state, and federal levels.

Prerequisites: NUR 658; for adult nurse practitioner majors, NUR 653, NUR 672; for family nurse practitioner majors, NUR 652, NUR 670. Pre/Corequisites: for adult nurse practitioner majors, NUR 669, NUR 682; for family nurse practitioner majors, NUR 668, NUR 680.

### Specialty Courses for Adult Nurse Practitioner Major

#### **NUR 574 Adult Health Promotion and Disease Prevention Across the Lifespan (2)**

Health promotion and disease prevention concepts are applied to individual and community based interventions grounded in theories of growth and development, epidemiology, and social policies that influence the achievement of health. The promotion of health, prevention of illness and identification of the factors that influence risk reduction, self care, and healthy life style choices across the health illness continuum of individual clients and the community are emphasized. Opportunities to critically reflect on the roles of the nurse practitioner as case manager, educator, and collaborator are explored to enhance the health and well being of clients and their families from a variety of social and cultural backgrounds to ensure the delivery of appropriate, individualized health care.

Prerequisites: NUR 500, NUR 566, NUR 567, BIO 570. Pre/Corequisites: NUR 555, NUR 560, NUR 582.

#### **NUR 582 Beginning Level Adult Clinical (2)**

Clinical experience provides an opportunity to deliver primary care within a community based setting to a population with a variety of cross-cultural health care needs. Focus is on the unique wellness lifestyle and health care problems demonstrated by clients in diverse health care settings. Opportunities to deliver primary care to clients provide the students with challenges to expand their knowledge and skills. The focus of this clinical is to become proficient in obtaining histories and performing physical exams in the clinical setting with minimal supervision. The information obtained needs to be accurately documented utilizing SOAP format. Clinical faculty, in association with preceptors (physicians and/or nurse practitioners), provide guidance in the clinical setting under contract with the School of Nursing and Health Systems. The student will complete 5.5 contact hours per week per credit.

Prerequisites: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 566, NUR 567. Pre/Corequisites: NUR 555, NUR 560, NUR 574.

#### **NUR 653 Adult Primary Health Care I (2)**

Theory, research, and the pathophysiology required to evaluate and manage clients across the lifespan are applied to a variety of problems. Conditions, diseases and communicable diseases of the eyes, ears, nose, throat; head and neck; the skin, hair, nails; respiratory, hematological, and immunologic systems encountered in the primary care setting are studied. The advanced roles of the nurse practitioner as case manager, educator, and consultant are explored to enhance the health

and well being of clients and their families from a variety of socioeconomic and cultural backgrounds.

Prerequisites: NUR 574, NUR 582. Pre/Corequisites: NUR 503/NUR 504A, and at least one (1) credit of NUR 672.

### **NUR 669 Adult Primary Health Care II (3)**

The theory, research, and pathophysiology required to evaluate and manage clients with a variety of cardiovascular, peripheral vascular, pulmonary, acute and chronic renal and gastrointestinal, neuromuscular, and psychiatric problems, and office emergencies encountered in the primary care setting are addressed. The professional roles of the nurse practitioner as a case manager, educator, and consultant are explored to enhance the health and well being of clients and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 653 and at least one (1) credit of NUR 672. Corequisite: at least two (2) credits of NUR 672.

### **NUR 672 Intermediate Level Adult Clinical (variable credit 1-3)**

Clinical experience provides an opportunity to deliver primary care within a community based setting to a population with a variety of cross-cultural health care needs. Focus is on the unique wellness lifestyle and health care problems demonstrated by clients in diverse health care settings. Opportunities to deliver primary care to these clients provide the students with challenges to expand their knowledge and skills as well as to explore judgment making and priority setting abilities. Clinical faculty, in collaboration with preceptors (physicians and/or nurse practitioners), provide guidance in the clinical settings under contract with the School of Nursing and Health Systems. This clinical will build on skills and knowledge previously obtained at the beginning level. Three credits are required for course completion. The student will complete 5.5 contact hours per week per credit. Prerequisites: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 582. Pre/Corequisites: NUR 503/NUR 504A, NUR 653.

### **NUR 682 Advanced Level Adult Clinical (variable credit 1-3)**

Clinical experience provides an opportunity to deliver primary care within a community based setting to a population with a variety of cross-cultural health care needs. Focus is on the unique wellness lifestyle and health care problems demonstrated by clients in diverse health care settings. Opportunities to deliver primary care to these clients provide the students with challenges to expand their knowledge and skills as well as to explore judgment making and priority setting abilities. Clinical faculty, in collaboration with preceptors (physicians and/or nurse practitioners), provide guidance in the clinical settings under contract with the School of Nursing and Health Systems. The graduate student must have precepted with a master's prepared nurse practitioner prior to completion of the final clinical. This clinical will build on skills and knowledge previously obtained at the beginning and intermediate levels. Three credits for NUR 682 are required for course completion. The student will complete 5.5 contact hours per week per credit. Prerequisites: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 582 and three (3) credits of NUR 672. Pre/Corequisites: NUR 658, NUR 669.

