

RIT

Official Bulletin

General Information and

Undergraduate Programs 1983-84

**Rochester Institute of Technology
Rochester, N.Y.**

1983

	S	M	T	W	T	F	S
JULY						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						
AUGUST	1	2	3	4	5	6	
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			
SEPTEMBER				1	2	3	
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	
OCTOBER						1	
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31					
NOVEMBER			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			
DECEMBER				1	2	3	
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31

1984

	S	M	T	W	T	F	S
JANUARY	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				
FEBRUARY			1	2	3	4	
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29			
MARCH				1	2	3	
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
APRIL	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30					
MAY			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		
JUNE					1	2	
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
JULY	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				
AUGUST				1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	

ROCHESTER INSTITUTE OF TECHNOLOGY 1983-1984 INSTITUTE CALENDAR

(Official Institute Calendar as adopted by Policy Council in April, 1980)

Fall Quarter 1983-84	July 11 - August 12 **	CCE Mail-in Registration for Fall
	July 11 - August 26	CCE Walk-in Registration for Fall
	August 31 - Sept. 1	CCE Open Registration for Fall
	September 4	Move-in Day for New Resident Students
	September 5, 6	Orientation for New Students
	September 7	First Day of Classes (CCE)
	September 7	Day College Open Registration-New Students
	September 8	Day College Open Registration-Returning Students
	September 9	First Day of Classes (Day College)
	September 9	Non-matriculated Student Day College Registration
Winter Quarter 1983-84	September 14	Physical Education Registration
	October 28	Last Day to Withdraw with a Grade of "W"
	November 17	Last Day of Classes (Day College)
	November 18, 19, 21, 22	Exam Week
	November 22	Last Day of Classes (CCE)
	November 23-27	Fall/Winter Break
	Oct. 24 - Nov. 4 **	CCE Mail-in Registration for Winter
	Oct. 24 - Nov. 18	CCE Walk-in Registration for Winter
	November 21, 22	CCE Open Registration for Winter
	November 28	First Day of Classes (CCE)
Spring Quarter 1983-84	November 30	Day College Open Registration
	December 1	First Day of Classes (Day College)
	December 1	Non-matriculated Student Day College Registration
	December 8	Physical Education Registration
	December 21	Last Day of Classes Before Christmas Break
	January 3	Classes Resume after Christmas Break
	February 3	Last Day to Withdraw with a Grade of "W"
	February 7	Teaching Effectiveness Conference (No Day College Classes)
	February 21	Last Day of Classes (Day College)
	February 22, 23, 24, 25	Exam Week
Summer Quarter 1983-84	February 25	Last Day of Classes (CCE)
	February 26 - March 4	Winter/Spring Break
	Jan. 30 - Feb. 10 **	CCE Mail-in Registration for Spring
	Jan. 30 - Feb. 24	CCE Walk-in Registration for Spring
	February 28, 29	CCE Open Registration for Spring
	March 5	First Day of Classes (CCE)
	March 5	Day College Open Registration
	March 6	First Day of Classes (Day Colleges)
	March 6	Non-matriculated Student Day College Registration
	March 9	Physical Education Registration
Summer Quarter 1983-84	April 27	Last Day to Withdraw with a Grade of "W"
	May 14	Last Day of Classes (Day College)
	May 15, 16, 17, 18	Exam Week
	May 19	Last Day of Classes (CCE)
	May 19	Commencement
	May 20-28	Spring/Summer Break
	April 23 - May 4 **	CCE Mail-in Registration for Summer
	April 23 - May 18	CCE Walk-in Registration for Summer
	May 22, 23	CCE Open Registration for Summer
	May 29	Day College Open Registration
Summer Quarter 1983-84	May 29	First Day of Classes (CCE)
	May 30	First Day of Classes (Day College)
	May 30	Non-matriculated Student Day College Registration
	June 4	Physical Education Registration
	July 4	Holiday (No Classes)
	July 20	Last Day to Withdraw with a Grade of "W"
	August 7	Last Day of Classes (Day College)
	August 8, 9, 10	Exam Week
	August 13	Last Day of Classes (CCE)

"Dates of Various Summer Sessions to be announced
"CCE - College of Continuing Education

OPEN REGISTRATION SCHEDULE FOR MATRICULATION UNDERGRADUATE DAY COLLEGE — 1983-1984

	Fall	Winter	Spring	Summer		Fall	Winter	Spring	Summer
A	8:30am	4:00pm	1:00pm	8:30am	M	1:30pm	11:00am	4:00pm	1:00pm
B	9:00am	3:30pm	11:00am	4:00pm	N.O.P	2:00pm	10:30am	3:30pm	11:00am
C	9:30am	3:00pm	10:30am	3:30pm	OR	2:30pm	10:00am	3:00pm	10:30am
D,E	10:00am	2:30pm	10:00am	3:00pm	S	3:00pm	9:30am	2:30pm	10:00am
F,G	10:30am	2:00pm	9:30am	2:30pm	T,U,V	3:30pm	9:00am	2:00pm	9:30am
H,U	11:00am	1:30pm	9:00am	2:00pm	W,X,Y,Z	4:00pm	8:30am	1:30pm	9:00am
K,L	1:00pm	1:00pm	8:30am	1:30pm					

Contents

About this bulletin

The RIT Undergraduate Bulletin does not constitute a contract between the Institute and its students on either a collective or individual basis. It represents RIT's best academic, social, and financial planning at the time of publication. Course and curriculum changes, modifications of tuition; fees; dormitory, meal, and other charges; plus unforeseen changes in other aspects of RIT life sometimes occur after the bulletin has been printed, but before the changes can be incorporated in a later edition of the same publication. Because of this, Rochester Institute of Technology does not assume a contractual obligation with its students for the contents of this Undergraduate Bulletin.

