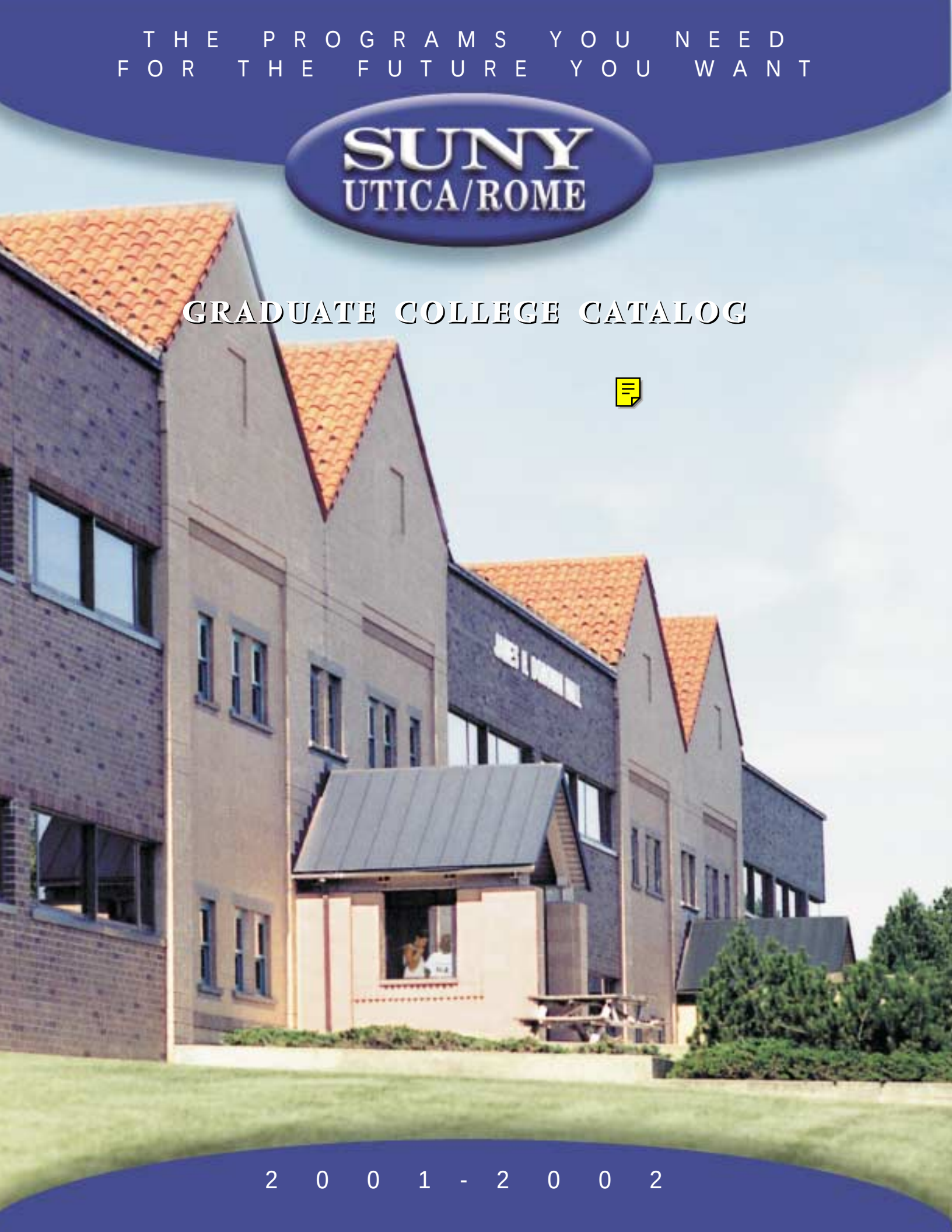
THE PROGRAMS YOU NEED
FOR THE FUTURE YOU WANT

SUNY UTICA/ROME



GRADUATE COLLEGE CATALOG

2001-2002

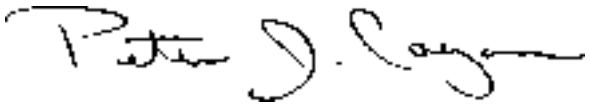
President's Message

Now more than ever before, the pursuit of advanced study is not only intrinsically worthwhile—it is, increasingly, a crucial component of continued success in our society.

At the Institute of Technology, we recognize the importance of specialized graduate programs. Our reputation for excellence and the significant accomplishments of our graduates strengthen our determination to offer even more in this new century. Our students, faculty and alumni are a testament to this commitment.

To those who seek intellectual stimulation, growth and academic achievement: I bid you welcome!

Prepare to embark on a voyage of discovery.



Peter J. Cayan
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.

Table of Contents

General Information

The State University of New York Institute of Technology at Utica/Rome is currently the only all-transfer, upper division institution among the 64 SUNY campuses. Starting in fall 2003, freshmen will be admitted to select degree programs, as the college makes the transition from two-year to four-year institution.

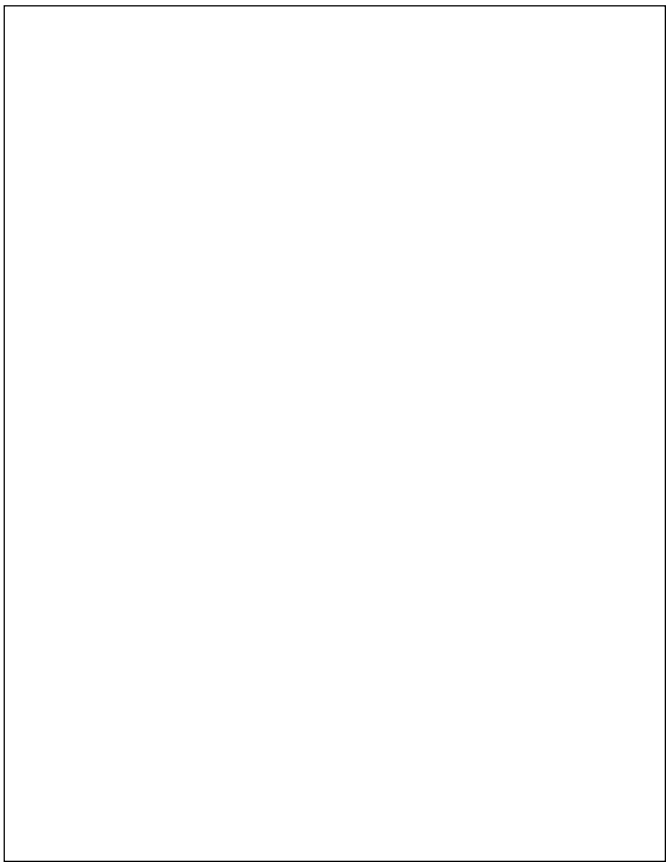
Founded in 1966, the Institute of Technology awards 20 bachelor's degrees and 11 master's degrees, among them one of the few completely on-line accountancy programs in the country. The Institute comprises four Schools: Arts & Sciences, Information Systems & Engineering Technology, Management, and Nursing.

Institute of Technology staff have the expertise to serve students pursuing graduate degrees, whether they have just obtained a bachelor's degree or are returning to the academic experience after a hiatus of months or years, as well as those making the transition from community and junior colleges and other institutions.

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. The original $60 million campus complex was completed in 1988; a new $14 million library complex is scheduled for completion in fall 2002. 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 the Institute's close working relationship with leading high-tech companies.

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

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



Thousands of Utica/Rome 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 Institute's 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.

With the transition to a four-year institution, 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, SUNY Institute of Technology at Utica/Rome 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, 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. The city is a regional transportation hub; visitors can arrive by air (at Oneida County or Syracuse airports), 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, a city steeped in history-from the American Revolution through the Industrial Revolution-is rich in its cultural diversity and strong in its support for the performing and decorative arts. The city is home to the internationally-recognized Munson-Williams-Proctor Art 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. Spectator sports include the Utica Blue Sox, an affiliate of the Florida Marlins and member of the New York Penn League.

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 SUNY Utica/Rome's 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 College 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. 2001-2002 semester rates for on-campus housing are as follows:

Standard Single	$2,120/semester
Premium Double	$1,910/semester
Standard Double	$1,750/semester
Meal plans:	
19 meals/week & 100 pts.	$1,210/semester
14 meals/week & 100 pts.	$1,133/semester
Block plans:	
125 meals & 200 pts.	$1,150/semester
90 meals & 400 pts.	$1,185

/semester

The Residential Life Office also provides assistance to SUNY students in locating housing in the Utica/Rome communities; including listing 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 Residential Life Office throughout the year.

Students with Disabilities

The Institute of Technology does not discriminate against qualified individuals with disabilities in admissions or in access to programs.

Admissions

Application Information

An application for admission to graduate study at the SUNY Institute of Technology must be filed, along with all supporting documents to the college's Admissions Office. It is suggested that fall semester applications be submitted by July 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 the SUNY Institute of Technology at Utica/Rome) 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 SUNY Utica/Rome must forward official transcripts of all undergraduate and graduate work to the Admissions Office. A bachelors degree is required for consideration. A 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, and Nursing Administration.

  GMAT Test scores are required for Accountancy and Business 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 Business 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 and Adult Nurse Practitioner applicants** must also submit: A) a transcript demonstrating successful completion of a basic statistics course, and (for Adult Nurse Practitioner applicants only) an undergraduate health assessment course, 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. 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 the SUNY Utica/Rome (1-800 SUNY TECH).

Readmission

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 the college, 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 this college. 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 the Institute of Technology 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 the Institute of Technology.
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 the Institute of Technology at Utica/Rome, with the exception of the School of Nursing's major in Adult Nurse Practitioner, Applied Sociology, or Family Nurse Practitioner, which accepts up to nine credits.
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 the Institute of Technology. A copy will be forwarded to the appropriate academic school. The maximum six-hour transfer applies.

Residency Requirement

Students in graduate degree programs must complete at least 27 semester hours of graduate credit in residence at the Institute of Technology. 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 graduate 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 graduate 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.

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, 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 the SUNY Institute of Technology.

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.

Graduate Management Admission Test

Scores from the Graduate Management Admission Test (GMAT) are required for the accountancy, business management, and Health Services Administration (or GMAT) 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 SUNY Institute of Technology.

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.gmat.org.

Health Center

The Health Center, conveniently located in the Campus Center, provides evaluation and treatment of health-related problems for full and part-time students. The Health 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 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 Center provides individual health counseling and offers innovative, prevention-oriented workshops on diet, exercise and other health-related topics throughout the year. The Health 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 the Institute's regulations, a full-time student must submit a health history and physical examination to the Health Center prior to attendance at the college. Part-time students who submit a health history and physical examination may also use the services of the Health Center.

   The student may only receive first-aid and emergency care from the Health 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, the Institute also has a mandatory health insurance program; i.e., all full-time students must carry some type of health insurance. The Institute 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 the Institute's health insurance plan each semester. Those students who do not wish to participate in the Institute's plan must document alternate insurance coverage via electronic waiver on the Institute'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 the Institute's health insurance plan but may purchase it at the Business Office each semester.

4. The State University requires international students entering the country for study or research, or any United States student studying abroad in a SUNY-sponsored program, to carry a SUNY health insurance policy. Information regarding insurance is mailed to these students upon their admission to the college. Additional information is available in the Health 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 Center, phone 315/792-7172, Fax 315/792-7371.

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 College 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 the college's financial aid booklet.

Graduate Assistantships

Assistantships are awarded each academic year to selected students. These awards provide a full New York State tuition waiver. 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 Executive Vice President for Academic Affairs through a selection process involving each dean. All graduate assistantship appointments and notifications will be made by the Executive 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 Executive 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 Executive 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 Executive 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.

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. (A booklet, Sources of Student Financial Assistance, is available upon request from the Admissions Office.)

In addition, you may access fastWEB, an on-line searchable database of scholarships. The direct URL is **(http://www.fastweb.com).**

International Student Financial Aid

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

For more information:

Financial Aid Office
SUNY Institute of Technology at Utica/Rome
P.O. Box 3050, Utica, NY 13504-3050
(315) 792-7210

e-mail: finaid@sunyit.edu
Internet: www.sunyit.edu

Tuition, Fees and Refunds

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

Tuition

Undergraduate	*Full-Time*	*Part-Time*
New York Resident*	$1,700 per semester	$137 per credit hour
Out-of-State Resident	$4,150 per semester	$346 per credit hour
Comprehensive Student Fee	$327.50 per semester	$25.35 per credit hr.

Graduate	*Full-Time*	*Part-Time*
New York Resident*	$2,550 per semester	$213 per credit hour
Out-of-State Resident	$4,208 per semester	$351 per credit hour
Comprehensive Student Fee	$262.50 per semester	$21.35 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:

	Full-time	*Part-time*
College Fee	*12.50*	*.85*
Intercollegiate Athletics	*90.00*	*7.50*
Student Activities	*65.00*	*4.00*
Health Services	*60.00*	*5.00*
Technology Applications	*100.00*	*8.00*
	$327.50	*$25.35*

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

The Student Activity Fee is mandatory for undergraduate students. This 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 SUNY Utica/Rome students.

First-time, new students are assessed a one-time Orientation Program fee of $40 used to support activities and programs which aid the student transition to a new academic campus environment.

Tuition Refund Policy

Credit Courses

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

Undergraduate/Graduate - 15 Week Schedule (Full Semester)

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

Undergraduate/Graduate - Quarter or 10 Week Term

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

Undergraduate/Graduate - 8 Week Term

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

Undergraduate/Graduate - 7 Week Term

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

Undergraduate/Graduate - 5 Week Term

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

Undergraduate/Graduate - 4 Week Term

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

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

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

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

No drop is considered official until the proper forms have been completed at the Registrar's Office and submitted to the Business Office.

How Receipt of Federal Title IV Funds

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

Affects Student Refunds

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 SUNY after the Title IV funds are returned.

Withdrawal Date

Regulation requires the Institute 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 the school 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***, the school 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 the school 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 the school, the student, or both. The school must return the lesser of the unearned Title IV assistance or an amount equal to the total liability incurred by the student multiplied by the unearned percentage. Using the above example, if a student had received $1,000 in Title IV loans and grants, and $500 had been applied to the account and $500 had been applied to the student, the earned portion of the aid package is $200 (.2 x $1000) and the unearned portion is $800 (.8 x $1000). $800 must be returned to the Title IV programs. Of this $800, $500** must be returned by the school.

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

Student Responsibility

Students must return unearned Title IV assistance less any amount returned by the school. The student above is responsible for returning the remaining $300.

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 FFEL Loans
- Subsidized FFEL Loans
- Unsubsidized (other than parent loans) Federal Direct Loans
- Subsidized Federal Direct Loans
- Federal Perkins Loans
- FFEL PLUS 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. The school formal leave of absence policy must be followed in requesting the leave. The leave must be approved by the school in accordance with this policy. **However, if the student does not return at the expiration of an approved leave, then the school 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 the college, and the resident has signed out of the room.