## **Specialty Courses for Family Nurse Practitioner Major**

### **NUR 531 Family Theory (2)**

Family theories are explored using research from a multidisciplinary and culturally diverse approach. A variety of assessment techniques and instruments are introduced and applied to identify family health status, risks, and problems. It provides a theoretical foundation in assessment and planning for family intervention.

### **NUR 572 Family Health Promotion and Disease Prevention Across the Lifespan (3)**

Health promotion and disease prevention concepts are applied to individual and community based interventions grounded in theories of growth and development, epidemiology, and social policies that influence the achievement of health. The promotion of health, prevention of illness and identification of the factors that influence risk reduction, self care, and healthy life style choices across the health illness continuum of individual clients and the community are emphasized. Opportunities to critically reflect on the roles of the nurse practitioner as case manager, educator, and collaborator are explored to enhance the health and well being of clients and their families from a variety of social and cultural backgrounds to ensure the delivery of appropriate, individualized health care. Prerequisites: NUR 500, NUR 566, NUR 567, BIO 570. Pre/Corequisites: NUR 531, NUR 555, NUR 560, NUR 580.

### **NUR 580 Beginning Level Family Clinical (2)**

Clinical experience provides an opportunity to deliver primary care within a community based setting to a population with a variety of cross-cultural health care needs. Focus is on the unique wellness lifestyle and health care problems demonstrated by clients in diverse health care settings. Opportunities to deliver primary care to clients provide the students with challenges to expand their

knowledge and skills. The focus of this clinical is to become proficient in obtaining histories and performing physical exams in the clinical setting with minimal supervision. The information obtained needs to be accurately documented utilizing SOAP format. Clinical faculty, in association with preceptors (physicians and/or nurse practitioners), provide guidance in the clinical setting under contract with the School of Nursing and Health Systems. The student will complete 5.5 contact hours per week per credit. Prerequisites: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 566, NUR 567. Pre/Corequisites: NUR 555, NUR 560, NUR 572.

### **NUR 652 Family Primary Health Care I (3)**

Theory, research, and the pathophysiology required to evaluate and manage clients across the lifespan are applied to a variety of problems. Conditions, diseases, and communicable diseases of the eyes, ears, nose, throat; head and neck; the skin, hair, nails; respiratory, hematological, and immunologic systems encountered in the primary care setting are studied. The advanced roles of the nurse practitioner as case manager, educator, and consultant are explored to enhance the health and well being of clients and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 572, NUR 580. Pre/Corequisites: NUR 503/NUR 504A, and at least one (1) credit of NUR 670.

### **NUR 668 Family Primary Health Care II (4)**

The theory, research, and pathophysiology required to evaluate and manage clients with a variety of cardiovascular, peripheral vascular, pulmonary, acute and chronic renal and gastrointestinal, neuromuscular, and psychiatric problems, and office emergencies encountered in the primary care setting are addressed. The professional roles of the nurse practitioner as a case manager, educator, and consultant are explored to enhance the health and well being of clients and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 652 and at least one (1) credit of NUR 670. Corequisite: at least two (2) credits of NUR 670.

### **NUR 670 Intermediate Level Family Clinical (variable credit 1-3)**

Clinical experience provides an opportunity to deliver primary care within a community based setting to a population with a variety of cross-cultural health care needs. Focus is on the unique wellness lifestyle and health care problems demonstrated by clients in diverse health care settings. Opportunities to deliver primary care to these clients provide the students with challenges to expand their knowledge and skills as well as to explore judgment making and priority setting abilities. Clinical faculty, in collaboration with preceptors (physicians and/or nurse practitioners), provide guidance in the clinical settings under contract with the School of Nursing and Health Systems. This clinical will build on skills and knowledge previously obtained at the beginning level. Three credits are required for course completion. The student will complete 5.5 contact hours per week per credit. Prerequisites: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 580. Pre/Corequisites: NUR 503/NUR 504A, NUR 652.

### **NUR 680 Advanced Level Family Clinical (variable credit 1-4)**

Clinical experience provides an opportunity to deliver primary care within a community based setting to a population with a variety of cross-cultural health care needs. Focus is on the unique wellness lifestyle and health care problems demonstrated by clients in diverse health care settings. Opportunities to deliver primary care to these clients provide the students with challenges to expand their knowledge and skills as well as to explore judgment making and priority setting abilities. Clinical faculty, in collaboration with preceptors (physicians and/or nurse practitioners), provide guidance in the clinical settings under contract with the School of Nursing and Health Systems. The graduate student must have precepted with a master's prepared nurse practitioner prior to completion of the final clinical. This clinical will build on skills and knowledge previously obtained at the beginning and intermediate levels. Four credits for NUR 680 are required for course completion. The student will complete 5.5 contact hours per week per credit. Prerequisites: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 580 and three (3) credits of NUR 670. Pre/Corequisites: NUR 658, NUR 668.