RIT admits and hires men and women, veterans and disabled individuals of any race, color, national or ethnic origin, or marital status in compliance with all appropriate legislation, including the Age Discrimination Act. The compliance officer is James Papero.

General Information and Undergraduate Study 1983-84

Produced by RIT Communications

For more information concerning undergraduate study at RIT, or for a complete list of courses offered, write or phone:

**Rochester Institute of Technology
Office of Admissions
One Lomb Memorial Drive
P.O. Box 9887
Rochester, N.Y. 14623
(716) 475-6631**

- Calendar (inside front cover)
- 2 RIT at a Glance
- 2 What is RIT?

Career Education

- 4 The Center for Cooperative Education and Career Services

The Campus Community

- 4 Student Body
- 5 Student Conduct Standards

Enrollment Information

- 7 Veterans
- 7 Costs and Tuition
- 8 Refund Policies
- 8 Financial Aid
- 13 Admissions Procedures
- 15 Registration and Records
- 16 Academic Standards and Regulations

Student Affairs Division

- 17 Complementary Education
- 18 Higher Education Opportunity Program
- 18 International Student Affairs
- 18 Counseling Center
- 19 Special Services
- 20 Student Health Service
- 20 Student Housing
- 21 Orientation
- 21 Student Clubs and Organizations
- 23 Physical Education and Intercollegiate Athletics
- 24 Resources for Community Living

Alumni

- 25 Alumni Association

Student Academic Development

- 25 Learning Development Center
- 27 Instructional Media Services
- 28 Wallace Memorial Library

Faculty and Program Development

- 28 Curriculum Planning

Undergraduate Programs

- 29 College of Applied Science and Technology
- 50 College of Business
- 59 College of Continuing Education
- 60 College of Engineering
- 69 College of Fine and Applied Arts
- 76 College of Graphic Arts and Photography
- 96 College of Liberal Arts
- 106 College of Science
- 119 National Technical Institute for the Deaf
- 123 Department of Military Science and Reserve Officers' Training Corps

Personnel

- 125 Board of Trustees
- 127 Endowed Professorships
- 128 Officers of the Institute
- 128 Deans
- 128 Faculty and Staff

Campus Map (inside back cover)

RIT Official Bulletin

Vol. LXXXIII

No. 5

August 26, 1983

The RIT Official Bulletin (USPS 715-400) is published six times annually by Rochester Institute of Technology, One Lomb Memorial Drive, P.O. Box 9887, Rochester, N.Y., 14623, monthly in March and May and semi-monthly in July and August. Second-class postage paid at Rochester, N.Y. **Postmaster:** Send address changes to Rochester Institute of Technology, One Lomb Memorial Drive, P.O. Box 9887, Rochester, N.Y. 14623.

RIT at a Glance

Location

Campus in Rochester, New York. The Rochester metropolitan area has a population of about 700,000. City Center campus in downtown Rochester.

Type

Private, coeducational, non-sectarian.

Orientation

Science, technology, the fine and graphic arts, management, selected social professions, with strong emphasis on professional competency.

Size

Full-time equivalency enrollment in fall, 1982, was 10,760 students.

Calendar

RIT operates on the quarter plan, each quarter being 11 weeks in duration. Many classes also are available during the summer (see current summer sessions bulletin).

Degrees

Associate in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), Bachelor of Fine Arts (BFA), Bachelor of Science (BS), Bachelor of Technology (B. Tech), Master of Business Administration (MBA), Master of Engineering (ME), Master of Fine Arts (MFA), Master of Science (MS), Master of Science for Teachers (MST).

Housing

Residence halls for over 3,400 students, with on-campus apartments and townhouses for upperclass students.

Sports

Full intercollegiate sports schedule, as well as intramural and recreational programs; facilities include indoor ice rink and pool.

Other cocurricular activities

Fraternities, sororities, professional and honorary societies, special interest clubs, service organizations.

Alumni

More than 40,000 in all 50 states and worldwide.

Placement

The Institute makes every effort to help students find employment, both during school and after graduation. The Center for Cooperative Education and Career Services acts in four principal areas as a liaison between employers and those students seeking positions. These areas include: part-time jobs, summer work, cooperative employment, and permanent employment for senior students and alumni.

Accreditation

The Institute is chartered by the legislature of the State of New York and accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools. In addition to institutional accreditation, curricula in some of the colleges are accredited by appropriate professional accreditation bodies. Specific mention of these is included in the college descriptions, where applicable.

What Is RIT?

With a history of more than 150 years, Rochester Institute of Technology is a privately endowed, co-educational, non-sectarian major institute of higher education; its principal task is preparing students for technological competence in a world of change.

RIT is composed of nine colleges: Applied Science and Technology, Business, Continuing Education, Engineering, Fine and Applied Arts, Graphic Arts and Photography, Liberal Arts, Science, and the federally-funded National Technical Institute for the Deaf.

As the information contained in these pages shows, RIT offers a variety of master's, bachelor's and associate's degrees, as well as certain certificate and diploma programs.

Some of these offerings are unique or unusual: packaging science, nuclear medicine technology, printing, photographic science, and the programs of the School for American Craftsmen and the previously-men-

tioned National Technical Institute for the Deaf (NTID).