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

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

* *The first day 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 deemed to have ended when seven calendar days, including the first day of scheduled classes, have elapsed.*

Schedule of Other Fees and Charges

		Full-time	Part-time
Room Charges	— Semester Rate Standard Single Room	$2,120	n/a
	— Semester Rate Premium Double Room	$1,910	n/a
	— Semester Rate Standard Double Room	$1,750	n/a
Board Charges	— Semester rate-19 meals/wk. + 100 points	$1,210	$1,210
	— Semester rate-14 meals/wk. + 100 points	$1,133	$1,133
	— Semester Block Plan-125 meals + 200 points	$1,185	$1,185
	— Semester Block Plan-90 meals + 400 points	$1,185	$1,185
Parking Fee (see section entitled "Parking Fees")		$54	$27
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		$15	$15
International Student Medical Insurance*		$619.75	$619.75
Domestic Student Medical Insurance		$202/year	Optional
ID Card Replacement Fee		$15	$15
Late Registration Fee		$30	$30
Orientation Fee — paid once; during first semester		$40	$40
Late Payment Fee — charged to accts for payments received after assigned due date		$30	$30
Returned Item Charge — levied against maker for checks returned unpaid or charge payments declined by cardholder bank		$20	$20
Transcript Fee — per transcript		$5	$5
Diploma Replacement Fee — per replacement		$20	$20
Diploma Cover Replacement Fee — per replacement		$25	$25
HVCC Technology Fee — HVCC students only		$85	$5.50 cr. hr.

Deposits

For full-time undergraduate students, an **admission deposit** in the amount of $50 is due 30 days after acceptance. They become non-refundable after May 1, or 30 days after acceptance; whichever is later (until the first day of classes). **No deposits will be refunded after classes begin.** Upon registration, this amount is subtracted from tuition due. **Part-time students do not pay an admission deposit.**

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

Students who wish to reserve dormitory rooms are required to pay a $100 dormitory deposit, due with their admissions 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. 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 the college with proof of insurance coverage and fill out a Medical Insurance Waiver Form before the end of the second week of classes. It is the student's responsibility to insure that the waiver form is on file, as the charge becomes final on the last day to waive. Waiver forms will then no longer be accepted and the student is responsible for the payment of the insurance fee. **Part-time students may purchase coverage if they so desire.** Waiver forms must be submitted on the Web **each semester.**

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

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

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

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

1. Go to SUNY's Home Page on the web: *www.sunyit.edu*,
2. Select *Campus Intranet* in the Quick Links menu,
3. Select *Login to Secure Area*,
4. Enter your SSN and PIN,
5. Press *LOG IN*,
6. Re-enter your PIN (security measure),
7. *SUNY Information* Main Menu will appear,
8. Select *Personal Information Menu*,
9. Select *Medical 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 the Institute of Technology, 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 ..... $202 per year*
(full-time students only)

International Student Insurance ..... $619.75 per year*
(both full- and part-time students)

**Subject to change*

Parking Fees

Effective January 1, 1991, 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%). 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 Bursar's Office will provide a receipt to be presented at the University Police Department, where students may obtain a valid parking decal and complete vehicle registration cards. Parking fees for various categories are as follows (including applicable sales taxes):

Time Period	*Full-time*	*Part-time*
Annual (full 12 month period)	129.60	64.80
Academic Year (fall/spring only)	108.00	54.00
Single Semester Only	54.00	27.00
Summer Semester Only	21.60	21.60

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 college 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

Students may either register for classes by phone or via the Internet at www.sunyit.edu if they are currently enrolled, matriculated students. New students will register at an orientation program. In accordance with requirements established by the SUNY Board of Trustees, **students registering after semester bill due date must pay for tuition and fees at that time.** Any deferrals due to financial aid or hardship require prior approval from the Financial Aid Office. No deferrals are granted based on estimates, or for programs that have not yet been applied to and awarded, as of registration date. Deferrals for veterans, clients of VESID and DVR (federal and state vocational rehabilitation programs), and approved third parties require prior arrangement. Documentation of such must be presented, in writing, at time of payment/registration.

Students who pre-register will be billed on or at a date subsequent to the date they selected their course schedule, with a payment deadline specified on their statement. **All registered students are required to return the confirmation portion of their billing statement, with payment or deferral, by the required due date.** This serves as confirmation of student's intention to attend for the semester. **All students who have enough financial aid to reduce their balance due to zero, who are covered by Third Party Deferrals, or who participate in our time payment plan, must also return the confirmation copy as evidence of their intention to return.**

Failure to return a confirmation copy with valid deferral or full payment by payment due date, may result in the advance registration being deleted. The student then re-registers at a later time. However, 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. Students who are re-registering are NOT guaranteed spots in courses for which they originally registered.

SUNY Utica/Rome 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 315/792-7529 or 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 the Institute of Technology.

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.

Employers

Any third party employer arrangement is subject to approval by the college. Third party payments are acceptable only if the employer, unconditionally, agrees to pay the college upon receipt of a billing statement. No stipulations regarding student academic performance are allowable. Tuition liability is ultimately the responsibility of the student, should an employer not remit payment in a timely fashion.

Tuition reimbursement clients can download the form from our web page and obtain required signatures. Please note the deferral is for tuition only, regardless of employer's policy. Return form and payment for fees with confirmation/remittance portion of the billing statement to the Bursar's Office prior to billing due date.

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, etc.)

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

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

Veteran's Deferrals

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

Required Disclosures

Please take notice, if payment is not received for obligations due to the Institute, 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, ie. 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 Masters Degrees

1. A student possessing a masters degree from another institution may earn a second masters degree from the Institute of Technology by completing the specific degree requirements and the college residency requirement. Both requirements may be satisfied simultaneously.
2. A student may earn two masters degrees from the Institute of Technology, and must satisfy all degree requirements for each program. A student wishing to complete more than one masters 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 SUNY Institute of Technology, to apply towards the 27 hour residency credit requirement of the second degree program.

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 the Institute of Technology or at another institution. Enrollment in other than the following registered, or otherwise approved, programs may jeopardize eligibility for certain student aid awards.

HEGIS	*Classification*	*Degree*
0502	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
0799	Telecommunications	M.S. Master of Science

Continuous Registration: Computer Science Thesis

All students must maintain continuous registration, equal to or greater than one credit, while doing their thesis for CSC 599.

Graduate/Undergraduate Academic Calendars

Fall Semester 2001 *

August 24	*(Fri)*	*New Student Orientation/Registration*
August 27	*(Mon)*	*ALL CLASSES BEGIN*
		Add/Drop Begins - No Fees Charged
		Late Registration Begins
August 31	*(Fri)*	*Last Day to Register for Fall 2001 Courses*
September 3	*(Mon)*	*LABOR DAY HOLIDAY - No Classes*
September 4	*(Tues)*	*Add/Drop and Late Registration Fee Begin*
		(Students Must Obtain Instructor's Signature to Add a Course)
September 10	*(Mon)*	*Last Day to Add a Course or Drop Without Academic Record*
September 11	*(Tues)*	*Withdrawal (W Grade) from Courses Begins*
October 15	*(Mon)*	*Last Day of Classes for First Half Semester Courses*
October 16	*(Tues)*	*First Day of Classes for Second Half Semester Courses*
		Incomplete Grades from Spring & Summer 2001 Revert to "F" Grades
November 1	*(Thurs)*	*Last Day to File for May 2002 Graduation*
November 2	*(Fri)*	*Last Day to Officially Withdraw (W Grade) From Courses*
November 12-14	*(Mon-Wed)*	*Advance Registration - Spring 2002*
		(Matriculated Students see Academic Department for Advising Schedule)
November 21-25	*(Wed-Sun)*	*THANKSGIVING HOLIDAY RECESS*
		(Recess begins at 6:00 pm, Tuesday, November 20th)
November 22-23	*(Thurs-Fri)*	*College Closed for ALL Business*
November 26	*(Mon)*	*Classes Resume*
December 8	*(Sat)*	*Classes End*
December 10	*(Mon)*	*Final Exams Begin*
December 13	*(Thurs)*	*Final Exams End*
December 15	*(Sat)*	*December Commencement - 1:00 p.m.*

Spring Semester 2002*

January 18	*(Fri)*	*New Student Orientation/Registration*
January 21	*(Mon)*	*ALL CLASSES BEGIN*
		Add/Drop and Late Registration Begin - No Fees Charged
January 25	*(Fri)*	*Last Day to Register Without Late Fee for Spring 2002 Courses*
January 28	*(Mon)*	*Add/Drop and Late Registration Fees Begin*
		(Students Must Obtain Instructor's Signature to Add a Course)
Feb 1	*(Fri)*	*Last Day to Add or Drop A Course Without Academic Record*
Feb 4	*(Mon)*	*Withdrawal (W Grade) from Courses Begins*
March 8	*(Fri)*	*Last Day of Classes for First Half Semester Courses*
March 10-17	*(Sun-Sun)*	*SPRING BREAK*
March 18	*(Mon)*	*Classes Resume*
		First Day of Classes for Second Half Semester Courses
		Incomplete Grades from Fall 2001 Revert to "F" Grades
April 1	*(Mon)*	*Last Day to File for August 2002 Graduation*
April 5	*(Fri)*	*Last Day to Officially Withdraw (W Grade) From Courses*
April 15-16	*(Mon-Tue)*	*Advance Web Registration - Summer and Fall 2002*
		(Matriculated Students see Academic Department for Advising Schedule)
May 4	*(Sat)*	*Classes End*
May 6	*(Mon)*	*Final Exams Begin*
May 9	*(Thurs)*	*Final Exams End*
May 11	*(Sat)*	*Commencement - 10:00 AM*
June 3	*(Mon)*	*Last Day to File For December 2002 graduation*

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

Master of Science in Accountancy

Dean's Message

The Master of Science in Accountancy program is offered by the School of Management both on campus, as well as online. 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. The Accountancy program builds on the Institute's strengths by integrating some coursework already included in the School of Management's successful Master of Science program in Business Management. A meaningful application of current computer capabilities and software plays both an integral and an integrated part of the program. Combining the core requirements, the available electives and the prerequisite courses results in a program which has both a specialized focus in Accountancy and the broad background in business management which are necessary for success in today's demanding business environment

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 Master of Science in Business Management and the Master of Science in Health Services Administration and are described elsewhere in this catalog.

Sanjay Varshney, PhD, CFA
Dean, School of Management

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 a graduate advisor to determine appropriate course selection. Prerequisite skills may be fulfilled in a variety of ways including transfer courses, courses at the Institute of Technology, 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 guidelines as an admission criterion as follows:

1. A total of 950 points based on 200 x undergraduate GPA + GMAT score, or
2. A total of 1,000 points based on 200 x upper division GPA + GMAT score.

The SUNY Institute of Technology will use these standards except for the following cases:

1. The applicant has been out of school for an extended period and the real meaning of his or her undergraduate grades is questionable.
2. The applicant has demonstrated, through exceptional performance in a management career, that his or her undergraduate grades were not indicative of his or her ability.
3. Conditional admission may be allowed for promising candidates who do not perform well on the GMAT. Students must maintain at least a B average in the first three courses completed in order to remain matriculated when admitted in this category.

4. When candidates have strong GPAs they may be conditionally admitted with a requirement to complete the GMAT test at the earliest possible date. **This requirement may not be waived and under no circumstances can a student complete their degree program without the submission of GMAT scores.**

The Program

The degree program is a 33 semester hour program consisting of eight required core courses, a required research seminar and two elective courses that allow students to pursue their professional interests. (The total program requirements are 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 and Saturday classes meet the needs of working professionals; the diverse selection of course offerings also makes full-time study possible. It is possible to complete the program through either weekday, weekend or on-line courses. Students who intend to pursue full-time study (and complete the program within an 18 month period) should plan on some combination of these three venues. 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:

9 Core Courses (27 hours)
2 Elective Courses (6 hours)

ACC 611	Advanced Income Tax Research
ACC 630	Fund Accounting
ACC 650	Advanced Auditing Theory
ACC 685	Advanced Financial Accounting Theory
BUS 505	Managerial Economics
BUS 515	Management Information Systems
BUS 690	Research Seminar
FIN 525	Financial Management Problems
MGS 511	Management Science Two Electives

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 611 Advanced Income Tax Research (3)
- Also Available Online

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)
- Also Available Online

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)
- Also Available Online

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)
- Also Available Online

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 Managerial Economics (3)
- Also Available Online

Managerial economics is the application of economic theory and methodology to decision-making problems encountered by public and private institutions. 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. Prerequisite ECO 310 or equivalent.

BUS 515 Management Information Systems (3)
- Also Available Online

Provides the necessary analytical framework and background knowledge for the business analyst's role in the design and development of computer-based information systems. Topics include establishing criteria for information flows, analysis of record keeping and reports for information control and integration of a data base for information maintenance. Methodology lectures, discussion, case studies, and experimental applications on a computer system. Prerequisites CSC 300, or CSC 301, or CSC 302, or equivalent.

BUS 690 Research Seminar (3)
- Also Available Online

Each student will design a research project appropriate to the curriculum. The project should, when possible, provide utility for the current employment or anticipated employment of the student. The student will complete the project and submit a report using correct format.

FIN 525 Financial Management Problems (3)
- Also Available Online

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.

MGS 511 Management Science (3)
- Also Available Online

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 maximum techniques) and (6) the basic elements of forecasting (including the classical time series model). Prerequisite STA 300 OR equivalent.

Elective Course Descriptions

Any two graduate courses offered by the School of Management; selected either from the following or from courses listed in the Master of Science in Business Management Program.

ACC 571 Advanced Management Accounting (3)
- Also Available Online

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 580 CPA Problems (3)

To assist students preparing for careers in public accounting. Emphasis is placed on analysis required in examinations preliminary to expressing a professional opinion as to fairness; includes examination procedures and methods of reporting results.

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 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.

Faculty

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

John E. Cook, Professor; Ph.D., Syracuse University. Management.

Richard J. Havranek, Associate Professor; Ph.D., Syracuse University. Strategy/Policy, Human Resource Management, computerization of personnel and other management information.

Peter Karl, Associate Professor; J.D., Albany Law School; M.B.A., Rensselaer Polytechnic Institute, CPA State of New York. A nationally recognized speaker on federal 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.

Graham K. Lemke, Assistant Professor; Ph.D., Binghamton University. Finance, unionization and firm risk, risk management, derivatives, and game theory.

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

Thomas Tribunella, Associate Professor, Ph.D., University at Albany. Accounting, cost and managerial, accounting information systems.

Sanjay B. Varshney, Associate Professor; Ph.D., Louisiana State University. Chartered Financial Analyst with the New York Society of Security Analysts. Finance market micro structure trading analysis, corporate governance, security valuation and issuance.

Kenneth Wallis, Associate Professor; CPA, CMA, MS, University of Akron. Accounting, Audit and taxation. Leading practitioner in area with one of the largest audit and tax firms.

Robert S. Yeh, Assistant Professor; Ph.D., Purdue University. Marketing, quantitative marketing models, statistical applications and mathematical modeling in product designing and product improvement.

Master of Science in Advanced Technology (MSAT)

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 and photonics.