## **Cognate Courses for Nursing Administration Major**

### **MGT 607 Organizational and Management Theory (3)**

Analyze major schools of management thought: traditional, behavioral, and contingency. Explore managerial roles, power styles, and conflict with respect to contemporary organizational systems through lecture, discussion, case analysis, and experiential exercises.

### **HRM 518 Human Resource Management (3)**

Manage human resources more effectively by improving analysis and planning. Focus on the development of state-of-the-art systems which support basic business objectives as well as foster good working relations between employees and managers.

### CSC 507 Data Analysis (3)

Become proficient in the application of statistical methods. Prepare for "computerized" administrative environments. Prerequisites: Descriptive statistics and computer literacy.

## Specialty Courses for Nursing Administration Major

### NUR 522 Financial Management for Nurses (2)

Utilizing basic principles for fiscal management and budgeting, the nurse administration student examines budgets and budgeting, reimbursement and regulation, strategic planning and monitoring, forecasting and decision-making, management information systems, and business plans. These principles are then applied to develop a patient service financial plan and/or budget.

### NUR 524 Program Planning and Development (2)

Program planning provides a concise, practical approach to planning, managing, and evaluating health programs within an acute or community based health care delivery system. A variety of theoretical and health system models are applied to program planning. The program planning process is presented with illustrations of how this process provides fiscally sound, sustainable change in a variety of practice environments.

### NUR 526 Legal and Regulatory Issues in Nursing (2)

Legal/regulatory issues that impact the advanced practice of nursing administration are examined. The student explores the origins of law and the judicial system to appreciate the various legal aspects of the health care delivery system including state codes, nurse practice acts, licensure, disciplinary bodies, civil liability, malpractice, and other relevant areas, such as ethical codes and standards of practice, on nursing and health care.

### NUR 610 Nursing Administration Seminar (3)

Administrative issues within nursing and the health care environment are examined. Knowledge, skill, and disposition are developed by examining the role of the nurse administrator in relation to strategies utilized for advanced professional practice. Opportunities are created to critically reflect on effective approaches necessary for effective leadership, change management, quality improvement, conflict resolution, and resource utilization in culturally diverse environments. Prerequisites: NUR 500, NUR 503/NUR 504A, NUR 560, MGT 607. Pre/Corequisites: NUR 522, NUR 524, NUR 526, HRM 518, CSC 507.

### NUR 611 Nursing Administration Practicum (3)

In partnership with a nurse administrator, management and leadership principles are applied in this culminating experience. The role of the nurse administrator is assessed and analyzed in relation to professional practice, effective leadership, change management, evaluation of the quality and effectiveness of nursing practice, policy development, and resource utilization. The practicum provides the student the opportunity for critical reflection on the advanced practice role in nursing administration.

Synthesis of management and leadership theoretical principles, practice guidelines, and pertinent research are emphasized. Occasions exist to demonstrate knowledge, skill, and disposition in administrative practice through the development and implementation of the practicum objectives. Within the framework of the objectives, each student designs, implements, and evaluates an administrative project. Prerequisites: matriculated status, current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file. Pre/Corequisites: NUR 610, NUR 522, NUR 524, NUR 526, HRM 518, CSC 507.

### NUR 624 Grant Proposal Seminar (3)

Selection of potential research and project proposals are critically explored for funding. Identification of funding sources and the development of a grant proposal for submission to a potential funding agency is emphasized. Faculty facilitation and seminar provide an interactive learning environment for students to present their proposals in progress and to obtain critical reviews of their work from all participants. Focus is on the ongoing development of critical analyses skills, participation in scholarly exchanges of ideas, and research utilization within nursing administration. Prerequisite: NUR 500, NUR 560, or permission of the dean.

## Courses for Accelerated R.N. to B.S./M.S. Nursing

### NUR 504A Advancing Leadership in Health Care (3)\*

Designed for the accelerated R.N. to B.S./M.S. programs of study, students learn to evaluate and integrate power, management, and leadership theories in the implementation of advanced nursing practice for culturally diverse communities, families, and individuals within the microsystem of the healthcare institution and the macrosystem of health care delivery. Essential tools to facilitate the development of strategies to impact on health care policies and quality management are discussed. The historical and current role of the caring and learned profession of nursing is explored. System trends

are critically evaluated for their political and social impact on health care delivery systems and the environment. Political implications and the action of the advanced nurse as clinician, administrator, leader, manager, change agent, and consultant are analyzed and researched. The central focus is the development of advanced professional practice. Prerequisite: Completion of all 300 and 400 level courses. \**In process of revision.*

## Other Courses

### NUR 501 Health Policy (3)

Federal and state governments, as well as many health care organizations, engage in ongoing and significant decision-making which will determine the course of health care. The purpose of this course is to present the process, intent, and consequences of policy. Past, present, and potential policy decisions will be studied.

### NUR 514 Health Assessment (2)

Complete health assessment is explored through seminar discussion and laboratory practice. Content focuses on the acquisition of assessment skills of the healthy and ill individual. Prerequisite: Undergraduate health assessment course; registered nurse. (Note: this course will act as a refresher course for those registered nurses whose undergraduate health assessment course was greater than five years ago.)