Many of the programs are co-op, a formal program of campus study augmented by work off campus in the student's chosen field. Pioneered by RIT in New York State, the cooperative educational concept enhances the Institute's "learn by doing" philosophy. During the past academic year, over 2,000 students in business, engineering, science, engineering technology, printing and computer science and technology, alternated academic quarters with work quarters during their last two or three undergraduate years.

RIT's students reflect the diversity of its programs. They come from almost every state in the union and many foreign countries. More than 45 percent transfer from two-year colleges or other four-year institutions. Older and part-time students compose a greater and greater proportion of the total enrollment.

The percentage of women also is

increasing: today about a third of the Institute's students are female.

An increasing number of RIT alumni are entering graduate schools, but RIT maintains its focus on preparation for moving directly into professional occupations.

RIT continues to place basic emphasis upon teaching as the essential responsibility of the faculty. In support of this are such activities as an Institute Committee on Effective Teaching and individual and group projects to improve teaching productivity. However, faculty are engaged also in research and other scholarly activities.

The Institute's alumni number more than 40,000 in every state and worldwide.

RIT's campus in suburban Rochester occupies 400 acres on a 1,300 acre site. It houses complete

academic and sports facilities, including an indoor ice rink and Olympic-size swimming pool. The academic/administrative complex of 13 buildings, which has received several architectural awards, is arranged as three adjacent quadrangles. The residential complex of 16 interconnected buildings is reached by a quarter-mile mall past tennis courts and playing fields. Adjacent to the residential area is the NTID academic/residence complex.

Many of the Institute's full-time day students live in Institute-operated residence halls. Four apartment villages with a total of 659 units house upperclass students.

The Institute maintains its City Center at 50 West Main Street in downtown Rochester. There the College of Continuing Education offers day and evening courses in which students pursue a range of aspirations from hobbies to master's degrees. Graduate painting and art education are also located here. More than 1,200 students are currently advancing their educational, vocational, and avocational objectives at the City Center. Besides its curricular uses, the City Center provides many technical and community service programs and houses the School of Applied Industrial Studies.

An ongoing intent

When the Rochester Athenaeum was founded in 1829, its intent was to prepare students for "the making of a living and the living of a life."

One hundred and fifty four years later, RIT's seventh president, Dr. M. Richard Rose, continues to articulate that purpose: "This saying speaks of making a living and living a life not as two distinct processes, but as one. It is an idea that is central to the type of education that we do best here at RIT."

Undergraduate Programs	Degree and HEGIS* Code				
	AS	AAS	BFA	BS	BTech
College of Applied Science and Technology					
Audiovisual Communications				0605	
Civil Engineering Technology					0925
Computer Information Systems		5101			0701
Computer Science		5101		D701	
Computer Technology		5399			0925
Electrical Engineering Technology					0925
Energy Technology					0925
Food Service Management		5404		1307	
General Dietetics & Nutritional Care		5404		1306	
Hotel/Resort Management		5404		1307	
Manufacturing Engineering Technology					0925
Mechanical Engineering Technology					0925
Packaging Science				4999	
Travel Management		5404		1307	
College of Business					
Accounting		5002		0502	
Business Administration		5001		0506	
Photographic Marketing Management		5004		0509	
Retailing		5004		0509	
College of Engineering					
Computer Engineering				0999	
Electrical Engineering				0909	
Industrial Engineering				0913	
Mechanical Engineering				0910	
Microelectronic Engineering				0999	
College of Fine and Applied Arts					
Ceramics and Ceramic Sculpture		5012	1009		
Double Craft Major			1009		
Graphic Design		5012	1009		
Industrial and Interior Design		5012	0201		
Fine Arts—Medical Illustration			1299		
Fine Arts—Painting, Printmaking		5012	1002		
Glass		5012	1009		
Metal Crafts and Jewelry		5012	1009		
Weaving and Textile Design		5012	1009		
Woodworking and Furniture Design		5012	1009		
College of Graphic Arts and Photography					
Biomedical Photographic Communications		5299		1217	
Film and Television		5007		1010	
Imaging and Photographic Sciences		5007		1011	
Newspaper Production Management				0699	
Photographic Processing & Finishing Management		5007		0599	
Printing		5009		0699	
Printing and Applied Computer Science				0699	
Printing Systems Management				0699	
Professional Photographic Illustration		5007	1011		
Technical Photography		5007		1011	
College of Liberal Arts					
Criminal Justice				2105	
Social Work				2104	
College of Science					
Applied Mathematics	5617			1703	
Biology	5604			0401	
Biomedical Computing	..			1217	
Biotechnology				0499	
Chemical Technology		5305			
Chemistry	5619			1905	
Computational Mathematics				1703	
Diagnostic Medical Sonography (Ultrasound)				1299	
Medical Technology	..			1223	
Nuclear Medicine Technology	..			1299	
Physics	5619			1902	
National Technical Institute for the Deaf					
Interpreting (for the hearing-impaired)		5506			

Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards. AM the above programs are registered according to the indicated HEGIS* code.

*Higher Education General Information Survey

**Students in these programs receive an AS in General Science (HEGIS 4902) upon successful completion of the first two years

NOTE: For information on offerings of the College of Continuing Education, or the National Technical Institute for the Deaf, please write to that respective college for its Official Bulletin or catalog.

RIT Proud of Link With Rochester Dr. Rose Asserts

"RIT means access to employment and significant contributions to the community for thousands of young people and adults," says President M. Richard Rose. "For those of us who work and study here, RIT is a dynamic and progressive university that always has been willing to take those extra steps necessary to maintain relevant educational programs.

"For its alumni, RIT continues to provide opportunities to improve themselves and their families educationally, professionally, financially and socially.