The twelve full-time faculty members in these programs represent a wide range of academic, research and applied specialities. 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 Site, 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. The Industrial Engineering Technology department has initiated faculty exchange programs and joint activities with two universities in China. These collaborative efforts afford students in this discipline, opportunities for joint projects and idea exchanges with other professionals working in these fields.

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, MATLAB/SIMULINK and COMNET III. In addition, the Institute of Technology maintains extensive library holdings in support of the Master of Science in Advanced Technology program.

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

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 master's programs.

Degree Requirements

The MSAT is a well-rounded, 33-credit program that will provide 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. Currently, the program is being conducted on a part-time cohort basis. Two three-credit courses per term are offered for two and a half years and there is a project required as the culmination of 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. Whenever there is sufficient student interest generated in pursuing a MSAT degree another cohort will be initiated, either on or off campus. Once a cohort is established, the Institute will continue to offer the program until the total of ten courses is completed.

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

* *We are in the process of adding tracks for students who wish to pursue full-time study.*

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 Advanced Engineering Economics (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: Engineering Economy or equivalent or consent of instructor.

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 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 576 Finite Element Theory (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/INERTIA 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 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 Advanced 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.

Faculty

Digendra Kumar Das, Associate Professor, Ph.D., University of Manchester Institute of Science and Technology.
CAD/CAM/CIM, fluid/prognostics, turbomachinery and thermal sciences and MEMS.

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, Ph.D.,P.E., University of Pittsburgh.
Rehabilitation engineering and assistive technology, experimental fluid mechanics and FMS.

Salahuddin Qazi, Associate Professor, Ph.D., Looughborough 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.

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. Preference will be given to students who have 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. Applicants should have submitted 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

The college supports a practice-oriented learning environment with state-of-the-art laboratories in all primary areas of academic offerings.

Master of Science in Applied Sociology

Dean's Message

The M.S. in Applied Sociology promotes the use of sociological and anthropological theory and research to formulate, implement, and evaluate organizationally-based interventions. This part-time degree program builds on our existing strengths in social services and criminology. It seeks to provide students with knowledge and skills that can be used in multiple settings, including but not limited to:

- problem formulation
- theoretical application
- intervention design
- organizational development
- quantitative and qualitative methods of data collection and analysis
- integration of diverse methods of data collection and analysis
- evaluation
- information technology and participatory design
- program advocacy
- ethical practice

The knowledge and skills acquired from completing the M.S. in Applied Sociology are relevant to recent changes in the funding requirements for social service and criminal justice agencies. New hot-words such as "accountability," "measurable outcomes," "theory and research based program development," and "program evaluation" have become critical requisites for public and private funding. Many social service and criminal justice agencies do not have the staff who possess the knowledge and skills to respond to the new funding requisites. We believe that graduates of the M.S. in Applied Sociology will be well equipped to confront the challenges posed by the accountability revolution.

(Upon successful completion of the program, a graduate will have the necessary academic training for certification as a *Clinical Sociologist* by the Sociological Practice Association. This certification is a credential that is acquired after peer review by other practicing sociologists. It should be noted that such a credential does not qualify individuals for third party payments.)

A graduate with an M.S. in Applied Sociology will be qualified for the following careers:

- Program Director
- Program Developer
- Program Evaluator
- Grant Writer
- Research and Data Analyst
- Team Leader
- Project Coordinator

Daniel J. Murphy, Ph.D.
Dean, School of Arts and Sciences

Admissions

Application for admission to graduate degree study should be filed, along with all supporting documents, with the Institute's Admissions Office no later than June 15 preceding the Fall Semester of a cohort year. The Department will respond to applications as they are received. Some applicants may be placed on a waiting list until July 1.

The specific admissions requirements and policies 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.
- Nine 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 program's curriculum requirements will include a set of 7 required courses and 4 electives intended to appeal to students with professional experience or interest in the social service or criminal justice fields.

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 of field work/participant observation in the anthropological tradition. Compares this to Positivist and Postmodernist approaches. Trains students to use ethnographic methods, as well as other qualitative methods that emerge from this perspective (like 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. (Pending)

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. (Pending)

SOC 596 Proposal and Grant Writing Seminar (3)
Focuses upon the writing of viable proposals. Proposal types covered include grant applications, project proposals, and thesis proposals. A thesis is an intellectual effort that focuses upon the investigation of an applied issue. A project, in contrast, is a more focused effort which is usually tailored toward meeting the needs of a practice setting. Encourages students to seek out funding opportunities. (Pending)

SOC 597 Seminar in Applied Sociology (6)
Provides students with a real-world social service agency-based applied social project experience. Emphasizes group work and classroom discussion and feedback. Places students in charge of the conceptualization/design, implementation and evaluation phases of a project. Provides a capstone experience. (Pending)

SOC 598 Project Supervision (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 results. * Students will be asked to maintain on-going enrollment in project supervision by signing up for one credit each semester. This process would begin the two semesters after the student's initial enrollment in SOC 598. (Pending)

SOC 599 Thesis Supervision (3+)
Supports completion of a viable thesis. Students must work with an advisor to develop an acceptable thesis proposal, to implement that thesis proposal, and to evaluate its effectiveness. * Students will be asked to maintain on-going enrollment in project supervision by signing up for one credit each semester. This process would begin the two semesters after the student's initial enrollment in SOC 599. (Pending)

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 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)

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

ANT 531 Methods of Research: Ethnographic Data Collection and Analysis - R
SOC 521 Crime and Social Policy
OR
SOC 595 Practicum in Sociology - R

Summer Session I

COM 500 Organizational Communication Skills for the Professional

Semester III

SOC 532 Methods of Research: Survey and Experimental Design - R
ANT 561 Change and Information Technology in Public and Not-for-Profit Organizations
OR
SOC 572 Managed Care

Semester IV

SOC 533 Methods of Research: Statistical Analysis - R
OR
SOC 571 Advocacy
OR
SOC 580 Ethics and Corruption in the Public Service

Summer Session II

SOC 596 Proposal and Grant Writing Seminar - R

Semester V

SOC 598 Project Supervision - R
OR
SOC 599 Thesis Supervision - 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

David Hakken, Ph.D., M.A., A.B. Specializes in work and computerization and human needs. Current research on social policy, in regard to new forms of technology for people with disabilities and national computing policy.

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.

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 at Utica/Rome. 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.

Master of Science in Business Management

Dean's Message

The School of Management offers the M.S. in Business Management and plays a major role in the growing graduate programs of the SUNY Institute of Technology. There are opportunities for concentrated study in both quantitative and behavioral aspects of management, as well as specific courses which provide for their integration. Specific concentrations focus on Accounting & Finance, Human Resource Management, Marketing, and Health Services Management. Students may also pursue the general "Management" concentration by selecting any three courses of their choice. The program is especially well suited for students who already have an undergraduate preparation in a business or management related area. Additionally, students who may have a background in technical or other non-management areas and desire an opportunity to broaden their capabilities are afforded several options to do that. A meaningful application of current computer capabilities and software plays both an integral and an integrated part of the program. Numerous opportunities exist to expand into other important areas of management such as small business management, international business and total quality management through available electives. Combining the core requirements, the available electives and the prerequisite courses results in a program which has both a specialized focus and the broad background in business management which are necessary for success in today's demanding business environment.

The Master of Science in Business Management degree is one of 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 this catalog.

Sanjay Varshney, Ph.D., CFA
Dean, School of Management

The Program

The program stresses the use of modern techniques to analyze and develop solutions to a wide variety of business management situations and problems. The focus of 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 & Finance, Human Resource Management, Marketing, Health Services Management and Management. Additionally, a variety of opportunities exist to study a wide range of other business topics as electives. Combining the M.S. with the required prerequisite courses gives the student a broad background in business management skills applicable in most organizations at the managerial level.

Program Options

Weekday Option

The course schedule for the M.S. in Business Management is designed primarily for part-time students. However, full-time study may be pursued by some business graduate students and may be completed in three semesters. Most of the courses are scheduled for late afternoon or evening. The optimum time for full-time students to enter the program is the fall semester; since a number of courses are offered in a sequence of fall/spring/summer. Therefore, entering any semester other than fall may prevent the full-time student from pursuing the core sequence in a timely fashion. Part-time students may enter in fall, spring or summer, and take electives or alternative core courses. Students may supplement their on-campus study with weekend courses when available (see below). Students needing prerequisite skills may enter any semester, since most prerequisite courses are generally available. An assessment during the admission process will aid in determining an optimal entering point.

Weekend Option

Our experience has shown that weekend classes are popular with many students. Accordingly, in response to demand and based on faculty availability certain courses are offered on weekends. There are usually opportunities to complete many of the common core courses on weekends as well as some of the specialized courses within individual programs. Courses are conducted in four-hour blocks on Friday evenings (5:30 - 9:30 p.m.), Saturday mornings (8:00 a.m. - noon) and Saturday afternoons (1:00 - 5:00 p.m.), during a series of 10-week sessions throughout the academic year. The program includes courses which support each of the concentrations **although it might not be possible to complete the entire graduate program taking only weekend classes.**

Online Option

The School of Management offers the entire M.S. in Accountancy program online through the World Wide Web, in addition to delivering it on campus. Accordingly, several of the support courses that are also required for the M.S. in Business Management are offered online through the SUNY Learning Network. These courses are offered both on campus, as well as online. However, please be cautioned that it is not possible at the current time to complete the M.S. in Business Management Program entirely online.

Admissions Criteria

Students admitted to the M.S. program in Business Management are expected to be proficient in a general core of prerequisite topics common to programs in business management. Prerequisites include accounting, business law, management, organizational behavior, finance, marketing, computer use, statistics, and economics. There are minor variations in prerequisite courses based on the concentration which will be pursued. These variations are highlighted in the evaluation conducted by the admissions office in conjunction with the application process; and in the final program of study developed within the School of Management.

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 the Institute of Technology, and College-

Level Entrance Program (CLEP) or Regents College Degree (RCD) examinations for students with appropriate knowledge, but no official documentation. **Specialized one-credit modules are also offered at the graduate level to provide equivalent exposure to some of these topics.** The modules may be taken for pass/fail and do not count toward the degree program. The modules are described on page 33 in the section on course descriptions.

Master of Science vs. Master of Business Administration

The popularity of graduate study in business has rapidly increased in the last 25 years. Part of that popularity is attributed to the curriculum structure adopted by most graduate business programs. Study for the master's degree in most academic fields presupposes an undergraduate major in that field. Schools of business find that over half the students applying for programs in business do not have undergraduate business majors. Curricula for the master's degree have been designed to allow for a wide variety of student background preparation.

The Master of Business Administration (M.B.A.) is a common degree designation. It is traditionally a two-year (full-time) curriculum designed to prepare generalists for corporate management. The first year of the program is designed, in most cases, to fulfill business backgrounds for students who did not complete an undergraduate business major. Many M.B.A. programs will accept appropriate undergraduate coursework and waive some or all of the first-year requirements. Other M.B.A. programs require all students, regardless of background, to complete the full two years of graduate work.

During the 1980s, the M.S. became increasingly common as a specialized degree. The M.S. in Accountancy, for example, is now popular because individuals desiring graduate work in accounting found the M.B.A. too general and wanted graduate work more attuned to their specialty. Additional majors are now being developed at many schools to provide an M.S. degree program with a strong specialization, as opposed to the perceived generalist M.B.A. degree.

The SUNY Institute of Technology M.S. degree has been designed and developed based upon forecasts of potential employment opportunities and potential student interests. The curriculum is designed on the same assumption as most other business programs – a one-year program for students with undergraduate business preparation, and two years for individuals without the undergraduate prerequisites.

The SUNY Institute of Technology M.S. degree program is quite similar to many M.B.A programs, which stress the quantitative skills and decision science concepts within the business world.

Admissions Guidelines

Scores from the GMAT (Graduate Management Admissions Test) will follow the AACSB (American Assembly of Collegiate Schools of Business) recommended guidelines as an admission criterion as follows:

1. A total of 950 points based on 200 x undergraduate GPA + GMAT score, or
2. A total of 1,000 points based on 200 x upper division GPA + GMAT score.

The SUNY Institute of Technology will use these standards except for the following cases:

1. The applicant has been out of school for an extended period and the real meaning of his or her undergraduate grades is questionable.
2. The applicant has demonstrated, through exceptional performance in a management career, that his or her undergraduate grades were not indicative of his or her ability.
3. Conditional admission may be allowed for promising candidates who do not perform well on the GMAT. Students must maintain at least a B average in the first three courses completed in order to remain matriculated when admitted in this category.
4. When candidates have strong GPAs they may be conditionally admitted with a requirement to complete the GMAT test at the earliest possible date. **This requirement may not be waived and under no circumstances can a student complete their degree program without the submission of GMAT scores.**

Degree Requirements

Prerequisite Skills

As outlined in the admissions requirements, there are certain topical areas in which all students should have basic knowledge. In some cases these are absolute prerequisites (certain courses could not be taken without completion of the competency area, e.g., budgeting should not be attempted without prerequisite work in accounting and finance). In other cases, competencies are needed early in the program, but selective graduate course work may be started prior to their attainment. Courses taken to fulfill these prerequisites will not be counted toward degree requirements nor will they be counted in the graduate grade point average.

Program Requirements

The degree requirements consist of the completion of 33 credit hours to be distributed in the following manner:

Common Core Courses	24 credit hours
Specialized Core Courses	9 credit hours

All students must complete the common core courses. All students will have a program of study that identifies the specific distribution for their concentration. All students must complete the capstone experience requirement (BUS 685). Students desiring to complete the thesis in a manner that would also satisfy the capstone experience must submit a petition requesting this through the Dean. A thesis might also be completed as an 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.

Common Core Courses

All students must complete the following eight common core courses. Note that it is desirable to complete ACC 520, BUS 505, and MGS 511 as early in the program as possible. BUS 690 should not be taken until the student has completed at least half (six courses) of their 33 hour graduate program. BUS 685 – the capstone class must be taken in the last semester of study.

Course Name	Course Number	Credits
Accounting for Managers	ACC 520	3
Managerial Economics	BUS 505	3
Management Science/Human Resource Management*	MGS 511/HRM 518	3
Financial Management Problems	FIN 525	3
Management Information Systems/ Organizational Management Theory**	BUS 515/MGT 607	3
Research Seminar	BUS 690	3
Marketing Survey Design & Data Analysis	MKT 510	3
Business Environments & Strategies	BUS 685	3
Total Common Core		24 credits

**MGS 511 required for Accounting & Finance concentration. Others may substitute HRM 518 instead.*

***BUS 515 required for Accounting & Finance concentration. Others may substitute MGT 607 instead.*

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). Prerequisite Accounting 305 or equivalent.

BUS 505 Managerial Economics (3)
- Also Available Online

Managerial economics is the application of economic theory and methodology to decision-making problems encountered by public and private institutions. 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. Prerequisite ECO 310 or equivalent.

MGS 511 Management Science (3)
- Also Available Online

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. 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). Prerequisite STA 300 or equivalent.

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.

FIN 525 Financial Management Problems (3)
- Also Available Online

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.