### NUR 591 Independent Study (variable credit)

### NUR 626 Thesis or Project (1-3 credits)

Student has the option of implementing an approved research or project proposal for up to 3 credits. Prerequisites: NUR 500, CSC 507, NUR 560.

### CMT 600 Continuous Registration (1)

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis, or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

## Faculty

**Esther G. Bankert**, Interim Dean/Professor, Nursing, A.A.S. Maria College, B.S. Mt. Saint Mary College, M.A. New York University, Ph.D. State University of New York at Albany.

**Mary Lou Wranesh Cook**, Professor, Nursing, B.S. University of Rochester, M.S. University of Rochester, Ph.D. State University of New York at Albany.

**Louise A. Dean-Kelly**, Associate Professor, Nursing, B.S. State University of New York at Albany, M.S. State University of New York at Stony Brook, D.N.S. State University of New York at Buffalo.

**Deborah A. Hayes**, Clinical Assistant Professor, Nursing, Diploma Albany Medical Center School of Nursing, B.S. State University of New York Institute of Technology at Utica/Rome, M.S. State University of New York at Binghamton.

**Lorraine M. Kane**, Associate Professor, Health Information Management, B.S. Daemen College, M.S. State University of New York at Binghamton.

**Christeen Liang**, Clinical Assistant Professor, Nursing, Diploma Worcester Hahnemann Hospital, B.S.N. State University of New York Health Science Center at Syracuse, M.S. Gerontological Nurse Practitioner, State University of New York at Binghamton.

**Jeanine D. Muldoon**, Professor, Nursing, B.S. Boston College, M.S. University of Massachusetts at Amherst, Ph.D., University of Massachusetts at Amherst, Certificate Harvard University.

**Maria Pappas**, Associate Professor, Nursing, B.S. Boston University, M.N. Emory University, Dr. P.H. University of Pittsburgh.

**Kathleen F. Sellers**, Assistant Professor, Nursing, B.S. Niagara University, M.S.N. The Catholic University of America, Ph.D., Adelphi University.

**Amy Shaver**, Instructor, Nursing, Diploma Albany Memorial School of Nursing, B.S. SUNY Institute of Technology, M.S., SUNY Institute of Technology.

**Donna L. Silsbee**, Associate Professor, Program Coordinator, Health Information Management, B.S. State University of New York at Albany, M.S. State University of New York at Binghamton, Ph.D., State University of New York at Albany, "The State University Chancellor's Award for Excellence in Teaching, 2000."

**Carole E. Torok**, Professor, Nursing, B.S. D'Youville College, M.S.N. University of Pennsylvania, Ph.D., State University of New York at Albany.

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# Master of Science in Telecommunications

## Director's Message

The M.S. in Telecommunications is an application oriented program designed to accommodate those individuals with a technology, business or general studies baccalaureate degree, and who are seeking graduate level telecommunications education in order to secure entrance to, or advancement within, the dynamic field of telecommunications.

The Master of Science program in telecommunications requires from 39-42 credit hours of graduate coursework in telecommunications, business and computer information systems in combination with one of the following: thesis, research project or capstone seminar. Courses and advisement are conveniently offered so that both full and part time students can complete the degree in reasonable time.

Instruction is applications oriented, and takes place both in lectures and in hands-on laboratory exercises in four state of the art telecommunications laboratories. Students are also strongly encouraged to participate in the Telecommunications summer internship program.

The Telecommunications program at SUNYIT has gained an international reputation for its industry orientation. Advised by a dynamic thirty-person telecommunications industry advisory board, the Master of Science in Telecommunications investigates critical areas of advanced telecommunications technologies, network design and simulation, project management, regulation and international telecommunications policy and trade issues. Original and substantial student research on a significant topic is demonstrated in the thesis, research project or capstone option.

The Department possesses an academically and industry experienced faculty with research, teaching and consulting achievements in the core telecommunications subject areas. The faculty's experience and current activities are diverse and global, having been obtained in North America, Europe and the Asia-Pacific region.

The Department has created rewarding relationships with industry associations. Among these are a Cisco Networking Academy which is a cooperative venture between higher educational institutions and Cisco, the world's leading networking company. In a lab setting that closely corresponds to the corporate workplace, 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.

The Department is a member of the Information Systems Security Association (ISSA), the Wall Street Technology Association (WSTA), and the Pacific Telecommunications Council (PTC). These prestigious organizations encourage 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 trade 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.

SUNYIT possesses extensive library holdings in support of the telecommunications program. This includes a large number of periodicals in telecommunications subject areas. The M.S. in the Telecommunications program is designed to meet the needs of part- and full-time students seeking quality education and preparation for career advancement in the dynamic one trillion dollar per year global telecommunications industry.

Financial aid may be available for academically qualified students.