"In many ways, RIT also symbolizes much of what we find so desirable about our community, particularly through its attractive blend of tradition, culture, innovation, business and education.

"Yet, in many ways it has grown hand-in-hand with greater Rochester itself. Its very roots are in the area's early industry. Our link to business and industry can be seen in our broad array of College of Continuing Education programs, focused on assisting individuals in career advancement.

"This link with greater Rochester's history and growth also makes RIT a special place for the entire community. It's a link of which we're very proud. We hope you will share in this pride as RIT provides access to the future."

The Center Links Students To Career Experiences

RIT's particular philosophy is called career education-and The Center for Cooperative Education and Career Services supports the Institute's commitment to preparing students for "the making of a living and the living of a life." We made a commitment to career education as early as the 1880s. We began the Cooperative Education Program in 1912. Our friends called it a bright new idea; we called it common sense.

Since 1912 RIT has developed one of the country's largest and strongest co-op programs. Last year alone over 750 employing companies participated in the program, hiring students to gain career experience as a part of their RIT curriculum. Those 750 employers join the Institute and the student in a three-way partnership that leads to career awareness and experience that can't be matched. Co-op gives the student and the employer an opportunity to look each other over; it gives the student an opportunity to try out personal and professional abilities in a different environment. Many students relocate in order to take advantage of the best co-op opportunities. At RIT the center and the student are committed to the philosophy of career education that makes co-op an experience of a lifetime.

The Center for Cooperative Education and Career Services provides counselors for each student, available to assist from the beginning of the co-op program right through career entry upon graduation. We take pride in being ready to give students an edge over the competition when they graduate. The center assists through individual career counseling and group sessions to develop important job search skills, resource materials for career and job research, job listings from co-op and career employers, reference and credential service, and one of the best on-campus interview programs going. We are serious about our students' career options. That's why the staff of the center not only counsels but also spends considerable time developing opportunities with employers nationwide for students in co-op programs and for graduates. We even help our alumni with lifetime services at their request. All of the center's services are available to students at no fee.

A center for information about the employment of RIT students and about employment for RIT students, the office conducts surveys of alumni, analyzes national employment data, and communicates with business, industry and government to keep an eye on the needs of students and employers. Information is synthesized and made available through many formats to students and their academic advisors as well as Institute planners. The linkages among the students, alumni, and employers enhance RIT's ability to provide a quality education firmly rooted in the dedication to preparation for career success. The Center for Cooperative Education and Career Services is committed to linking RIT students to career experiences and to career entry upon graduation.

The RIT Student Body Is Characterized By Diversity

There is no typical RIT student. If the student body could be characterized, however, it would be only by its diversity.

Some of our students have just graduated from high school. Some are transferring to RIT after going to college somewhere else. Some are returning to college after a long period of time.

RIT is an institute where painters, potters and photographers go to school with accounting majors; where those interested in a career in social work study with those interested in mechanical engineering.

Students have entered RIT from every state in the United States and from many foreign countries. They come from varying economic and social backgrounds.

Yet, despite their diversity, they all have ideas about where they're going in life. A recent survey of incoming freshmen and transfers showed that despite their diversity, most RIT students had one thing in common: they wanted a professional/technical career. This is what RIT is all about. Long before the word "career" became popular, RIT stood solidly behind the idea that education for work—for a job—was worthwhile and sound. And over the years RIT has built up a lot of experience in moving graduates directly into a career.

Veterans

The veteran, often a little older and usually ready to move directly toward a career goal, will find at RIT a serious purpose in education where he or she can make up lost time with minimum problems of adjustment. Veterans' programs at the Institute help vets deal with machinery of the Veterans' Administration and with the opportunities the government gives them.

Study at RIT is approved under PL89-358 (Readjustment, 1966) PL815 or PL894 (Rehab) and PL634 (War Orphans). For benefits an application for the Certificate of Eligibility may be obtained from the Veterans' Affairs Office, located in the basement of the College-Alumni Union.

VA Form 21E-1995, "Request for Change of Program or School," is used when the veteran wishes to transfer schools. This should be filled out immediately upon acceptance at RIT.

Transfer students

More than 45 percent of all full-time students attending RIT transferred from another two- or four-year college. RIT doesn't simply disregard their previous experience; RIT thinks it's valuable. In order to continue building on its excellent relationship with two-year colleges, RIT has a Center for Community/Junior College Relations. This is an excellent two-way channel for cooperative action. For information on transferring to RIT, see page 13.

Deaf students

The more than 1,000 students registered through the National Technical Institute for the Deaf (NTID) make a distinct contribution to the educational processes of the Institute. They are RIT students in every sense: they come from varied backgrounds, are registered in a wide variety of academic fields and fully share in the extracurricular and social life. Deaf and hearing students often share the same dormitories and sometimes the same room. They play on the same teams, attend many of the same classes. Hearing students may also participate in programs for deaf students by interpreting, tutoring, and taking class notes for them. RIT is proud of its share in this national educational effort for deaf people. For more information on NTID, see page 119.

Institute Standards For Student Conduct

RIT's educational mission

It is the mission of RIT "to prepare men and women for living and working in a democratic and technological society" by offering curricula that "meet the need for technological and other specialized knowledge and skills within the broader framework of humanistic values."¹ To achieve its mission, the Institute establishes guidelines that provide for the orderly conduct of its instructional and campus life activities. As an educational community, it strives for a campus environment that is free from coercive, exploitive behavior by its members. Moreover, it sets high standards that challenge students to develop values that will enhance their lives professionally and that will enable them to contribute constructively to society.