BUS 515 Systems Analysis for Information Managers (3)
- Also Available Online

Provides the necessary analytical framework and background knowledge for the business analyst's role in the design and development of computer-based information systems. Topics include establishing criteria for information flows, analysis of record keeping and reports for information control and integration of a database for information maintenance. Methodology lectures, discussion, case studies, and experimental applications on a computer system. Prerequisites CSC 300, or CSC 301, or CSC 302, or equivalent.

MGT 607 Organizational and Management Theory (3)
- Also Available Online

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

BUS 690 Research Seminar (3)
- Also Available Online

Each student will design a research project appropriate to the curriculum. The project should, when possible, provide utility for the current employment or anticipated employment of the student. The student will complete the project and submit a report using correct format.

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 658 Business Environments & Strategies (3)
- Also Available Online

An integrating experience to apply the varied skills and knowledge accumulated throughout the required coursework. Special emphasis will be upon how organizations fit within the social, political, and economic environments, and managerial strategies to optimize achievement of objectives.

Specialization Concentration Courses

Students may choose from five areas of concentration within the degree. A total of 9 credit hours selected from courses within the specialization are required.

Concentration in Accounting & Finance

The Accounting & Finance Concentration provides an opportunity for students to become more intensely involved with financial markets and operations. This concentration is also well suited for students who are interested in accounting but do not intend to pursue the C.P.A. credential. There is a valuable synergy between accounting and finance—from which both concentrations in our graduate program benefit. On a broad basis the course work included in this concentration provides students the ability to pursue credentials in the financial community such as the Certified Financial Planner, Certified Financial Counselor and the Chartered Financial Analyst. This program of study also provides opportunity for series six/seven licenses which are required by various agencies in the local area.

FIN 532 Introduction to Stock Market Investing (3)

Introduces current trends and strategies for investment management in the stock 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, and (9) combining stocks with other alternative investments.

ACC 685 Advanced Financial Accounting Theory (3) - Also Available Online

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 foundation of GAAP. In addition, the process by which the Financial Accounting Standards Board promulgates new FAS will also be analyzed.

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.

Concentration in Human Resource Management

This concentration focuses on management of the human resource. A variety of technical, behavioral, quantitative and strategic aspects are included to provide students with a rigorous, comprehensive capability in this critical area. This exposure would be especially appropriate for students who are contemplating positions at upper management and executive levels either in the human resource management function or other positions requiring intense skills in managing the firm's human resources.

HRM 615 Labor Relations (3)

This topic continues to have a major impact on the work place environment. A major assumption of this course is that an in-depth knowledge of the history, development, current status, legal underpinnings and skills attendant to the collective bargaining process is critical to managers in both union and non-union environments. Accordingly the curriculum addresses each of these important facets of the collective bargaining process. Attention is also given to the proper use of disciplinary action within a unionized setting, to include arbitration procedures. Prerequisite HRM 518.

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. Prerequisite HRM 518.

HRM 630 Staffing (3)

This course focuses on determining the human resource needs of an organization and identifying potential techniques for satisfying those needs. Emphasis is placed on the role of the staffing function in obtaining, developing, and retaining a qualified work force. Current related theory and research is analyzed and used as the basis for recommended practices. Topics include: legal issues, strategic human resource planning, recruitment, selection, orientation and socialization, and performance appraisal. Prerequisite HRM 518.

Concentration in Marketing

Marketing is a crucial function to most business organizations. For many business entities, maximizing customer satisfaction is the winning competitive advantage. Marketing plays the role of intermediary between the organization and the customers. Our program of marketing concentration will prepare students for a variety of careers and entry positions in the area of marketing. The curriculum designed for the marketing concentration involves a comprehensive study of the most updated marketing technology and strategic planning. Courses included in this concentration area provide students well-rounded academic training as well as on-hands experiences. Graduates with this concentration are expected to have career opportunities in new product research and development, sales management, advertising administration, marketing research, brand management, product management, and many other areas in the business environment.

MKT 550 Marketing Research and Technology (3)

Explore applications of modern technology and research methods in 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 Marketing Management (3)

Emphasizes a managerial approach in marketing decision making. 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. Prerequisite: MKT 510

Concentration in Health Services Management

The MS program in Business with a concentration in Health Services Management will prepare students broadly for a variety of management positions in the health professions, including: administrative positions in hospitals; nursing home administration; ambulatory care administration; health care consulting; and management level positions in health insurance such as health maintenance organizations, preferred provider organizations; government; and others. Students wishing to specialize in this area in depth are benefited from pursuing the M.S. in Health Services Administration instead.

HSM 500 Health Care Systems (3)

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 Marketing Health Care (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 which provides guidance and support to these efforts. This course will address many of the planning and marketing variables that should be addressed, as well as how to coordinate these activities.

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 finan-

cial viability. Prerequisite: ACC 301 or its equivalent.

Concentration in Management

Any three graduate classes of 3 credit hours each, other than the common core classes, may be selected by the student to complete the concentration in Management.

Electives

All students will have the opportunity to select electives, and apply them toward the program with the Dean's approval. Students may also select courses being offered in other schools at the graduate level which are consistent with their programs of study. Approval of the Dean is required for any elective courses which are not offered by the School of Management. These requests should be submitted on a "Petition" form. The following are courses which can be applied as electives in addition to those other School of Management courses described elsewhere in this catalog.

ACC 505 Introduction to Accounting (3)

An accelerated introduction to the principles of accounting, coverage of the recording process, financial statement preparation, and introduction to management accounting. Topics include cost behavior, cost-volume-profit relationships, segmented reported and budgeting.

ACC 530 Accounting and Budgeting for Not-for-Profit Organizations (3)

Attain a working knowledge of fund accounting and budgeting. Preparation of a budget for an agency or division or a large not-for-profit organization.

ACC 571 Advanced Management Accounting (3) - Also Available Online

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 630 Fund Accounting (3) - Also Available Online

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.

BUS 509 Strategies in National/International Business (3)

A review of business theories and principles utilized in shaping current, private, and public management decisions. National and international business problems will be addressed, along with strategies being pursued to alleviate them. The course will demand extensive research in current publications.

BUS 551 Business & Society (3)

Analysis of forces external to the firm which influence its goals, structure, and operation; including legal and regulatory constraints, primarily as they reflect the philosophical backgrounds of free enterprise and managerial enterprise viewpoints current in American business. The social, political, and technological factors which influence managerial/non-managerial behavior in the firm and the firm's impact on society. Actual cases influencing the firm or industry objectives, and the philosophy of private enterprise will be covered. (Offered concurrently with BUS 451; students cannot earn credit for both courses.)

BUS 575 Small Business Management (3)

The characteristics of management functions unique to small business firm are explored in the course. Small Business Management offers students an opportunity to work on "live" problems being experienced by small businesses. Students enrolled in the course will observe and analyze assigned cases in the field, define problem areas, and recommend remedial action. Prerequisite: permission of instructor.

BUS 651 Business Ecology (3)

Business organizations operate within the context of an environment. Various aspects of that environment (economic, social, political, geographical, physical, ethical issues, etc.) impact upon the decisions made in those environments. Appropriate issues will be addressed and will likely vary each semester based upon current events.

ECO 510 Microeconomics (3)

A study of how the market system works. Topics include consumer preference and choice theory; demand; market equilibrium; production technological change; cost; the behavior of the firm; perfect competition; monopoly and the other forms of imperfect competition; pricing and non-price competition under oligopoly; factor markets; the theory of rent; market imperfections, with special emphasis on externality; economics of information; special topics.

FIN 502 Corporation Finance (3)

A study of theoretical concepts of corporate finance and the application of these concepts to real world case studies. Covers the basics of financial activities of the firm including financial planning, the structure of financing, and asset selection. Knowledge of principles of finance and accounting.

FIN 541 Financial Institutions and Markets (3)

Provides the conceptual framework to analyze and understand the public securities markets, and the operation and interaction of financial institutions within. Students learn about commercial versus investment banks, insurance companies and the non-banks, interest rates and their impact on fixed income investments and mortgage markets, risk management and duration gap management as undertaken by commercial banks and insurance companies, and the role of the Federal Reserve in money supply and the overall health of the financial markets.

FIN 633 Portfolio Management (3)

Introduction modern investment theory and the dynamics, framework, and philosophy of portfolio management. Topics include: (1) the theory of investor behavior, (2) portfolio analysis, (3) capital market theory, (4) valuation theory, (5) managing equity portfolios, (6) managing fixed income portfolios, and (7) the use of options and futures.

FIN 685 Financial Environments and Strategies (3)

An integrating experience to apply the varied skills and knowledge accumulated throughout the required course work to make the student competitive in the Finance profession. Special emphasis will be upon mastery of body of financial knowledge including significant current developments on the economic and financial scene. Students acquire greater understanding of global capital markets, demonstrate the ability to use the tools and techniques of investment analysis in the valuation of financial assets, and provide a synthesis of all previous related course work. Prerequisites: FIN 525, FIN 632, FIN 541, FIN 633

HRM 622 Employee Benefits Management (3)

Concepts of group life, health, retirement, and emerging employer sponsored benefits plans. Emphasis is on plan design and management with special attention to cost funding, regulation and tax considerations. The impact of government programs such as Social Security on individual insurance and employee benefit programs and potential impact of proposals such as national health insurance. Prerequisite HRM 518 or HRM 620.

HRM 640 International Human Resource Management (3) - Also Available Online

The importance of including the global perspective in current strategic thinking and planning has become readily recognized. Human resource managers must also support this strategic direction by developing personnel programs which are specifically geared to exigencies of the international economy. The course reviews the basic functional areas of human resource management with special attention to considerations which must be taken to exist and thrive in an international business environment. Prerequisite HRM 518.

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. Prerequisite HRM 518.

HRM 685 Human Resource Management Environments & Strategies (3)

An integrating experience to apply basic business management skills to comprehensive problems and cases dealing with human resource interaction with current business environments and strategy. Students must demonstrate knowledge of both quantitative and behavioral techniques to achieve quality management of the human resource. Prerequisite: Permission of the dean.

HRM 699 Thesis in Human Resource Management (3)

The thesis in human resource management requires a student to combine knowledge and expertise developed in the specialized core curriculum along with the common core courses of the Master of Science in Business Management program. Emphasis is on development of a paper which is based on convincing logic, supported by primary and/or secondary research and integrated with the body of knowledge which comprise the program of study. A key aspect of the thesis is the ability to integrate fundamentals of the degree program in an independent effort consistent with study at the graduate level. Prerequisite: Completion of HRM 690. (Note: Students intending to take the thesis option should refer to the section on "Research Experience Requirement.")

HSM 501 Health Policy (3)
- Also Available Online

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. Prerequisites: HSM 301 and permission of program advisor.

HSM 502 Health Finance (3)
- Also Available Online

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: FIN 302.

HSM 509 Legal Aspects of Health Care (3)
- Also Available Online

The course is designed to explore legal issues that affect the operation of health care facilities. Covered topics include malpractice, licensure, staff privileges, federal/state regulatory mechanisms, hospital 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 510 Managed Care (3)
- Also Available Online

Managing patient care has become a significant factor in health care delivery, as efforts to provide only appropriate care and contain costs gain momentum. The most notable type of organization involved in managed care is the health maintenance organization, although managed care principles are employed in other sectors of the health care system. This course will examine managed care from several perspectives, including its advantages and disadvantages. Prerequisites: HSM 301 and permission of program advisor.

HSM 522 Nursing Home Administration (3)
- Also Available Online

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

HSM 523 Long-Term Care Policy and Regulation (3)
- Also Available Online

Long-term care services are expanding commensurate with the growth of the elderly population. As the service sector increases, the regulatory environment becomes more complex. This course will familiarize the student with the development of long-term care policy and corresponding applicable state/federal regulations on providers. There will be particular emphasis on nursing facilities and other service providers and consumers.

HSM 530 Ambulatory Care Administration (3)
- Also Available Online

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

HSM 531 Financial Management in Ambulatory Care Organizations (3) - Also Available Online

Designed for the health care administrator who will work primarily in ambulatory facilities. The course will focus on financial reimbursement issues which the administrator must understand in providing strategic financial and operational direction to his/her facility.

HSM 600 Quantitative Methods for Health Services Management (3) - Also Available Online

Technical decision making in the health field requires the comprehension of disparate data. The student will analyze health status data, utilization statistics and financial data using basic statistical methods including correlation, regression, analysis of variance and nonparametric tests. Statistics will be applied to operational and problems of concern to management, such as treatment outcomes, health status instruments, planning and financial management as well as techniques of systematic analysis and cost effectiveness analysis. An introduction to the use of computer packages for health data analysis will include file analysis, data manipulation and basic statistical analysis.

HSM 690 Seminar in Health Services Management (3)
- Also Available Online

As the capstone event of the MS in Business Management-Health Services Management, this course packs years of health administrative experience into one semester of computer simulated "real life". Teams of students define, analyze and solve significant senior management-level operational problems in fictitious New York State health facilities. Students compete to see which facility will be the most successful. They expand or limit services, merge with other facilities, apply for loans, negotiate labor disputes and track their overall performance. Prerequisite: Permission of Instructor, completion of all core courses.

HSM 692 Internship (Variable credit 3 - 12)

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. Prerequisite: Permission of Program Director.

HSM 699 Thesis in Health Services Management (3)

The thesis option in health services management requires a student to combine knowledge and expertise developed in the specialized core curriculum along with the common core courses of the Master of Science in Business Management program. Emphasis is on the development of a paper which addresses a convincing research question in the health care field, and is supported with primary and/or secondary data. Topic areas include improving the delivery of health care services to a subgroup of the population, or advancing health service delivery in an organization or a geographic region. Prerequisite: Completion of HSM 690.

MGS 615 Operations Research (3)

Use of systematic quantitative analysis as an aid in the formulation and solution of complex management decisions. Alternative solutions to business problems are generated and examined with the use of computer-based technology and sophisticated mathematical techniques. Topics include: (1) decision making using expected monetary value, (2) linear programming (including simplex, computer-generated solutions, and sensitivity analysis), (3) simulation model development and usage, (4) Markov analysis, (5) queuing models, (6) the transportation model (including the Greedy algorithm, VAM, Northwest Corner Method, Stepping Stone Method and MODI), (7) the assignment problem using the Hungarian method, and (8) and introduction to network models. Prerequisite Management Science 511.

MGS 660 Production Systems & Control (3)

Problems and techniques related to the production of manufactured goods. Topic coverage includes (1) inventory models (both deterministic and probabilistic), (2) linear programming using "long hand" simplex and computer-generated solutions, (3) network models (including project scheduling, maximal flow in a capacitated network, minimal spanning tree problem, and the shortest route problem), (4) dynamic programming (both deterministic and probabilistic), (5) queuing models (including single and multiple server models), and (6) the elements of quality control (both by variables and attributes). Prerequisites MGS 615, ACC 520 and FIN 625.

MGT 505 Management and Administration Theory (3)

This course proposes to study and analyze the basic science, theory and principles of administrative management and how they relate to the practice of management. Consideration is given to the essential functions of planning, organizing, coordinating, commanding and controlling in the practice of management. The course includes the managerial challenges in today's ever-changing environment ranging from classical to behavioral school of thought.