*Eugene Newman, Ph.D.*

*Director-M.S. in Telecommunications Program*

## Admissions Criteria

A baccalaureate degree with an upper division major in telecommunications, engineering, engineering technology, computer science, photonics, business or a related area from an accredited college or university is required.

Applicants with deficiencies in mathematics, computer science/information systems, business or telecommunications may be required to take appropriate prerequisite coursework.

Applicants must submit Graduate Record Exam test scores taken within the past five years. Information on this test appears in the general information section of the Graduate College Catalog.

## Prerequisite Coursework

- Calculus 1 or equivalent.
- Applied Statistical Analysis or equivalent
- Two undergraduate telecommunications technical electives, or equivalent, as determined in consultation with graduate advisor.
- Students who require prerequisite coursework or wish to apply to substitute professional industry experience must consult with graduate advisor to determine appropriate course selection or substitution.

## Other Admissions Criteria

1. Evidence of personal and professional qualifications via three professional references.
2. A narrative statement by the applicant describing his/her professional objectives for graduate study.
3. Applicants must have maintained an average of B or better for the last thirty credit hours toward a baccalaureate degree or graduate coursework (a GPA of 3.0 on a 4.0 scale). If undergraduate GPA is between 2.8 and 3.0, applicants may be considered if they can demonstrate graduate potential via other means. Applicants possessing under graduate GPAs below 2.8 may be considered for discretionary admission after completion of non-degree coursework as required by the Department of Telecommunications.

## ADVANCEMENT TO CANDIDACY REQUIREMENTS

1. Students must successfully complete TEL 598 as part of their first 15 graduate credits. Students who fail to register for and complete TEL 598 during this time will be dismissed from the program.
2. A review of student academic performance will take place at the conclusion of TEL 598. Students who have a graduate GPA of 3.0 or higher in the program, and who received a Satisfactory grade (“S”), in TEL 598 will be advanced to candidacy.
3. Students who have a GPA of less than 3.0 will be placed on academic probation.
4. Students who have an Unsatisfactory (“U”) in TEL 598 will be placed on academic probation and will be restricted to one course per semester while on probation. Such students will further be required to re-take TEL 598 the next time the course is offered. Should the student fail to re-take the course in a timely manner, or fail to achieve a Satisfactory (“S”) grade when the course is retaken, the student will be dismissed from the program.

## Degree Requirements

### MASTER OF SCIENCE TELECOMMUNICATIONS PROGRAM GUIDE (39-42 Credits Required)\*

#### Areas

#### QUANTITATIVE DATA ANALYSIS

6 hours required

#### RESEARCH METHODOLOGY

(required if selecting Thesis, Research Project or Capstone Option)

#### TELECOMMUNICATIONS

#### CORE COURSES

24–27 hrs. required\*\*

#### Possible Courses

CSC 507 - Data Analysis

MGS 511 - Management Science

TEL 598 - Research Methods in Telecommunications

TEL 500 - Voice Communications

TEL 501 - International Telecommunications

TEL 502 - Data Communications

TEL 505 - Network Design and Simulation

TEL 520 - Telecommunications Systems Analysis & Project Management

TEL 530 - Telecommunications Law and Policy

TEL 540 - Integration of Telecommunications and Computer Systems

TEL 580 - Strategic Integration of Telecommunications in a Competitive Environment

TEL 581 - Survey of Information Assurance

TEL 582 - Security For Telecommunications Networks

TEL 585 - Telecommunications Electronic Commerce

TEL 590 - Selected Topics in Advanced Telecommunications\*\*\*

TEL 594 - Graduate Internship

#### DIRECTED APPLICATION

TEL 595 - Directed Application+

#### PROJECT OPTION 6 hrs. required

RESEARCH PROJECT TEL 597 - Research Project+

6 hrs. required

THESIS 6 hrs. required

TEL 599 - Thesis+

#### PROJECT OPTION

9 hrs. required

The Directed Application Project option consists of two additional three-credit hour telecom grad courses# (i.e. 6 hrs) plus the 3 credit hour Directed Application seminar (TEL 595)

\* Minimum to graduate: 39 credit hours in combination with Thesis or Research Project. If selecting Directed Application Project, the minimum is 42 credits.

\*\* A minimum of 24 credits from the Telecommunications Core is required if selecting Thesis or Research Project Option. A minimum of 27 credits from Telecommunications Core is required if selecting Capstone Option.

\*\*\* Students may take additional sections of TEL 590, as long as the Selected Topics covered are not the same.

+ A student must choose one of the following:

- Thesis Option
- Research Project
- Directed Application Project

## Course Descriptions

### TEL 500 Voice Communications (3)

Provides knowledge of the components, operations, and services of analog and digital local loop circuit switched networks, digital and VOIP PBXs, and signaling systems. Advances in wire line and wireless voice telecommunications networks including VOIP, power line communications, passive optical networks, and broadband wireless are investigated. Cross listed with TEL 301.