Historically, RIT has aspired to the goal of teaching students for the "making of a living and the living of a life, not as two distinct processes but as one."² This goal includes the emotional, physical, spiritual and social development of students. Because the Institute prepares its students for leadership in their careers and in community life, it has set standards of personal development and academic excellence that go well beyond the standards of the larger society. Moreover, the faculty and staff are expected to set examples for students in the pursuit of their personal and academic development. Although RIT acknowledges and respects the diversity of values and life styles of its faculty, staff and students, each member of the RIT community has the responsibility of observing the standards of campus life that are important to the pursuit of the Institute's mission.

Principles underlying Institute conduct policies

1. Students are expected to assume responsibility for their own conduct and also to have concern for the behavior of others. Such responsibility includes efforts to encourage positive behavior and to prevent or correct conduct by others that is detrimental.
2. The Institute places high priority on self-regulation by its members and intends that campus life will provide opportunities for students to exercise individual responsibility.
3. The Institute acknowledges the diversity of backgrounds, life styles and personal moral values of those who comprise the Institute community, and respects the right of individuals to hold values that differ from those expressed by the Institute. However, in their activities and duties as students, they are expected to observe Institute policies and standards.
4. Moreover, the Institute has legitimate concern for personal behavior beyond the impact the behavior has on the rights and freedoms of others. When an individual's pattern of behavior is self-destructive, interferes with the achievement of one's educational objectives, or adversely affects the quality of life on campus, the Institute may intervene to correct or prevent such behavior.
5. The Institute values and safeguards the personal privacy of its members. Rooms in campus housing will not be entered by Institute personnel without either the permission of the residents or the authorization of the vice president for Student Affairs unless a legal search warrant has been obtained.

Exceptions are made in emergency situations such as imminent harm to individuals or serious damage to the Institute property and for reasons of health and safety. The Institute adheres to the provisions of the Buckley Amendment regarding the privacy of student records.

6. The conduct of students at events held off-campus which are sponsored by RIT organizations must adhere to the same standards and policies as events held on campus, and infractions are subject to Institute action.

7. For students living in campus housing, campus life standards have special significance. The residence hall environment is highly interpersonal, and the behavior of every individual in some way usually influences the quality of residence life for others. Therefore, standards and policies for residence life are stated explicitly and are communicated to students through residence halls publications.

Summary of conduct policies

In keeping with the principles listed above, the following broad areas of conduct for students are enunciated. Although they are not all-inclusive, they indicate in general terms the standards of student concern that are important to the desired quality of campus life and to the educational mission of RIT. More explicit conduct policies are contained within *FACTS*, the RIT student handbook; the residence halls "Terms of Occupancy," and other official Institute documents.

Human rights and dignity

The Institute expects all students to practice high regard for the human dignity of other people. It seeks to prevent all types of discrimination on the basis of race, sex, religion, age, handicap and national origin. Attempts are made to resolve conflicts between individuals and groups with differing backgrounds and views through discussion and clarification of values and attitudes. However, repeated disregard for the rights and dignity of others will result in disciplinary action in accordance with Institute policies and procedures.

Personal conduct

Through its policies, the Institute requires conduct that contributes positively to the personal welfare of students, enhances the quality of the campus living environment and respects the rights of others. Conduct that infringes upon the rights of others or endangers any individual will not be permitted. The sanctions associated with student misconduct are outlined in Institute policies, and actions are taken in accordance with

¹Rochester Institute of Technology. "1980 Master Plan" (March 1980)

²George W. Hoke. *Blazing New Traits* (Rochester, N. Y. Rochester Athenaeum and Mechanics Institute. 1937). p.V.

the RIT Judicial Process. The following statements on sexual behavior, alcohol and drug use, appropriate study environments, safety, and student regard for property are a further expansion of the Institute's position on the personal conduct of students.

Sexual behavior and harassment

The Institute acknowledges that an individual student's sexual attitudes and values are a matter of personal choice. However, responsible sexual behaviors, no less than in other areas of human interaction, must take into account the dignity, privacy, and rights of others. Sexual harassment is not tolerated. Moreover, no individual should be subjected to exploitive actions. Unacceptable behaviors and living arrangements are further defined within the "Terms of Occupancy" for the various Institute housing units.

Alcohol and drug abuse

Individual students will be held responsible for their behavior even though their judgement may be impaired because of the use of alcohol or other drugs. Registration procedures for all RIT events set forth the responsibilities and procedures to be followed by the sponsoring group at an activity where alcohol is served. No student should feel pressured to consume alcohol or other drugs.

Institute policies on drug and alcohol use conform to the laws of the State of New York. The Institute is not a haven from the law, and both New York State law and Institute policy will be enforced. Those students who evidence problems with alcohol or drugs will be offered, and, if necessary, required to avail themselves of counseling or other appropriate treatment. Even though individual students may be receiving such assistance, they will be held accountable for their behaviors through established Institute judicial procedures.

Study environment

Students need a campus environment that is conducive to studying. This is especially important in those facilities that are designated primarily for study. In the residence halls, each separate living unit must establish in writing the policies it will maintain to provide adequate study conditions according to the basic standards established by the Institute.

Safety

Safety is of critical importance at all places on the campus, but it is particularly important in the residence halls because the carelessness of one individual can threaten the lives of

hundreds of others. Willful violations of safety, such as causing false fire alarms, will result in immediate action according to judicial procedures. Safety inspections of individual rooms and group living areas will be conducted periodically by authorized Institute personnel.

Student regard for property

Students are expected to exercise appropriate care of Institute property and regard for the property of others. A student-developed property damage policy in the residence halls holds accountable those students responsible for damage.