MGT 507 Organization Development (3)

A study of transforming an organizational design into reality using theory and experience in behavioral science, the following concepts will be considered social: systems, group dynamics, planned change, the role of consultants and change agents, human relations, training and client systems. Prerequisite MGT 307 or equivalent. (Offered concurrently with MGT 407; student cannot earn credit for both coures.)

MGT 540 Organizational Communication (3)

Both theory and practice are emphasized in this advanced communication course. Communication and organizational theory are studied along with analytical techniques and their application to organizational problems. Skills in interviewing, small group communication, and in written and oral reports will be practiced.

MGT 560 Total Quality Management (3)

Enables either actual or aspiring supervisors and mid-level managers to assume leading roles in their organizations = Total Quality Management (TQM) efforts. Emphasis is more upon implementation than upon conceptualization, though the latter is also expressed. Maintains a balance between TQM methodology and strategies for organizational change.

MGT 585 Current Aspects of Management in High Technology Environments (3)

While principles of management have demonstrably withstood the test of time, to remain viable they must also respond to the demands of changing environments. As the speed with which technology changes becomes greater, management faces dramatically new challenges. Key areas of management and production will be examined and the impact of rapid technological advances on them will be analyzed. Appropriate responses will be developed and discussed. Intended for graduate students in management or technology oriented programs who have already completed some graduate work in their primary discipline-or who have already completed a bachelor's degree in management or technology related field.

MKT 520 International Marketing and Trade (3)

Offers students an integrated treatment of theories and policies in international marketing and trade. A knowledge and understanding of these interdependent subjects is beneficial for all those who plan to pursue a career in an international business environment. Topics in this course include theories that seek to explain the causal factors that determine the composition of international marketing and trade activities, policies that encompass the role of governments in their efforts to regulate, restrict, promote, or influence the conduct of international trade and investment, and functions of multinational enterprises that undertake production in many countries in pursuit of a global business strategy.

STA 500 Statistical Methods

Descriptive statistics, probability and probability distributions, decision theory, independence, sampling distributions, estimation, hypothesis testing, analysis of variance, regression and correlation, time series, index numbers.

Course Descriptions for One-Credit Hour Modules:

One of the several ways students can satisfy the undergraduate prerequisite course requirements is to complete compressed introductory modules offered at the graduate level. The following are currently available for that purpose. These courses each carry one graduate credit hour, carry a pass/fail grade, and cannot be used toward the 33 hour program requirement.

ACC 501 Accounting Fundamentals

The course will focus on the study, interpretation, and application of Generally Accepted Accounting Principles (GAAP). Topics include transaction recording, as well as the preparation and analysis of financial statements through the use of information technology. There are no prerequisite courses required. However, the instructor assumes that all enrolled students have a solid grasp of graduate school level math and English. Credit will not count towards degree.

BLW 501 Fundamentals of Business Law

Fundamental principles of business law beginning with the examination of contracts under common law and evolving into doctrine of sales under the Uniform Commercial Code (UCC). It will provide a practical emphasis on the legal background needed for entry into the business world. The class is designed for those students who previously have not been enrolled in an undergraduate business law course. Credit will not count towards degree.

BUS 501 Business Economics

An examination of the role of the price system in the economy, the factors underlying demand and supply and the behavior of firms under various market structures. In other words, we are going to take an in-depth look at how prices are determined in an economy similar to that in the United States, describe how the model of supply and demand works, and explain how to use it. Credit will not count towards degree.

FIN 501 Finance Fundamentals

An overview of the basic concepts in corporation finance. Students will gain a quick but comprehensive understanding of the problems and decisions faced by financial managers. Topics include firm/stock/bond valuation, risk and return, capital budgeting, capital structure and financing, dividend policy, corporate agency problems, financial restructuring, and the market for corporate control (mergers, acquisitions, takeovers). Credit will not count towards degree.

MGS 501 Fundamentals of Business Statistical Applications

Introduce scientific approaches to management decision making based on statistical analysis. The objective of this course is to acquaint graduate students, especially those without any academic training in statistics during their undergraduate studies, with statistical techniques in management planning and problem solving. Credit will not count towards degree.

MGT 501 Management Fundamentals

Provides a base from which students (with no previous study in management) can move forward and continue with graduate study. It is specifically intended for those who will continue to pursue the Master of Science in Business Management (or similar) degree. Introduces and reviews the major functional areas of management. Important current workplace topics in management are also introduced; such as 1) internationalization, 2) cultural diversity, and 3) technology.

MIS 501 Management Information Systems Fundamentals

In this course students will learn to manage and use information 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, management science, expert systems, and decision support systems. Credit will not count towards degree.

MKT 501 Marketing Fundamentals

This course is designed as an introductory graduate course in marketing management. It introduces students to the developments of marketing management. It introduces students to the developments of marketing theories and practices. Topics included in this one-credit course efficiently guide students through scientific approaches and managerial structures in marketing management. Therefore, students, especially those without any previous academic training in the marketing area, are prepared to take other graduate courses in marketing by successfully completing this course. Credit will not count towards degree.

Research Experience Requirement

Each of the five areas of concentration require a significant research experience and an integrative activity which provides the student the opportunity to demonstrate an appropriate level of knowledge in both the core and specialized areas of study.

All students must complete, in addition to a research seminar, a "capstone" course (e.g. BUS 685). If students intend to complete their capstone experience through completion of a thesis (in lieu of an integrative capstone course) they must submit a petition to do this. It is possible for a thesis to include aspects which would include the integrative aspects of a capstone course. The petition will describe how the thesis will do this. For these students the research seminar will provide the basis for completing a literature search, a background discussion and a thesis proposal. Subsequently the student will register for the thesis and complete the remaining thesis project. Completion of thesis requirements will be documented and reported as described in the Graduate Studies Policies and Procedures Manual.

Students may also pursue the thesis as an elective. In this case the capstone course would also be taken to satisfy the integrative capstone experience.

Faculty

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

Lisa J. Calongne, Assistant Professor; Ph.D., Virginia Polytechnic Institute and State University. Human Resource Management, adult learning and needs assessment.

John E. Cook, Professor; Ph.D., Syracuse University. Management.

J. Allen Hall, Associate Professor; Ph.D., University of Iowa. Communications for business.

Richard J. Havranek, Associate Professor; Ph.D., Syracuse University. Strategy/Policy, Human Resource Management, computerization of personnel and other management information.

Peter Karl, Associate Professor; J.D., Albany Law School; M.B.A., Rensselaer Polytechnic Institute, CPA State of New York. A nationally recognized speaker on federal taxation.

Sarah B. Laditka, Associate Professor; Ph.D., Syracuse University. Health Services Management, quantitative methods, health policy and strategic management in the health services industry.

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.

Graham K. Lemke, Assistant Professor; Ph.D., Binghamton University. Finance, unionization and firm risk, risk management, derivatives, and game theory.

James 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.

Edward Petronio, Associate Professor; Ph.D., Syracuse University. Business policy and organizational behavior.

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

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

Thomas Tribunella, Associate Professor, Ph.D., University at Albany. Accounting, cost and managerial, accounting information systems.

Henry W. Vandenburgh, Assistant Professor; Ph.D., University of Texas at Austin. Health Services Management, medical sociology, organizational and psychiatric issues in for profit and not-for-profit hospitals.

Sanjay B. Varshney, Associate Professor and Dean; Ph.D., Louisiana State University. Chartered Financial Analyst with the New York Society of Security Analysts. Finance, market micro structure trading analysis, corporate governance, security valuation and issuance.

Robert S. Yeh, Assistant Professor; Ph.D., Purdue University. Marketing, quantitative marketing models, statistical applications and mathematical modeling in product designing and product improvement.

Master of Science in Computer and Information Science

Dean'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 nine 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 the Internet and MBone technology. This technology was used 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 complete 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.

Rosemary J. Mullick, Ph.D.
Interim Dean, School of Information Systems and Engineering Technology

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 CSC 332)
CSC 503	Data Structures (Also listed as CSC 340)
CSC 504	Computational Methods in Linear Algebra (Also listed as CSC 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) or a thesis (CSC 599).

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 the institute. Bridge courses and transferred courses count as General Electives.

2. Students must select one of two options. Option I consists of 9 three-credit courses plus 6 credits of Thesis (CSC 599). Option II consists of 10 three-credit courses plus 3 credits of Project. The thesis involves a significant investment of time and effort. Theses are defended publicly, before a committee of three faculty members including the thesis advisor. Projects will include a public presentation of the results. Presentation time and location must be announced at least one week in advance.

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 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 Vision and Image Analysis (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.

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.

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, polynominal interpolations including splines, curve fitting, integration, and an introduction to differential equations. Emphasis will be on non-formal settings with a view toward applications.

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 University. Combinatorics, coding theory and cryptography.

Roger Cavallo, Professor; Ph.D., State University of New York at Binghamton. Systems theory, systems methodology, conceptual modeling, and probabilistic database theory.

Heather Dussault, Assistant Professor, Ph.D., Rensselaer Polytechnic Institute. Computer Architecture, Graphics

Raymond G. Jesaitis, Professor; Ph.D., Cornell University. Distributed systems, UNIX operating system, numerical methods.

Rosemary Mullick, Associate Professor; Ph.D., Wayne State University. Operating systems, artificial intelligence, computer networks, parallels between human cognition and artificial intelligence and human engineering.

Jorge Novillo, Associate Professor. Ph.D. Lehigh University. Combinatorics, data security, and artificial intelligence.

Michael Pittarelli, Associate Professor; Ph.D., State University of New York at Binghamton. Systems science, artificial intelligence, statistics, and database theory.

Ronald Sarner, Professor; Ph.D., State University of New York at Binghamton. Data modeling, statistical inference in the social sciences, and instructional computing.

Saumendra Sengupta, Associate Professor; Ph.D., University of Waterloo. Systems modeling, computer networks and distributed systems, pattern recognition.

Scott Spetka, Associate Professor; Ph.D., University of California, Los Angeles. Distributed database systems and distributed query processing.

Naseem Ishaq, Adjunct Associate Professor; Ph.D., London University. Computer vision and computer-aided design.

Academic Computing Facilities

For the second consecutive year SUNY Institute of Technology at Utica/Rome has been named to the *Yahoo Internet Life* list of the Top 100 wired colleges in the nation. In 2000, Utica/Rome placed 56th nationally in the highly competitive university category, along with RIT, RPI, SUNY-Buffalo, New York University and placing ahead of Syracuse University, SUNY-Geneseo, and SUNY-Binghamton.

The use of computers is widely integrated into almost all facets of life at the Institute of Technology. Computing is used for instruction, research, communication, as well as the registration and business functions of the college. Students use a web browser to register for classes (virtually eliminating registration lines), to view course grades and to print unofficial transcripts. E-mail accounts are automatically established for all students at the time of initial registration. Students should expect that most of their classes will involve some use of computing, and that e-mail will be an important part of their out-of-class communication with instructors as well as with campus administrative offices.

Academic programs at the Institute are supported by over 250 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 bed. Off-campus access is maintained through the Internet and through a small number of dial-up telephone lines. Several labs in Kunsela Hall provide late night and weekend computer access.

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. At present there are no time quotas for student connections to the time-shared systems. All enrolled students are automatically assigned accounts on time-shared computing systems and are granted initial disk storage quotas that may be increased upon approval of the Director of Information Services. The Institute's policies with respect to computer access are published in the Computer User's Guide, available from Information Services and posted on the college's web site.

The Institute has a fiber-optic backbone between buildings and a copper wiring plant within buildings. The backbone runs at a speed of 155 mb/sec (ATM); segments run at either 10 mb/sec or 100 mb/sec.

Internet Access

The Institute of Technology holds the domain name **sunyit.edu**. In 1996 the Institute's Internet connection was upgraded from a single T-1 (1.5 mb/sec) to a dual T-1 (3 mb/sec). The connection was again doubled in 1999 to a fractional T-3 (6 mb/sec) service, thus maintaining the Institute'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. Several course sections are taught over the Internet in lieu of some course meetings and several other sections are offered exclusively over the Internet through the SUNY Learning Network. An extensive WWW site is maintained (**www.sunyit.edu**). The Institute's Library catalog is also Internet-accessible (**unicorn.sunyit.edu**), as is the college's BANNER WEB registration system. Real-time registration activities such as course add/drop, schedule inquiry, grade inquiry, unofficial transcript production, and billing inquiry are all supported from WWW-enabled computers, on or off-campus.

A discount service plan is presently in place with a local Internet Service Provider to assist off-campus students in obtaining inexpensive Internet access; several providers have free, advertising-supported Internet access plans with local access numbers.

College-Wide Time Shared Systems

The Institute maintains a number of centrally administered time-shared systems that have a common, integrated NIS file service permitting transparent access to user-owned files from any of the constituent host machines. While upgrades are anticipated during the lifetime of this catalog, the expected configuration as of Fall 2000 is as follows:

Ultra-Sparc II Systems – seven systems each with 512 megabytes of RAM, SUN UltraSparc II 300 mhz processors, shared disk arrays, DLT tape backup and CD-ROM running the SUN Microsystems *Solaris 7* operating system. These systems support e-mail, news, web services, printer queues, and provide access to the SAS Inc. statistical analysis system and to the Oracle database management system.

SUN ULTRA ENTERPRISE 3000 – known as *Persephone*, this system's main function is to host large library databases for a consortium consisting of Utica/Rome together with the University Colleges of Technology (Alfred, Canton, Cobleskill, Delhi, and Morrisville). This system has dual UltraSPARC processors and a large disk array, and runs the *Solaris* operating system.

Personal Computing Labs

The Institute has over twenty computer laboratories on the campus; some are dedicated to a particular curriculum or purpose, others are general purpose. PC labs consist primarily of Pentium II and Pentium III class computers (some older machines are employed in specialized settings, such as controlling a machine, where that use is appropriate) that are interconnected through servers running the Novell Netware, Microsoft Windows/NT, or UNIX operating systems. The Institute has adopted a single integrated office applications suite as its standard package. The adoption is typically for a two-year period (the next scheduled review is in Spring 2002). Microsoft Office2000, consisting of Word, Excel, PowerPoint, and Access is the current standard. In addition, the Institute currently holds a site license for all Inprise (Borland) software products including the C++ and Pascal language compilers. SPSS (Statistical Package for the Social Sciences) is widely used throughout the campus. Approximately 600 computer-based training (CBT) modules, covering numerous topics in programming, networking, and internet specialties are available. 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. Current (Fall 2000) lab environments include:

Mary Planow Public Lab (Kunsela Hall C-003) – consisting of over twenty-five PCs (currently AMD K6/300 processors) with 17" monitors, one Imac, a high speed monochrome laser printer, a color laser printer, and a scanning station. Available software includes Microsoft Office2000, the Inprise language products, Lahey FORTRAN, SPSS, the CBT training modules and numerous specialized applications. This lab is open for extended night and weekend hours.