### TEL 501 International Telecommunications Policy and Trade (3)

A course investigating trade in services and equipment policies of the United States, the European Community, and other major governments, as well as international trade agencies, international carriers, and transnational corporate users of telecommunications. Topics include competition and privatization, bilateral and multilateral trade agreements including GATT, the WTO, international technical standards, intellectual property, and the competitive satellite industry. This course also addresses the reorganization and global responsibilities of the International Telecommunications Union.

### TEL 502 Data Communications (3)

Data communications is a rigorous treatment of advanced topics in the technology of communicating digital information over public and private communications facilities. The topics include general principles, LANs, WANs, and related topics. These topics are covered in: lectures, individual exercises, team exercises, and interactive competitive team projects.

### TEL 505 Network Design and Simulation (3)

A course investigating network design and simulation modeling enabling telecommunications system developers to evaluate the performance of existing and proposed networks under different hardware, configurations, or operating constraints. Simulation modeling minimizes risks of unforeseen network bottlenecks, under utilization of overuse of system resources.

### TEL 520 Telecommunications Systems Analysis and Project Management

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.

### TEL 530 Telecommunications Law and Policy

A seminar in the regulation of telecommunications in the United States. Designed to provide students with an understanding of the regulatory and antitrust environment and its impact on competition and services. Social and political issues affecting telecommunications regulation are also addressed.

### TEL 540 Integration of Telecommunications and Computer Systems

Analyzes the principles, operations, and implementation of computer integrated-telecommunications in various corporate environments.

### TEL 580 Strategic Integration of Telecommunications in a Competitive Environment

Examines the role of the telecommunications manager as the purveyor of information technologies within the modern corporate environment. Includes a review of strategic telecommunications system analysis and design. Relies on extensive use of case studies.

### TEL 581 Survey of Information Assurance (3)

A fast paced introduction into the field of Information Assurance. Various kinds of threats faced by an information system and the security techniques used to combat them are covered. Hacker methods, viruses, worms, bombs and system vulnerabilities are described with respect to the actions that must be taken by a network manager to thwart them. Existing and planned protection methods and defenses are mapped to the information system threats and attacks. This course provides the background for those individuals who seek skills in the areas of Network and Data Security.

### TEL 582 Security For Telecommunications Networks (3)

A course providing advanced skills required to analyze internal and external network security threats, and develop security policies to protect an organization's information. Students will learn how to evaluate network and Internet security challenges and design and implement firewall strategies. Prerequisite: TEL 581.

### TEL 585 Telecommunications Electronic Commerce (3)

Examines international trade, political, and technological dimensions of telecommunications electronic commerce. Government, international trade agency, and telecommunications network supplier and client planning for competition policy, intellectual property protections, security and privacy are analyzed.

### TEL 590 Selected Topics in Advanced Telecommunications

A course investigating current topics related to the research, development, deployment, and planning of new networks, signaling systems, transmission media and switching systems. Topics include wireless personal communications systems; satellite networks with an emphasis on the impact of fixed and mobile satellite systems on the economy and society; Optical Networks, VOIP, and Public System Technologies.

### TEL 594 Graduate Internship (3)

Students work for an organization approved by their advisor for a minimum of 250 hours in a supervised position. Students are required to write two reports on their internship experience. Work must be completed in one term, or during the summer.

### TEL 595 Directed Application Project (3)

An interdisciplinary experience in researching, writing, and presenting a telecommunications project in a structured environment. To enroll a student must have successfully completed 27 graduate credits in Telecommunications.

### TEL 597 Research Project

Upon approval of the advisor, student will research, design, solve and implement a graduate project.

### TEL 598 Seminar in Research Methods

Reviews the major considerations and tasks involved in undertaking a thesis or research project. The goal is for students who complete this course to be able to successfully complete their thesis or research project requirement.

### TEL 599 Thesis

Upon approval of the advisor, the student will research and write an original work on a significant topic in the field of telecommunications.

### CMT 600 Continuous Registration (1)

Maintaining continuous registration is a requirement for all graduate degrees. Students who have completed most course requirements but are finishing projects, capstone experiences, thesis or are satisfying Incomplete or In-Progress grades should register to maintain continuous matriculation. Course may be taken up to 6 semesters at which time it is expected that all program requirements will have been met. Credit is not used toward program completion requirements. Only S/U grades are awarded for this course.

## Faculty

**David M. Climek**, Lecturer, M.S. Telecommunications, SUNY Institute of Technology, M.S. Business, SUNY Institute of Technology. Information assurance, disaster planning and recovery Member Software Defined Radio Forum (SDR), IEEE, Armed Forces Communications and Electronics Association (AFCEA).

**Patrick W. Fitzgibbons**, Associate Professor of Telecommunications; Ph.D., State University of New York at Buffalo. Network design, simulation and management. Member of the IEEE Communications Society.

**Larry Hash**, Associate Professor of Telecommunications; Ph.D., North Carolina State University. Wireless telecommunications systems, data networks, and internetworking. Member of the IEEE, American Society of Engineering Educators, and the Interactive Media Association.