Admissions Staff Strives to Serve Special Needs

RIT takes pride in the diversity of its student body—a diversity actively promoted by the Office of Admissions.

Women, veterans, returning students, minorities, commuters, handicapped and international students are people with individual needs that require support from RIT's student services, according to James G. Miller, associate vice president for Institutional Advancement.

"Each of the admissions staff members works with a group of students who may have special needs," he says. "In addition to the daily counseling and recruiting responsibilities, each counselor acts as an advisor and program coordinator for a different group on campus.

"Arthur C. Friedel keeps in contact with the international students on campus, who are here from as far away as Malaysia and India.

"The international student population at RIT is steadily increasing due to the unique education opportunities offered. Graduates return to their respective countries with the knowledge and expertise needed to solve economic, technical and environmental problems.

"A photographer from Mexico might come to RIT for refresher courses, or a whole group may come to campus for a full four- or five-year degree program. Whatever the case, they need someone on campus who can direct them to the services offered in English tutoring, counseling or health care. And our department offers that personalized assistance."

Barbara Bell's concern is the minority student. She actively recruits

minority students and conducts special career days for prospective students.

Another admissions staff member takes particular interest in women on campus, and is sensitive to the fact that RIT has been viewed as a technical, and therefore male-oriented, institution. "Dorothy Lowe is involved in encouraging women to pursue careers in technical fields, and informing them about the many options open to them," Miller explains. "We also assist students in locating services they may need on campus—in child care, chaplaincy, counseling, or career development assistance."

Whether you are a high school student or an experienced homemaker exploring a second career, we encourage you to seek our assistance while you clarify and re-examine your personal career goals. New and exciting career opportunities are available in areas that traditionally were thought of as being male dominated. Majors in accounting, engineering and photographic marketing management are just a few of the many programs available at RIT for women who are interested in pursuing challenging careers.

The admissions staff is prepared to draw upon the various Institute resources and support services to explore the world of work to placement services for those ready to begin the job search. Through this assistance and referral, we can give you a better insight into the opportunities and challenges at RIT.

This involvement of the admissions staff allows them to keep in contact with students currently enrolled. Miller points out that although his role as director is primarily managerial, he acts as an advisor to a fraternity and still does counseling.

"If we're going to counsel incoming students intelligently, we all have to be involved with the day-to-day concerns of students who are already here. Our advisory functions keep us in touch," he remarks. "Plus the input of the students who work with us part-time in the office is great for providing regular communication and feedback."

The actual admissions procedure is another way in which the admissions staff maintains personal contact with students. A prospective student can expect the admissions staff person who initially interviews him or her to act as a liaison throughout the admission process. The counselor takes personal responsibility for following up on the status of each applicant.

Miller explains that Admissions is more interrelated with other depart-

merits . "We work closely with Financial Aid, the Counseling Center, the Learning Development Center, Central Placement, Records and Institutional Research, the NTID Admissions Office, alumni, and with each of the colleges so that better communication can be maintained. That's just one of the ways in which we're trying to make life—and learning—easier for the students as they experience the educational process at RIT."

Veterans Are Achievers

"Because our veterans are a little older and realize the value of an education, they undoubtedly try harder," says Gene Clark, director of Veterans Affairs. "They have proven that one's level of maturity and interest in self-development are key factors in successful completion of one's goals. Our average veteran at RIT usually has the added responsibility of a family. With this, of course, comes the added financial pressure of maintaining a home and, more often than not, a full-time job. Because of the complexities of governmental regulations and benefit payment," says Gene, "our veterans have become very dependent on our ability to service their needs. They come to the Office of Veterans Affairs for counseling, information, assistance with problems, tuition deferments, and just to say hello. We, for the most part, are all veterans and feel that having been there makes it easier for those who are to follow. Veterans helping veterans is the basis of our services."

The Office of Veterans Affairs ...conveniently located on the lower level of the college union and easily accessible for day and evening students...is open daily from 8 a.m. until 8 p.m., Monday through Thursday, and until 4:30 p.m. on Friday. The OVA staff is comprised of the director, program secretary, peer-counselors, and VA work-study students constantly handling inquiries and assisting veterans with VA related information. With their assistance, a veteran or dependent can be sure of a steady transition into and through the RIT educational experience.

"Successful contact with our veterans has proven that VA problems can be effectively dealt with before they have a negative impact on our vets," maintains Clark. "We are concerned that many veterans and the dependents of deceased and disabled veterans are not utilizing their benefits. Benefit payment rates have been recently increased and the

length of eligibility extended to 10 years for program completion."

Gene is a U.S. Air Force veteran and presently serves as a commissioned cavalry officer with the U.S. National Guard. His degree in business administration combined with his military experience and expertise in veterans' programs provide the background that enables him to successfully assist veterans and their dependents through the maze of veterans' benefits.

Costs

Payment Procedure/The Quarterly Pre-Billing

Charges at RIT are computed on a quarterly basis. The Institute must receive payment in full for each quarter before registration will be allowed. Any preregistered student whose payment is not received by the due date will not be eligible to officially register until payment is received. Any non-preregistered student must attend Open Registration Day and make payment at that time. Payments sent by mail should be made by check, payable to Rochester Institute of Technology. Due dates for the 1983-84 school year are as follows:

Fall Qtr.	August 17, 1983
Winter Qtr.	November 9, 1983
Spring Qtr.	February 13, 1984
Summer Qtr.	May 8, 1984

The student should receive the Quarterly Pre Billing approximately two weeks prior to the quarterly due date. Upon receipt of the student's payment in full, the Bursar's Office will process the payment and clear the student for registration.