DogNET and DogNET Multimedia Lounge (Kunsela Hall C-012, C-107, and C-122) – provides access to UNIX workstations (that are named after dogs, of course). Twenty-one workstations (currently Pentium II/300 with 17" monitors) are in C-012 running the FreeBSD operating system, and providing access to over 800 programs for Internet access, multimedia applications, language compilers, etc. Many of these systems are equipped with sound cards for applications like mbone (Internet audio/video broadcast/conference system). The lab is supported by three file servers. In addition to providing disk storage (without quota) to computer science and information systems majors, the servers support the computer science departmental WWW server (**www.cs.sunyit.edu**) and news service. The public DogNET lab is one of four labs managed by computer science students under the supervision of computer science faculty. The DogNET Multimedia Lounge (C-122) contains Pentium-based computers and SUN workstations equipped with video cameras for conferencing and other multimedia applications. One of the SUN workstations is also an Oracle server. The Multimedia Lounge accommodates small groups of students working collaboratively on projects. Another SUN DogNET lab - currently SUN Ultra5 workstations (C-107) - is used for computer science courses in operating systems, networking, and system administration. The ground floor DogNET lab (C-012) is open extended night and weekend hours.

Solaris Lab (Kunsela C-013) - twenty workstations (currently SUN Ultra 5 workstations) with 17" monitors running the SUN *Solaris* operating system and supported by seven SUN Ultra Sparc 10 servers providing access to services including mail, news, multimedia, and internet access. Commercial productivity packages provided include StarOffice, a full cross-platform office suite and the Oracle database package. This lab also has many open source and GNU packages installed such as Gimp (a graphics manipulation tool), PHP for the web, and language compilers. Both text mode and graphical access to the UNIX environment is provided. This lab is open for extended night and weekend hours.

Advanced Environments Lab (Kunsela C-014 and C-228) – twenty-seven workstations (currently Pentium III/500) and three servers interconnected with 100TX Ethernet technology. All systems run the latest version of Windows Workstation and Server. This lab supports instruction and experimentation in object-oriented programming, client-server and distributed computing (networking, system administration and interoperability with other platforms), collaborative computing (web development, videoconferencing, multimedia). Programming environments supported include SUN Java 2, Visual Studio (C++, Java, InterDev, Visual Basic), FORTRAN90, Prolog, LISP, ML-ObjectCaml. Application software includes Microsoft Office2000, FrontPage, Publisher, Project, Simulink. Access to assorted applications provided on a more limited basis in C-228 – Mathematica, Matlab, GPSS, IMSL libraries, Corel Draw, TeX, Macromedia Director, NetObjects Fusion, Cold Fusion, Adobe Photoshop, FrameMaker, MS BackOffice (SQL, SMS), Oracle, Exceed. This lab is managed by computer science faculty and students and is open for extended night and weekend hours.

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.

Learning Center (Donovan G-155) – approximately fifteen computers (currently Pentium III/400) with 17" monitors and associated peripherals. Most of the applications available in other labs are also accessible here. The Learning Center provides assistance in the use of the various software packages.

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, Autobook, AutoCad, Hyrdrain, Microstation, and Microsoft Office2000. This lab supports courses in Civil Engineering Technology and Mechanical Engineering Technology.

Macintosh Lab (Donovan G-238) – ten Macintosh PowerPC computers, an associated file server, and peripherals. This lab is used primarily in support of courses in the Department of Psychology. Currently installed software includes Eyelines, MacLaboratory, and Hypercard.

Technical Writing Lab (Donovan 1146) – twenty-two computers (currently Pentium II/400) with 17" monitors and associated laser printers used extensively in support of courses in report and technical writing. Currently installed software includes Microsoft Office2000, internet tools (telnet, ftp, Netscape Communicator), Grammatik, as well as several legacy word processors.

Donovan Hall Public Lab (Donovan 1149) – thirteen computers (currently Pentium-II and Pentium III based) with 17" monitors and associated peripherals. Currently installed software includes Abdominal Pain, Borland C++, ChestPain, EKG, EKG2, internet tools, HEART Hypertension Management, Iliad, MDChallenge, Nursing Research CAI, SPSS/PC+, statistics tutorials, and Microsoft Office2000.

School of Management Lab (Donovan 1157) – approximately thirty computers (currently Pentium III/450) with 17" monitors and associated peripherals. This lab is often used for hands-on instruction in courses in the School of Management and the School of Nursing. Currently installed software includes Microsoft Office2000, Abdominal Pain, Borland C++, ChestPain, EKG, EKG2, internet tools, HEART Hypertension Management, Iliad, MDChallenge, Nursing Research CAI, SPSS/PC+, and statistics tutorials.

Advanced CAD Lab (Donovan 1159) – ten computers (currently Pentium III/450), printers and plotters used in support of courses in Civil Engineering Technology and Industrial Engineering Technology. Currently installed software includes Algor Supersap, Autobook, AutoCad, Hydrain, Microstation, SmartCam, TKSolver, and Microsoft Office2000.

Physics Lab (Donovan 2107) – features ten computers (currently Pentium III/400) with 17" monitors. This lab is primarily used for physics lab courses and use software for video analysis and scientific graphing.

Advanced Writing Lab (Donovan 2147) – approximately twenty-four computers (currently Pentium III/450) with 17" monitors, scanner, printer, and associated peripherals. This lab also has several small-group work areas with computers in each area. Extensively used to support courses in Professional and Technical Communications. Currently installed software includes Microsoft Office2000, internet tools, HyperWriter, Internet Assistant, PaintShop Pro, Photoshop, Pagemaker, SPSS/PC+, Storyboard Live, and several legacy word processors.

Master of Science in Health Services Administration

Dean's Message

The Master of Science in Health Services Administration is the newest graduate degree offered by the School of Management. This 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.

The Master of Science in Health Services Administration degree is one of three graduate business degrees offered by the School of Management. The other two are the Master of Science in Business Management and the Master of Science in Accountancy. These programs are described elsewhere in this catalog.

Sanjay Varshney, Ph.D., CFA
Dean, School of Management

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 the Institute of Technology, 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 at the Institute must be filed, along with all supporting documents, with the college's Admissions Office. It is suggested that fall semester applications be submitted by June 15; applications for spring semester should be filed by November 15.

Admission to graduate study involves the following:

1. Completed Application for Graduate Admission (available from the Institute of Technology's Admissions Office) and payment of $50.00 application processing fee (payable to the SUNY Institute of Technology at Utica/Rome) must be submitted to the Admissions Office.
2. Graduates of colleges other than the Institute of Technology at Utica/Rome must request that official transcripts of all undergraduate and graduate work be sent to the Admissions Office (Institute of Technology graduates are exempt from this requirement).

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 guidelines as an admission criterion as follows:
  A total of 950 points based on 200 x undergraduate GPA + GMAT score, or A total of 1,000 points based on 200 x upper division GPA + GMAT score.

The College 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 been out of school for an extended period of time and the real meaning of his or her undergraduate grades is questionable.
2. The applicant has demonstrated, through exceptional performance in a management career, that his or her undergraduate grades were not indicative of his or her ability.
3. Conditional admission may be allowed for promising candidates who do not perform well on the GMAT or GRE.
4. When candidates have strong GPAs they may be conditionally admitted with a requirement to complete the GMAT or GRE test at the earliest possible date. This requirement may not be waived and under no circumstances can students complete their degree program without the submission of GMAT or GRE scores.

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	*Course Requirements*
Health Systems *(3 hours required)*	**HSM 500**-Health Care Systems (HSM 300 or equivalent and HSM 301 or equivalent)
Policy *(3 hours required)*	**HSM 501**-Health Policy
Economics *(3 hours required)*	**HSM 505**-Health Economics
Law *(3 hours required)*	**HSM 509**-Legal Issues in Health Care
Management *(3 hours required)*	**HSM 507**-Organizational Management for HCO
Accounting & Finance *(6 hours required)*	**HSM 502**-Health Care Finance **HSM 535**-Financial Management of HCO (HSM 435)
Marketing & Planning *(3 hours required)*	**HSM 525**-Health Care Marketing and Strategic Planning (HSM 425)
Quantitative Methods *(3 hours required)*	**HSM 600**-Quantitative Methods for HSA
Research Methods *(3 hours required)*	**BUS 690**-Research Seminar **NUR 560**-Nursing Research Methods
Integrative Capstone *(3 hours required)*	**HSM 685**-HSA Environments and Strategies

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

MSHSA Electives

Electives	**Course Selection**
Health Services Administration	*(6 hours required)* **HSM 510**-Managed Care **HSM 522**-Nursing Home Administration **HSM 523**-Long Term Care Policy and Regulation **HSM 530**-Ambulatory Care Administration **HSM 531**-Financial Management for Ambulatory Care Org **HSM 699**-Thesis in Health Services Administration
Other Graduate Electives	**ACC 571**-Advanced Management Accounting **ACC 630**-Fund Accounting **CSC 507**-Data Analysis **NUR 624**-Grant Proposal Seminar

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. Equivalents are undergraduate courses that will satisfy a Core Course Requirement.
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)
The course is designed to explore 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 and 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 provided guidance and support to these efforts. This course will address many of the planning and marketing variables that should be addressed, as well as how to coordinate these activities. Prerequisite: MKT 501 or its equivalent.

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 600 Quantitative Methods for Health Services Management (3)
Technical decision making in the health field requires the comprehension of disparate data. The student will analyze health status data, utilization statistics and financial data using basic statistical methods including correlation, regression, analysis of variance and nonparametric tests. Statistics will be applied to operational problems of concern to management, such as treatment outcomes, health status instruments, planning and financial management as well as techniques of systematic analysis and cost effectiveness analysis. An introduction to the use of computer packages for health data analysis will include file analysis, data manipulation, and basic statistical analysis. Prerequisite: STA 300 or its equivalent.

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, or permission of instructor. (Note: Students must obtain a grade of B or better in this course to be eligible to graduate.)

Research Methods Course

1 of the following 2 courses will satisfy the requirement:

BUS 690 Research Seminar (3)
Each student will design a research project appropriate to the curriculum. The project should, when possible, provide utility for the current employment or anticipated employment of the student. The student will complete the project and submit a report using correct format.

NUR 560 Nursing Research Methods (3)
This course examines the research process and prepares the student to write a research proposal. The methods of scientific inquiry, problem identification, use of underlying theories and conceptual models, research design, measurement, data collection and analysis, and ethical considerations will be discussed. Critical analysis of existing research studies and student reports will be used to promote development of research skills. The significance of research findings and the need for continuing research activities will be explored as they relate to nursing.

Health Services Administration Electives

HSM 510 Managed Care (3)
Managing patient care has become a significant factor in health care delivery, as efforts to provide only appropriate care and contain costs gain momentum. The most notable organization involved in managed care is the health maintenance organization, although managed care principles are employed in other sectors of the health care system. This course will examine managed care from several perspectives, including its advantages and disadvantages. Prerequisite: HSM 301 or permission of instructor.

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)
This course is designed to assist the health care executive to 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 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 and 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.

CSC 507 Data Analysis (3)
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.

NUR 624 Grant Proposal Seminar (3)
The purpose of this seminar is for students to write a proposal under the guidance of graduate faculty. Students will be expected to identify an appropriate funding source and prepare a proposal for submission to a funding agency. Prerequisite: NUR 560.

Faculty

Sarah B. Laditka, Associate Professor; Ph.D., Syracuse University. Quantitative methods, financial management, health policy, strategic management.

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.

Henry W. Vandenburgh, Assistant Professor; Ph.D., University of Texas at Austin. Medical sociology, organizational and psychiatric issues in for profit and not-for-profit hospitals.

Master of Science in Information Design and Technology

Dean's Message

The Master of Science in Information Design and Technology is designed to meet the needs of professionals who design information using various media. This degree would be of interest to those who support the design, development, and administration of communication technology initiatives as well as those who use information technology. The part-time program balances theory and practice, with the graduate gaining a firm understanding of information design and the application of technology in a variety of settings. Students learn to use new technologies, communicate information to various audiences, evaluate technology, and use it in educational and training settings.

The program will engage students in critical assessments of various media and their applicability for a given purpose. Students will study how to select an appropriate medium for a particular message to a specific audience. They will create original materials using a variety of tools for various media, including web pages, multimedia, newsletters, and other desktop publishing documents, scripts, articles, and storyboards. Students will be able to focus on one or more of the following areas:

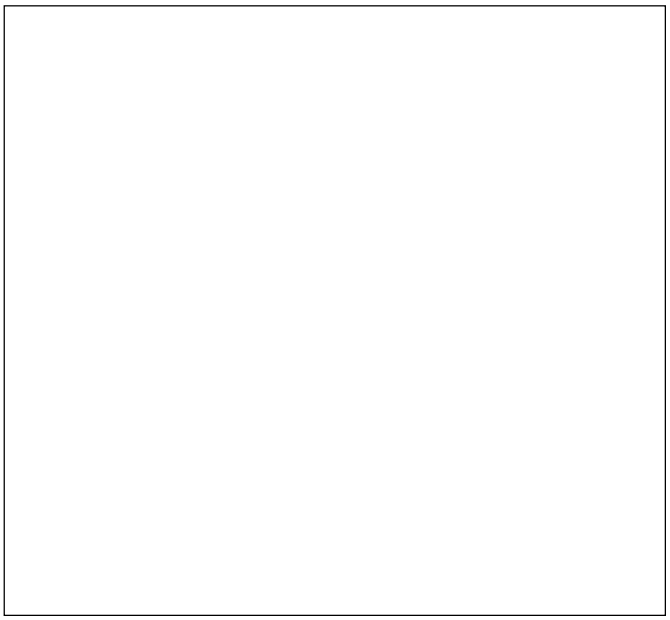
- Instructional Media
- Educational Technology
- Web Development
- Graphic Design
- Professional Communication

Graduates will be prepared for advancement in professional careers that include secondary school and community college teaching, technical communication, public relations, marketing, instructional design and technology, government service, publications, corporate communication and training for profit and non-profit organizations, healthcare management and other industries.

Daniel J. Murphy, Ph.D.
Dean, School of Arts and Sciences

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 15 G4 dual processor machines with DVD video inputs. In addition to having all the capabilities of the PC lab, it will also support 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, for example:
   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 M.S. in Information Design and Technology consists of 33 credits, including four core courses, electives, and a thesis or project, as follows:

1. CORE COURSES
12 credit hours

1. IDT 501 Information Design Theory
2. IDT 503 Human Factors in Information Design

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
TEL 598	Graduate Seminar in Research Methods
SOC 532	Methods of Research: Survey and Experimental Design
SOC 533	Methods of Research: Statistical Analysis
ANT 531	Ethnographic Data Collection and Analysis

2. ELECTIVES
12 credit hours

Electives may be used to satisfy course prerequisites.

IDT 531	Technical Editing
IDT 534	Visual Communication
IDT 541	Instructional Design
IDT 545	Change Theory and Information Technology
IDT 551	Evaluating Technology
IDT 553	Principles of Design for Desktop and Electronic Publishing
IDT 554	Advanced Web Development and Design
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

Working with an adviser, students will decide whether to 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.