**Eugene J. Newman**, Professor of Telecommunications; Ph.D., University of Wisconsin. International telecommunications policy and trade issues, project management. Member of the IEEE Communications Society, the International Telecommunications User Group, the Pacific Telecommunications Council, the Wall Street Technology Association, and the Association of Public Safety Communications Officers (APCO).

**Kevin R. Lefebvre**, Lecturer, Ph.D., University of Connecticut. Information assurance, transport networks. Member of IEEE, SPIE, OSA, Eta Kappa Nu, Sigma Pi Sigma, MRS, ASEE.

## Telecommunications Institute

The mission of the Telecommunications Institute, located at SUNYIT, is to develop and extend research and training in the telecommunications industry. The Institute was established through the joint efforts of the Institute and NYNEX Systems Marketing.

The Telecommunications Institute focuses on providing both training and information to professionals in the field of telecommunications. The Institute's 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 laboratory and its integrated voice and data network to enhance its educational pursuits outside of the classroom.

## Telecommunications Advisory Board

The Advisory Board, consisting of over 30 industry executives including those representing the end-user community, service and equipment suppliers, consultants, academicians, and 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 Telecommunications programs on the leading edge of this fast-paced industry, as well as arranging for scholarships and equipment donations.

Current members of the advisory board come from such companies and organizations as MCIWorldcom, Sprint, United Parcel Service, AT&T, Northern Telecom, Citigroup, Intermedia Communications Inc., Securities Industry Association, GTE, New York State Telecommunications Association, Communications Managers Association, NYSERNET, Corning Glass, GN Nettest, Cigna and IBM Global Services.

## Internships

All telecommunications students are encouraged to participate in the Department's active summer internship program.

## Facilities

The telecommunications program is supported by more than \$5 million in modern facilities and equipment. Most of this has been donated by industry, reflecting its strong support for the Department and its programs.

The Telecommunications Department maintains four "hands-on" laboratories for student and faculty experimentation. These include a digital telephone switching and transmission laboratory (Donovan Hall Room 1240), a Local Area Network laboratory (Donovan Hall Room G143), Router and Switching lab (Donovan Hall Room G145) and a Computer Based Training lab (Donovan Hall Room 1190).

*An abbreviated list of the telecom laboratory resources follows:*

- Nortel-Bay ATM Centillion 50 switching platform
- Northern Telecom DMS-10 Central Office Switching System
- Northern Telecom Meridian 1 PBX System - fully optioned
- Northern Telecom Meridian Link Adjunct Processor

- Northern Telecom D4E Smart Channel Banks
- Northern Telecom DMS-1 Urban Digital Loop Carrier System
- Octel Voice Messaging System with Automated Attendant
- Newbridge MainStreet Channel Bank
- Tie Data/Star PBX System
- 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
- AT&T BNS 2000 SMDS Switching Platform
- Cisco Network Academy File Server
- Mil3 OPNET Simulation Software
- Cadence BONeS Designer Simulation Software Program
- CACI COMNET III Simulation Software
- Network Analysis Center Modular Interactive Network
- Network Sniffer LAN Analyzer

# APPLICATION FOR GRADUATE ADMISSION

## SUNY INSTITUTE OF TECHNOLOGY

**PLEASE PRINT**

### PERSONAL INFORMATION

1. Last (Family), First, Middle

1a. Do you have any educational records under a different name?

Former name:

2. Street Address:

3. City, State or Country, Zip:

3a. Are you a NYS resident:  yes  no

If yes, for how long?

4. In case of emergency, notify:

5. Present employer:

6. Employer's address:

7. Position:

8. Number of years at this position:

9. Social Security Number:

10. Date of Birth:

11. Home Telephone:

11a. E-Mail Address:

12. Business Telephone:

13. Emergency Telephone:

14a. State or Country of Birth:

14b. Country of Citizenship:

15a. Are you a permanent resident?  Yes  No

15b. If yes, provide your alien registration # \_\_\_\_\_

16. Your response to the following racial/ethnic question is voluntary, but federal civil rights legislation and implementing regulations require the institution to submit counts of its student body by racial/ethnic categories. Your cooperation is appreciated.

White, Non-Hispanic  Black, Non-Hispanic  American Indian/Native American  Hispanic/Latino  Asian or Pacific Islander  Not listed

### APPLICANT INFORMATION

17. I wish to enroll in:

Fall

Spring of 20

Full Time

Part Time

GRE

Date: \_\_\_\_\_

I have taken the:  GMAT

Date: \_\_\_\_\_

TOEFL

Date: \_\_\_\_\_

17a. Program \_\_\_\_\_

17b. If Technology Management, please indicate concentration: \_\_\_\_\_

If Accountancy, M.B.A. or Health Services Administration, are you interested in courses:  on-line  on campus

18. I desire on-campus housing:  Yes  No

### EDUCATIONAL INFORMATION

19. College	City & State or Country	From (Mo./Yr.)	To (Mo./Yr.)	Major	GPA	Degree and Year

20. This is my first application to a SUNYIT Graduate Program  Yes, or I last applied \_\_\_\_\_ / \_\_\_\_\_. I last attended \_\_\_\_\_ / \_\_\_\_\_.  
MO. YR. MO. YR.