Students whose college costs are paid by the G.I. Benefit Plan or their employer are required to submit the properly authorized deferment form. Quarterly pre-bills will be mailed to the student's permanent address.

Financial standing

Tuition and fees paid to the Institute cover approximately 60-70 percent of the actual expense of a student's education. The rest of the cost is borne by the Institute through income on its endowment and from the gifts of alumni and other friends.

Students, former students, and graduates are in good financial standing when their account is paid in full in the Bursar's Office. Any student whose account is not paid in full will not receive transcripts, diplomas or other forms of recognition or recommendation from the Institute.

The Institute reserves the right to change its prices without prior notice.

Tuition

The full-time (12-18 credit hours) undergraduate amount is \$1,853 per quarter.

The part-time (less than 12 credit hours) tuition is \$157 per quarter credit hour.

Any undergraduate carrying over 18 quarter credit hours will be charged \$1,853 plus \$157 for each credit hour over 18.

Please refer to the subsequent charts for more specific tuition information.

Other fees

In addition to the fees outlined in the following charts, certain groups of students may incur other fees as follows:

Residence Halls Association Fee—\$5 per quarter charged to all residence hall students.

Off Campus Student Association Fee—\$2 per quarter charged to all full-time undergraduates not living in the residence halls.

Photo Facilities Fee—\$19 per quarter charged to all full-time photo students.

Late Registration Fee—A late registration fee of \$25 is charged to any student who fails to register (and make the necessary financial commitment) by the designated quarterly open registration day and time.

Student Accident and Sickness Insurance Plan

All full-time students who have no other medical insurance and have not signed the waiver option are charged \$98 on the Fall Quarter pre-billing.

Deferred payment plan

For those students who are not able to pay the amount due by the designated date, RIT has made arrangements for deferred payment through a local bank. For further information regarding this plan call the RIT Bursar's Office at (716) 475-6186.

Books and supplies

These vary widely with the program followed and to some extent the electives chosen. Those having minimal expenses (e.g. sciences, business) will average \$250-300; in the arts and crafts, this may be in the neighborhood of \$1,000-\$1,5000; in photographic illustration or professional photography, a realistic allowance is \$1,500 in addition to cameras (but in photographic sciences and photo finishing, expenses are minimal).

Typical expenses

We can tell you what tuition, room and board, and fees will cost you. But estimates of personal expenses are up to the individual student. When estimating what you'll spend for a year at college, remember to count travel expenses, clothes, meals not counted in your board plan, and spending money. A typical full-time resident student would have the following academic year expense:

Tuition.....	\$5,559
Fees.....	120
Room.....	1,584
Board.....	1,578
Books.....	307
Personal & Transportation	805
Total	
	\$9,953

As indicated in the preceding paragraphs, expenses will vary according to individual circumstances. A detailed table of charges for tuition and fees according to program choice follows, follows.

Refund Policies

Advance deposits are non-refundable. The acceptable reasons for withdrawal with refund during the quarter are:

For a full refund

1. Active military service: A student called to active military service during the first eight weeks of the term may receive a full tuition refund. If called after the eighth week, he may elect to complete the course by making special arrangements with both his instructor and department, or to withdraw and receive a full tuition refund. If he withdraws, he will have to repeat the course at a later date.
2. Academic reasons: Students sometimes register before grades for the previous quarter are available. If such a student later finds that he or she is subject to academic suspension, or has failed prerequisites, the student will be given a full refund upon withdrawal. It remains the student's responsibility to contact his or her department to assure that the withdrawal form and refund are properly processed.
3. If part-time students drop a course during the Official Drop Period (first 10 days of classes during the specific quarter), they may contact the Bursar's Office for a 100% refund for that course dropped. Courses dropped after the Official Drop Period will not result in any tuition refund.

For a partial tuition refund

A student must officially withdraw or take leave of absence FROM THE INSTITUTE in order to be eligible for a partial tuition refund.

A partial refund will be made during a quarter if withdrawal/leave of absence is necessitated for one of the following reasons:

1. Illness, certified by the attending physician, causing excessive absence from classes
2. Withdrawal for academic reasons at the request of the Institute during a quarter
3. Transfer by employer, making class attendance impossible
4. Withdrawal for academic or personal reasons at the request of the student, approved by the student's advisor or department representative, the Institute coordinator for academic advising, and the bursar

These partial refunds will be made according to the following withdrawal schedule and percentage of tuition reduction:

- During the first week of classes - 90% tuition reduction
- During the second week of classes - 75% tuition reduction
- During the third week of classes - 60% tuition reduction
- During the fourth week of classes - 50% tuition reduction
- Fifth and subsequent weeks - No tuition reduction

Note: Non-attendance does not constitute an official withdrawal.

A student is not "officially withdrawn" until he or she receives a copy of the withdrawal form. The date on which a withdrawal form is properly completed shall be the date of "official withdrawal" used to determine the refundable amount.

If the student drops his or her course load from full-time (12 or more credits) to part-time (less than 12 credits) status during the Official Drop Period, he or she may contact the bursar for a refund based on the differential between the full-time tuition payments and the total per-credit-charge for the part-time load.

No refund will be made for classes dropped after the Official Drop Period unless the student is officially withdrawing from the Institute.

Fees are not refundable.

Appeals process

An official appeals process exists for those who feel that individual circumstances warrant exceptions from published policy. The initial inquiry in this process should be made to Richard B. Schonblom, bursar. Unresolved matters will be referred for further action to William J. Welch, controller.