TEL 598 Graduate Seminar in Research Methods (3)
Reviews the major considerations and tasks involved in designing and conducting a thesis or research project. The goal is for students who successfully complete the course to be able to produce and defend the methodology of their proposed research, be ready to carry out the various tasks involved in doing the research, and to find the resources to guide them through their research. The theme throughout the course will be on comparing and/or combining qualitative and quantitative approaches to research.

ANT 531 Methods of Research: Ethnographic Data Collection and Analysis (3)
Examines the epistemological presumptions of field work/participant observation in the anthropological tradition. Compares this to Positivist and Postmodernist approaches. Trains students to use ethnographic methods, as well as other qualitative methods that emerge from this perspective (like 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 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)
Designed for practitioners and decision makers, this course will explore the social, organizational and theoretical aspects of the change process, with a focus on information technology and the diffusion of information. Students will learn to identify stakeholders, clients, gatekeepers, early and late

adopters, and will make use of appropriate resources and strategies to plan for and implement change.

IDT 551 Evaluating Technology (3)
Addresses issues that information technology professionals face in selecting technology (both hardware and software) to meet desired goals. Topics include technology classification, evaluation criteria and software and hardware considerations, including the Internet and intranets. Will examine how information is shaped and modified by the technologies that are selected.

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 modern desktop publishing techniques to design and produce printed material, and they use Internet publishing tools to design and produce material for the World Wide Web.

IDT 554 Advanced Web Development and Design (3)
Considers advanced aspects of web system design and development. Issues covered include server-site application development, client-side application development, and web graphics. The user-machine interaction will be considered with a focus on user interface design principles, guidelines and standards. The advantages and disadvantages of various graphical user interfaces and object-oriented user interfaces will be discussed.

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 575 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.

IDT 585 Seminar in Emerging Technologies (3)
Takes an in-depth look at emerging technologies including but not limited to multimedia, distance learning, networking and the Internet. Topics will vary by semester. May be repeated with permission of instructor.

IDT 590 Topics in Information Design and Technology (3)
An in-depth conceptual and empirical examination of particular topics in information design and technology, focusing especially on the relevant socio-cultural and ethical contexts. Topic Example: History of Information Design and Technology. To broaden students' overall understanding of information technologies and provide critical perspectives, this course explores the historical relationships among: 1) the practice of design and various communication technologies; 2) the mutual interactions among design, information technology, and social, cultural, and political forces; and 3) ethical issues related to information design and technology. Technologies examined will include writing, the printing press, radio, television, and contemporary digital technology.

IDT 599 Thesis/Project (3)
Supports completion of a thesis or capstone project. Students work with an advisor to develop and acceptable proposal and complete either the project or thesis.

FACULTY

David Hakken, Professor, Ph.D., The American University of Washington, D.C. Advanced information technology and social change, participatory design of information systems, and development of not-for-profit and public organizations.

Maarten Heyboer, Associate Professor, Ph.D., Virginia Polytechnic Institute and State University. Computer-mediated communication and distance learning via the Internet.

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.

Daniel J. Murphy, Associate Professor, Ph.D., Rensselaer Polytechnic Institute. Technical communication, digital media, and computer-mediated communication, organizational behavior, and Web implementation strategies.

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.

Wendy S. Wong, Assistant Professor, Ph.D., Hong Kong Polytechnic University. Visual cultural studies of popular culture, graphic design and typography, and digital media.

Master of Science in Nursing

Dean's Message

Throughout the early years of this new century, the demand for nurses with advanced nursing education preparation will exceed the projected supply of nurses with graduate degrees. These nurses will be particularly needed in arenas that specialize in primary care and administration across health care settings. Recognizing this imperative, the School of Nursing offers the Master of Science in Nursing degree with a choice of three majors, that is, adult nurse practitioner, family nurse practitioner, or nursing administration. These majors are complementary; neither competes with another. Nurse practitioners provide primary health care to clients emphasizing health promotion, health maintenance, health restoration, and disease prevention. Nursing administrators create and sustain practice environments that facilitate the delivery of quality nursing services and health care. Thus, depending upon the professional goals of aspiring advanced practice nurses, the School of Nursing's three graduate majors are responsive to the projected nursing needs for the next decade.

Jeannine D. Muldoon
Dean, School of Nursing

Accreditation

The M.S. in Nursing program is registered by the New York State Education Department and is accredited by the National League for Nursing Accreditation Commission (NLNAC, 61 Broadway, New York City, NY, 212-363-5555) and has been granted preliminary approval by the Commission on Collegiate Nursing Education (CCNE, 1 Dupont Circle NW, Washington, DC, 202-887-6791).

Statement of Purpose and Program Goals

The faculty of the School of Nursing are preparing nurses at beginning and advanced levels of professional nursing practice within a diverse, changing, and complex society. The goals of the program are to:

- Prepare a graduate to integrate knowledge from nursing theories, the arts, and the natural, social, and behavioral sciences to support professional nursing practice;
- Prepare a graduate capable of assisting culturally diverse families and communities to maximize wellness throughout the life span;
- Prepare a graduate capable of utilizing critical thinking, collaboration, research, and decision making in the delivery of health care;
- Prepare a graduate capable of commitment to professional and self growth and enhancement of professional standards; and
- Enhance the foundation for continuing study in nursing.

Curricular Goals for the Master of Science in Nursing Degree

Derived from the School of Nursing's program goals are the curricular goals specific to the Master of Science in Nursing degree to prepare the graduate for advanced professional practice. The goals for graduate education in the School of Nursing are to:

- Apply knowledge gained from nursing, the arts, and the natural, social, and behavioral sciences to advanced clinical practice promoting quality, cost effective health care and enhancing the discipline of nursing;
- Prepare advanced practice nurses capable of assisting culturally diverse families and communities to maximize wellness throughout the life span;
- Prepare advanced practice nurses capable of utilizing critical thinking, collaboration, research, and decision making in the delivery of health care;
- Prepare advanced practice nurses who demonstrate commitment to professional and self growth and utilize professional standards in their practice; and
- Instill the desire for continuing formal and informal study in nursing.

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 NLN 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,
- (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),
- submit official scores from the Graduate Record Examination that reflect a total of 1200 points from the combined verbal, quantitative, and analytical subsections (applicants whose scores are lower will be individually evaluated),
- currently be licensed or eligible for licensure as a Registered Professional Nurse in New York State,
- 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.

Admission Procedures

Once the Admissions Office receives the completed application, the applicant's credentials will be reviewed by faculty in the School of Nursing. 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.

Health

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 prior to participation in each of the placements in agency settings for practical and/or clinical experiences.

Degree Requirements

1. 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.
2. 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.
3. Graduate students may repeat a graduate nursing course only once.
4. Graduate students may have no more than two Cs on their record at the time of graduation.
5. Adult nurse practitioner and family nurse practitioner majors must complete and pass a comprehensive final examination at the completion of their program of study.

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

The curricular goals specific to the Master of Science in Nursing with a major in adult nurse practitioner are to:

1. Apply knowledge gained from nursing, the arts, and the natural, social, and behavioral sciences to the practice of the adult nurse practitioner to promote quality, cost effective health care and to enhance the discipline of nursing;
2. Prepare nurse practitioners capable of providing health care for adults emphasizing health promotion, health maintenance, and health restoration utilizing a sociocultural perspective;
3. Prepare nurse practitioners who utilize critical thinking, collaboration, research, and decision making in the delivery of health care to adults;
4. Prepare adult nurse practitioners who demonstrate commitment to the profession of nursing and utilize professional standards in their advanced practice; and
5. Prepare adult nurse practitioners who demonstrate a desire for ongoing study in nursing, both informally and formally.

Program of Study

		Credits
NUR 500	Theoretical Foundations for Nursing Practice	3
NUR 503	Advanced Nursing and the Health Care Delivery System	3
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
		39

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

The curricular goals specific to the Master of Science in Nursing with a major in family nurse practitioner are to:

1. Apply knowledge gained from nursing, the arts, and the natural, social, and behavioral sciences to the practice of the family nurse practitioner to promote quality, cost effective health care and to enhance the discipline of nursing;
2. Prepare nurse practitioners capable of providing health care for families emphasizing health promotion, health maintenance, and health restoration utilizing a sociocultural perspective;
3. Prepare nurse practitioners who utilize critical thinking, collaboration, research, and decision making in the delivery of health care to families;
4. Prepare family nurse practitioners who demonstrate commitment to the profession of nursing and utilize professional standards in their advanced practice; and
5. Prepare family nurse practitioners who demonstrate a desire for ongoing study in nursing, both informally and formally.

Program of Study

		Credits
NUR 500	Theoretical Foundations for Nursing Practice	3
NUR 503	Advanced Nursing and the Health Care Delivery System	3
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
		45

Advanced Certificates in Adult Nurse Practitioner & Family Nurse Practitioner

The School of Nursing 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.

Master of Science in Nursing with a Major in Nursing Administration

The curricular goals specific to the Master of Science in Nursing with a major in nursing administration are to:

1. Apply knowledge gained from nursing, the arts, and the natural, social, and behavioral sciences to the specialty practice of nursing administration to administer human and material resources within a health care system to promote quality, cost effective health care and to enhance the discipline of nursing;
2. Prepare nursing administrators capable of leading and managing health care personnel in culturally diverse community based organizations to promote wellness within the health care delivery system;
3. Prepare nursing administrators who utilize critical thinking, collaboration, and decision making in the operationalization of research protocols and findings in the advanced practice of nursing administration;
4. Prepare nursing administrators who demonstrate responsibility and accountability for the advanced practice of nursing administration by demonstrating commitment to professional and self growth and enhancement of professional standards; and
5. Prepare nursing administrators who demonstrate a desire for ongoing study in nursing, both informally and formally.

Program of Study

		Credits
NUR 500	Theoretical Foundations for Nursing Practice	3
NUR 503	Advanced Nursing and the Health Care Delivery System	3
CSC 507	Data Analysis	3
NUR 510	Nursing Administration Seminar	3
NUR 511	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

Course Descriptions

Core Courses

NUR 500 Theoretical Foundations for Nursing Practice (3)

Examination of the historical influences that have impacted upon the development of nursing. Students develop knowledge, skill, and disposition for theory-based nursing as they discuss and analyze the relevance and

significance of nursing as an art and science. Philosophical views of selected nurse theorists are critically examined for application to nursing practice, administration, and research. The development of nursing theory within the paradigm of caring is related to practice within the health care delivery system, research, and moral reasoning, the ethic of care and moral standards, and standards of professional nursing practice.

NUR 503 Advanced Nursing and the Health Care Delivery 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 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, community based partner, change agent, and consultant are analyzed and researched. The central focus is the development of advanced professional practice.

NUR 560 Nursing Research Methods (3)

Examination of the research process and prepares the student to write a research proposal. The methods of scientific inquiry, problem identification, use of underlying theories and conceptual models, research design, measurement, data collection and analysis, and ethical considerations will be discussed. Critical analysis of existing research studies and student reports will be used to promote development of research skills. The significance of research findings and the need for continuing research activities will be explored as they relate to nursing.

Courses for both Adult and Family Nurse Practitioner Majors

NUR 555 Clinical Pharmacology (3)

Focus is on the clinical application of the major classifications of drugs. Emphasis on pharmacology and therapeutics for primary, acute, and long-term care patients. The legal parameters for prescription writing and protocols will be covered. Theory and research findings related to treatment modalities and compliance will be examined.

NUR 566 Advanced Practice Nursing Lecture (3)

Health assessment will focus on the in-depth assessment skills needed by nurse practitioners; history taking, communication, physical examination, and psychological, cultural, and social assessment. Advanced assessment skills needed to develop clinical problem solving, critical thinking, 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. Corequisite: NUR 567. Prerequisites: matriculated status and undergraduate health assessment course within the past five years or NUR 514. Pre/Corequisites: NUR 500, BIO 570, & for family nurse practitioner majors NUR 531.

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 clinical problem solving, critical thinking, and decision making and will demonstrate their clinical and decision making competencies in on-campus laboratory experiences and in faculty supervised clinical experiences in a variety of facilities. Laboratory and/or clinical experiences are 2 contact hours per week per credit. Corequisite: NUR 566. Prerequisites to the faculty supervised clinical experiences: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file.

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)

Presentation of the theory, research, and pathophysiology required for evaluating and managing clients with a variety of women's health problems encountered in the primary care setting. Topics will include gynecological, prenatal, postpartum and pregnancy problems. The management of normal pregnancy and newborn assessment will be addressed. The professional roles of the nurse practitioner as case manager, educator, and consultant will be explored 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: 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)

Exploration and analysis of practical and professional issues of importance to the nurse practitioner. The purpose of this seminar is to allow the student to apply the knowledge achieved in the areas of professional practice, research, theory, and critical thinking toward the development of an active role in a changing and challenging health care system. Prerequisites: for adult nurse practitioner majors, NUR 582, NUR 672; for family nurse practitioner majors, NUR 580, NUR 670. Pre/Corequisities: 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)

Focus is on the role of the nurse practitioner to evaluate health behaviors and to provide anticipatory guidance to populations at risk. The content will provide the theory, research, and epidemiology required to evaluate and manage health promotion and disease prevention of clients in the primary care setting. The professional role of the nurse practitioner as case manager, educator, and consultant will be explored to enhance the health and well being of adults and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 500, BIO 570 and NUR 566, NUR 567 with a minimum grade of B. Pre/Corequisites: NUR 555, NUR 560, NUR 582.

NUR 582 Beginning Level Adult Clinical (2)

Clinical experience will provide the graduate student with an opportunity to deliver primary care within a community based setting to a population with a variety of cross cultural health care needs. Students will concentrate on the unique wellness lifestyle and health care problems demonstrated by clients within a number of health care settings. Opportunities to deliver primary care will provide 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 (nurse practitioners and/or physicians), will provide guidance in the clinical setting under contract with the School of Nursing. 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 with a minimum grade of B. Pre/Corequisites: NUR 555, NUR 560, NUR 574.

NUR 653 Adult Primary Health Care I (2)

Presentation of the theory, research, and pathophysiology required to evaluate and manage clients across the lifespan with a variety of problems within the head, ears, eyes, nose and throat and the dermatologic, endocrine and immunologic systems encountered in the primary care setting. The professional roles of the nurse practitioner as case manager, educator, and consultant will be explored to enhance the health and well being of clients and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 574 and NUR 582 with minimum grades of B. Pre/Corequisites: NUR 503 and at least one (1) credit of NUR 672.

NUR 669 Adult Primary Health Care II (3)

Presentation of 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 encountered in the primary care setting. The topic of office emergencies will also be addressed. The professional roles of the nurse practitioner as case manager, educator, and consultant will be 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 with minimum grades of B. Corequisite: at least two (2) credits of NUR 672.

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

Clinical experience will provide the graduate student with an opportunity to deliver primary care within a community based setting to a population with a variety of cross cultural health care needs. Students will concentrate on the unique wellness lifestyle and health care problems demonstrated by clients within a number of health care settings. Opportunities to deliver primary care will provide students with challenges to expand their knowledge and skills as well as explore judgement making and priority setting abilities. Clinical faculty, in association with preceptors (physicians and/or nurse practitioners), will provide guidance in the clinical settings under contract with the School of Nursing. This clinical will build on skills and knowledge previously obtained at the beginning level. A total of 3 credits is 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 with a minimum grade of B. Pre/Corequisites: NUR 503, NUR 653.