21. I am applying for an assistantship:  Yes  No Assistantship candidates must complete **Application for Assistantship** included in catalog.

22. I have applied for the following additional assistance which would be applicable to my SUNYIT studies: \_\_\_\_\_

23. List other schools to which you are applying (this is for internal use only and will not prejudice your application): \_\_\_\_\_

**CONTINUED ON BACK**

24. Answering "yes" to the questions listed below will not automatically prevent admission, the institution may use this information to insure campus safety. An applicant who responds "yes" to either of these questions will be requested to provide further information for admission consideration. The information will be reviewed by a campus committee. Any deliberate falsification or omission of data may result in a denial of admission or dismissal

Have you been convicted of a felony?  Yes  No

Have you been dismissed from a college for disciplinary reasons?  Yes  No

**PREVIOUS EMPLOYMENT**

25. \_\_\_\_\_

Position held	Employing Firm	From (Mo./Yr.)	To (Mo./Yr.)
Position held	Employing Firm	From (Mo./Yr.)	To (Mo./Yr.)
Position held	Employing Firm	From (Mo./Yr.)	To (Mo./Yr.)

**FOREIGN STUDENT INFORMATION**

26. My present U.S. nonimmigrant status is:  
 Student F-1  or J1  \_\_\_\_\_ with an expiration date of \_\_\_\_\_  
 Visitor  with termination date of \_\_\_\_\_ Other   
 Month and Year State Type, Conditions and Termination Date

**AGREEMENT: I HAVE REQUESTED EACH OF THE SCHOOLS LISTED IN QUESTION 19 TO SEND OFFICIAL TRANSCRIPTS TO SUNYIT. THE INFORMATION SUPPLIED IN THIS APPLICATION IS COMPLETE AND ACCURATE, TO THE BEST OF MY KNOWLEDGE.**

**X** \_\_\_\_\_ Date \_\_\_\_\_  
 Signature of Applicant

**Application Fee: \$50. Make checks payable to: SUNY Institute of Technology.**

**OFFICE USE ONLY**  
 Admission \_\_\_\_\_  
 Dept./Status/Degree  
 Conditions: \_\_\_\_\_  
 \_\_\_\_\_

Program Chair \_\_\_\_\_  
 Signature and Date  
 Division Dean \_\_\_\_\_  
 Signature and Date  
 Graduate Dean \_\_\_\_\_  
 Signature and Date

## APPLICATION FOR A GRADUATE ASSISTANTSHIP

Name of Applicant \_\_\_\_\_

Undergraduate Degree/Major \_\_\_\_\_ Undergraduate GPA \_\_\_\_\_

*Please write a brief narrative outlining the reasons you are requesting a graduate assistantship.*

*(If more space is needed, attach an additional page.)*

**Reviewed by:**

\_\_\_\_\_  
Faculty/Advisor

\_\_\_\_\_  
Date

**Recommended by:**

\_\_\_\_\_  
Dean/Department Chair

\_\_\_\_\_  
Date

Please return to the Admissions Office.

SUNY Institute of Technology  
P.O. Box 3050  
Utica, New York 13504-3050

## GRADUATE SCHOOL REFERENCE REPORT

Name of Applicant \_\_\_\_\_

Applying for the \_\_\_\_\_ (degree) \_\_\_\_\_ program.

Name and title of person supplying reference:

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Name	Title
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**AUTHORIZATION FOR WAIVER: TO BE READ AND SIGNED BY APPLICANT: This waiver is not required as a condition of admission.**

*I understand my right under the U.S. Family Education Rights and Privacy Act of 1974 to review confidential appraisals placed in my file that are submitted with reference to admission to a graduate or other school.*

I do  do not waive my right to review this reference report.

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Date	Signature of Applicant
------	------------------------

TO THE APPLICANT: Complete the above information and send this form with a reference envelope to the individual who will be providing your reference.

TO THE EVALUATOR: In the space below please comment on the following: 1. How long and in what capacity you have known the applicant. 2. The applicant in terms of talents, abilities, potential, organizing and communicating ideas, seriousness, and maturity and stability in the face of prolonged and difficult work. 3. Other relevant information not found elsewhere in the application materials. Return this form in the envelope provided.

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Signature	Position/Title	Date
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Name and Address (Please type or print) \_\_\_\_\_

# **APPLICATION FOR GRADUATE ADMISSION**

SUNY Institute of Technology

## **STATEMENT OF EDUCATIONAL OBJECTIVES**

Applicants to the graduate programs in Advanced Technology, Applied Sociology, Information Design and Technology, Nursing (Adult Nurse Practitioner, Family Nurse Practitioner, Nursing Administration), and Telecommunications must submit a written statement of reasons for seeking admission to the master's program, identifying immediate and long-term professional goals and relating intended contributions to the professional field after completion of the master's program.

*Please type response in a maximum of two double-spaced pages, using this form.*