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

Clinical experience will provide the graduate student with an opportunity to deliver primary care within a community based setting to a population with a variety of cross cultural health care needs. Students will concentrate on the unique wellness lifestyle and health care problems demonstrated by clients within a number of health care settings. Opportunities to deliver primary care will provide students with challenges to expand their knowledge and skills as well as explore judgement making and priority setting abilities. Clinical faculty, in association with preceptors (physicians and/or nurse practitioners), will provide guidance in the clinical settings under contract with the School of Nursing. The graduate student must have precepted with a master's prepared nurse practitioner prior to completion of this final clinical. This clinical will build on skills and knowledge previously obtained at the beginning and intermediate levels. A total of 3 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 and three (3) credits of NUR 672 with minimum grades of B. Pre/Corequisites: NUR 658, NUR 669.

Specialty Courses for Family Nurse Practitioner Major

NUR 531 Family Theory (3)

Exploration of family theory and research through a multidisciplinary and culturally diverse approach for the graduate family nurse practitioner.

NUR 572 Family Health Promotion and Disease Prevention Across The Lifespan (3)

Focus is on the role of the nurse practitioner to evaluate health behaviors and to provide anticipatory guidance to populations at risk. Content will provide the theory, research, and epidemiology required to evaluate and manage health promotion and disease prevention of clients in the primary care setting. The professional role of the nurse practitioner as case manager, educator, and consultant will be explored to enhance the health and well being of adults and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 500, NUR 531,BIO 570 and NUR 566, NUR 567 with a minimum grade of B. Pre/Corequisite: NUR 560, NUR 555, NUR 580.

NUR 580 Beginning Level Family Clinical (2)

Clinical experience will provide the graduate student with an opportunity to deliver primary care within a community based setting to a population with a variety of cross cultural health care needs. Students will concentrate on the unique wellness lifestyle and health care problems demonstrated by clients within a number of health care settings. Opportunities to deliver primary care will provide 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 (nurse practitioners and/or physicians), will provide guidance in the clinical setting under contract with the School of Nursing. 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 with a minimum grade of B. Pre/Corequisites: NUR 555, NUR 560, NUR 572.

NUR 652 Family Primary Health Care I (3)

Content will provide the theory, research, and pathophysiology required to evaluate and manage clients across the lifespan with a variety of problems within the head, ears, eyes, nose, and throat and dermatologic, endocrine and immunologic systems encountered in the primary care setting. The professional roles of the nurse practitioner as case manager, educator, and consultant will be explored to enhance the health and well being of clients and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 572 and NUR 580 with minimum grades of B. Pre/Corequisites: NUR 503 and at least one (1) credit of NUR 670.

NUR 652 Family Primary Health Care I (3)

Presentation of the theory, research, and pathophysiology required to evaluate and manage clients across the lifespan with a variety of problems within the head, ears, eyes, nose, and throat and the dermatologic, endocrine, and immunologic systems encountered in the primary care setting. The professional roles of the nurse practitioner as case manager, educator, and consultant will be explored to enhance the health and well being of clients and their families from a variety of socioeconomic and cultural backgrounds. Prerequisites: NUR 572 and NUR 580 with minimum grades of B. Pre/Corequisites: NUR 503 and at least one (1) credit of NUR 670.

NUR 668 Family Primary Health Care II (4)

Presentation of 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 encountered in the primary care setting. The topic of office emergencies will also be addressed. The professional roles of the nurse practitioner as case manager, educator, and consultant will be explored to enhance the health and well being of clients and their families from a variety socioeconomic and cultural backgrounds. Prerequisites: NUR 652 and at least one (1) credit of NUR 670 with minimum grade of B. Corequisite: at least two (2) credits of NUR 670.

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

Clinical experience will provide the graduate student with an opportunity to deliver primary care within a community based setting to a population with a variety of cross cultural health care needs. Students will concentrate on the unique wellness lifestyle and health care problems demonstrated by clients and families within a number of health care settings. Opportunities to deliver primary care will provide students with challenges to expand their knowledge and skills as well as explore judgement making and priority setting abilities. Clinical faculty, in association with preceptors (nurse practitioners, and/or physicians), will provide guidance in the clinical settings under contract with the School of Nursing. 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 with a minimum grade of B. Pre/Corequisites: NUR 503, NUR 652.

NUR 680 Advance Level Family Clinical (variable credit 1-4)

Clinical experience will provide the graduate student with an opportunity to deliver primary care within a community based setting to a population with

a variety of cross cultural health care needs. Students will concentrate on the unique wellness lifestyle and health care problems demonstrated by clients and families within a number of health care settings. Opportunities to deliver primary care will provide students with challenges to expand their knowledge and skills as well as explore judgement making and priority setting abilities. Clinical faculty, in association with preceptors (nurse practitioners and/or physicians), will provide; guidance in the clinical settings under contract with the School of Nursing. The graduate student must have precepted with a master's prepared nurse practitioner prior to completion of this final clinical. This clinical will build on skills and knowledge previously obtained at the beginning and intermediate levels. Four credits are required for course completion. The student will complete 5.5 contact hours per week per credit. Prerequistes: current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file, NUR 580 and three (3) credits of NUR 670 with minimum grades of B. Pre/ Corequisites: NUR 658, NUR 669.

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 510 Nursing Administration Seminar (3)

Management processes within the nursing division will be examined. The students' knowledge, skill, and disposition are developed by examining the role of the nurse administrator in relation to strategies utilized for professional practice, effective leadership, critical thinking, conflict resolution, and resource management.

NUR 511 Nursing Administration Practicum (3)

Under the aegis of a nurse administrator the student will experience the application of management principles in culturally diverse health care delivery systems. The student will assess and analyze the role of the nurse administrator in relation to strategies utilized for professional practice, effective leadership, critical thinking, conflict resolution, and resource management. The practicum will also provide the opportunity for students to analyze the effectiveness of their own management processes.

The student will participate in appropriate aspects of planning and other managerial processes. The student will have the opportunity to demonstrate knowledge, skill, and disposition through the development and implementation of the practicum objectives. Within the framework of the objectives, each student will design, implement, and evaluate an administrative project. Pre/ Corequisite: NUR 510. Prerequisites: matriculated status, current New York Registered Professional Nurse license, current CPR certification, complete health clearance on file.

NUR 522 Financial Management for Nurse Managers (2)

The nurse manager examines budgets and budgeting, reimbursement and regulation, strategic planning and monitoring, management information systems, and business plans.

NUR 524 Program Planning and Development (2)

Provision of a concise, practical approach to planning, managing, and evaluating health programs within an acute or community based health care delivery system will be provided. Three models will be presented: a health program planning model, an evaluation model, and a documentation model. Combined, they will provide a comprehensive, integrated methodology for health program planning and evaluation.

NUR 526 Legal and Regulatory Issues in Nursing (2)

Examination of the legal/regulatory issues which impact the professional practice of nursing administration. The student will explore 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 624 Grant Proposal Seminar (3)

The purpose of this seminar is for the student to write a proposal under the guidance of graduate faculty. Students will be expected to identify an appropriate funding source and prepare a proposal for submission to a funding agency. Prerequisite: NUR 560. (Note: students must have only six hours left to complete degree requirements at the end of NUR 624.)

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 that 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.

Faculty

Esther G. Bankert, Associate Professor; Ph.D., State University of New York at Albany.

Cathryn Jones Barns, Assistant Professor; Advanced Certificate, State University of New York Institute of Technology at Utica/Rome; M.S., Syracuse University.

Mary Lou Wranesh Cook, Associate Professor; Ph.D., State University of New York at Albany.

Louise Dean-Kelly, Associate Professor; D.N.S., State University of New York at Buffalo.

Deborah A. Hayes, Clinical Assistant Professor; Clinical Coordinator, Nurse Practitioner majors; M.S., State University of New York at Binghamton.

Jeannine D. Muldoon, Professor and Dean; Ph.D., University of Massachusetts.

Maria Pappas-Rogich, Assistant Professor; Dr.P.H., University of Pittsburgh.

Victoria E. Rinehart, Associate Professor; Ed.D., Teachers College, Columbia University.

Kathleen F. Sellers, Assistant Professor; Ph.D., Adelphi University.

Pamela W. Slagle, Clinical Assistant Professor; Program Coordinator, Nurse Practitioner majors; M.S., State University of New York at Stony Brook.

Carole E. Torok, Associate Professor; Ph.D., State University of New York at Albany.

Master of Science in Telecommunications

Director's Message

The M.S. in Telecommunications is an interdisciplinary, 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 rapidly growing field of telecommunications.

The Master of Science program in telecommunications requires from 33-36 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, as well as in three state of the art telecommunications laboratories. Students are also strongly encouraged to participate in the Telecommunications summer internship program.

The Telecommunications program at SUNY Institute of Technology has gained a national reputation for its quality telecommunications industry-oriented program. Advised by a dynamic thirty-person telecommunications industry advisory board, the Master of Science in Telecommunications is an interdisciplinary program combining computer science/information systems and business courses around a solid core of telecommunications coursework. This core investigates critical areas of advanced telecommunications technologies, network design and simulation, project management, regulation and international telecommunications policy and trade issues. Students are also required to complete a research project, a thesis, or a 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.

SUNY Institute of Technology is an Education Partner of both the Communications Managers Association (CMA) and the International Communications Association (ICA). Both of 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.

The Institute of Technology 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.

Prerequisite Coursework

- Calculus I or equivalent.
- Applied Statistical Analysis or equivalent.
- An introductory course in principles of management, or equivalent experience in management of a competitive enterprise.
- TEL 300 Introduction to Telecommunications, or equivalent industry experience.
- TEL 305 Basic Data Communications.
- Students who require prerequisite coursework or wish to apply to substitute professional industry experience should consult with a 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 undergraduate 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
(33-36 Credits Required)*

Areas	Possible Courses
QUANTITATIVE DATA ANALYSIS *6 hours required*	**CSC 507** - Data Analysis **MGS 511** - Management Science
RESEARCH METHODOLOGY *(required if selecting Thesis, Research Project or Capstone Option)*	**TEL 598** - Research Methods in Telecommunications
TELECOMMUNICATIONS CORE COURSES *18–21 hrs. required***	**TEL 501** - International Telecommunications **TEL 505** - Network Design and Simulation **TEL 520** - Telecom. 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
RESEARCH PROJECT OPTION *6 hrs. required*	**TEL 597** - Research Project+
THESIS OPTION *6 hrs. required*	**TEL 599** - Thesis+
CAPSTONE OPTION *9 hrs. required*	*The Capstone option consists of two additional three-credit hour courses# (i.e. 6 hrs) plus the 3 credit hour Capstone seminar (TEL 592)*

* Minimum to graduate: 33 credit hours in combination with Thesis or Research Project. If selecting Capstone Option, the minimum is 36 credits.

** A minimum of 18 credits from the Telecommunications Core is required if selecting Thesis or Research Project Option. A minimum of 21 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
- Capstone Option

\# MGT 585 (Current Aspects of Management in High Technology Environments) and MKT 550 (Marketing Research and Technology)

Course Descriptions

TEL 501 International Telecommunications Policy and Trade
A course investigating trade in services and equipment policies of the United States, the European Community, Japan 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 and NAFTA, international technical standards, intellectual property, global marketing alliances, and the competitive satellite industry. This course also analyzes the reorganization and global responsibilities of the International Telecommunications Union.

TEL 505 Network Design and Simulation
A course investigating network design and simulation modeling which enables 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 will also be 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 very fast paced introduction into the field of Information Assurance. The various kinds of threats that might be faced by an information system and the security techniques used to fight 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)
The current state of telecommunications network security lies in different and numerous national and international standards. In this course security issues surrounding networks will be addressed in the contexts of international and North American Standards, with emphasis on advanced topics in network security.

TEL 585 Telecommunications Electronic Commerce (3)
Examines the 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; Broadband ISDN; ATM; SONET; AIN; and voice and data compression techniques.

TEL 592 Telecommunications Capstone Seminar
An interdisciplinary experience in researching, writing, and presenting a specific topic as a team.

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 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.

Faculty

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, and the Pacific Telecommunications Council.

Telecommunications Institute

The mission of the Telecommunications Institute, located at the college, 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 the college'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 the Institute of Technology'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 Softwar
- 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 AT UTICA/ROME

PLEASE PRINT

PERSONAL INFORMATION

1. Name	Last (Family), First, Middle	Maiden Name

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:

14. State or Country of Birth:

15. Country of Citizenship:

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

I have taken the: ☐ GRE Date: _____ ☐ GMAT Date: _____ ☐ TOEFL Date: _____

17a. Program _____

17b. If Business Management, please indicate concentration: _____

If Accountancy or Health Services Administration, are you interested in courses: ☐ on-line ☐ on campus ☐ both

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 an Institute of Technology 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 Institute of Technology 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.)

FOREIGN STUDENT INFORMATION

26. My present U.S. nonimmigrant status is:

Student F-1 ☐ or J1 ☐ _____ with an expiration date of _____ _____

N -

Visitor ☐ with termination date of (Month and Year) Other ☐ (State Type, Conditions and Termination Date)

AGREEMENT: I HAVE REQUESTED EACH OF THE SCHOOLS LISTED IN QUESTION 19 TO SEND OFFICIAL TRANSCRIPTS TO THE INSTITUTE OF TECHNOLOGY. THE INFORMATION SUPPLIED IN THIS APPLICATION IS COMPLETE AND ACCURATE, TO THE BEST OF MY KNOWLEDGE.

X _____ _____

Signature of Applicant — Date

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

SUNY Institute of Technology at Utica/Rome • P.O. Box 3050 • Utica, New York 13504-3050

APPLICATION FOR A GRADUATE ASSISTANTSHIP

Name of Applicant _____

Address _____

Telephone Number _____ Graduate Program _____

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
at Utica/Rome
P.O. Box 3050
Utica, New York 13504-3050

GRADUATE SCHOOL REFERENCE REPORT

Name of Applicant _____

Current Address _____

_____

Applying for the _____ (degree) in the Department/School of _____

in the _____ program.

Name and title of person supplying reference:

_____ _____
Name Title

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 on or after January 1, 1975 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.*

_____ _____
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.

_____ _____ _____
Signature Position/Title Date

_____
Name and Address (Please type or print)

SUNY Institute of Technology
at Utica/Rome
P.O. Box 3050
Utica, New York 13504-3050

GRADUATE SCHOOL REFERENCE REPORT

Name of Applicant _____

Current Address _____

_____

Applying for the _____ (degree) in the Department/School of _____

in the _____ program.

Name and title of person supplying reference:

_____ _____
Name Title

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_____ _____ _____
Signature Position/Title Date

_____
Name and Address (Please type or print)

APPLICATION FOR GRADUATE ADMISSION

SUNY Institute of Technology at Utica/Rome

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 doubles-spaced pages, using this form.

Notes:

Notes:

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