Room and Board*

To complete a withdrawal from RIT, a resident student or a non-resident student on a meal plan must check out with Housing and/or Food Service. Refunds, when granted, are from the date of official check-out.

Partial refund schedule:

1. Room
 - a. During the first week of classes 90% of unused room charge
 - b. During the second week of classes 75% of unused room charge
 - c. During the third week of classes 60% of unused room charge
 - d. During the fourth week of classes 50% of unused room charge
 - e. Fifth and subsequent weeks - No refund
2. Board
 - a. During the first four weeks, 75% of unused board charge
 - b. After the first four weeks, 50% of the unused board charge

Financial Aid

There are a variety of scholarships, loans, grants, fellowships, and other aid programs available to help you pay for your education, and the best way to find out about them is to check with the RIT Student Financial Aid Office as soon as possible.

The main objective of the Student Financial Aid Office is to help students (including freshman, transfer, upperclass, and graduate) and their parents plan for and meet the costs of attending RIT.

It is RIT's philosophy that eligible students will be considered for financial assistance according to financial need. Normally this is arranged as a package of aid, consisting of scholarship, grant, loan, and/or employment in conjunction with outside scholarships and grants such as the New York State Tuition Assistance Program and Regents Scholarship, Pell Grant (formerly Basic Education Opportunity Grant), or other state and federal awards. Also, there is a full range of benefits available to eligible veterans attending RIT.

RIT's cooperative programs offer participating students an opportunity to make a very significant contribution to their total college expenses in addition to the valuable experience gained on the job.

Additionally, through the Student Employment Office, there are many part-time positions available to help

*A specific rate schedule is available in the Housing Office.

An Aid To Estimating Tuition, Fees

i

College	School, Department or Program	Co-op	Year	Tuition Per Year	Fees ^f	Total Per Year	Quarterly Payments ^g		
							1st Qtr.	2nd Qtr.	3rd Qtr.
College of Applied Science and Technology	Computer Science and Technology	Yes	1 & 2 3, 4, 5	5064 3376	105 70	5169 3446	1723 1723	1723 1723	1723
	Engineering Technology	Yes	1 & 2 3,4,5	5064 3376	105 70	5169 3446	1723 1723	1723 1723	1723
	Food, Hotel and Tourism Management	Yes	Each Year	5064	105	5169	1723	1723	1723
	Packaging Science	No	Each Year	5064	105	5169	1723	1723	1723
	Audiovisual Communications Instructional Technology	No	1 & 2	(Completion of 2 years at another college)					
		3,4	5064	105	5169	1723	1723	1723	
Business	Bus. Administration Retailing	Yes	1	5064	105	5169	1723	1723	1723
			2 "	5064	105	5169	1723	1723	1723
3			3376	70	3446	1723	1723	1723	
4			5064	105	5169	1723	1723	1723	
	Photo Marketing	No	Each Year	5064	105	5169	1723	1723	1723
Engineering	Electrical Mechanical, Industrial, or Computer Engineering	Yes	1 & 2	5064	105	5169	1723	1723	1723
			3, 4,5	3376	70	3446	1723	1723	
Fine and Applied Arts	Art and Design School for American Craftsmen	No No	Each Year	5064	105	5169	1723	1723	1723
Graphic Arts and Photography	Photographic Arts and Sciences Printing	No No	Each Year	5064	156	5220	1740	1740	1740
Liberal Arts	Criminal Justice Social Work	Yes	Each Year	5064	105	5169	1723	1723	1723
Science	Biology Mathematics, or Physics	Yes	1 & 2	5064	105	5169	1723	1723	1723
			3, 4,5	3376	70	3446	1723	1723	
	Chemistry	Yes	1	5064	105	5169	1723	1723	1723
			2-5	3376	70	3446	1723	1723	
Health Related Professions Involving Clinical Science	No	1,2, 3	5064	105	5169	1723	1723	1723	
		4	(Full-time internship in approved hospital)						
Counseling Center	Career Decision	No	Only 1	5064	105	5169	1723	1723	1723

Note: Books and supplies are not shown in the tables above, since they vary so much with each program. It is, however, essential that they be remembered in budgeting for upperclass years. This is especially true for students in arts and photography.

[†]Does not include Residence Halls Association Fee, Off Campus Student Association Fee, Orientation Fee or Medical Insurance Fee (optional)

*Incooperative program, students pay tuition only for quarters at RIT; normally two per year in alternate quarters.

**Students in College of Business attend classes for 11 quarters over the 4-year program. Payments are due for quarters assigned to school, which may differ in time but not in quantity from above chart.

*** if printing students elect to follow the voluntary cooperative plan, tuition is charged only for quarters at RIT.

Any undergraduate carrying over 18 quarter credit hours will be charged regular tuition plus \$143 for each quarter credit hour over 18.

Tuition for part-time undergraduate students (carrying fewer than 12 quarter credit hours) is at the rate of \$143 per quarter credit hour.

Student Activity Fee is assessed at \$5 per quarter.

Note: RIT matriculated day college students taking CCE courses will be charged the day college tuition rates.

A graduation fee of \$15 is payable at the beginning of the Spring Quarter of the year in which the student expects to receive an associate's or bachelor's degree. The graduation fee charge for those receiving a master's degree is \$20, which also includes rental of the master's hood.

defray expenses. Those needing the income from full-time employment should consider attending RIT's College of Continuing Education evenings.

Inquiries for all types of financial assistance should be directed to the RIT Office of Student Financial Aid, One Lomb Memorial Drive, P.O. Box 9887, Rochester, N.Y. 14623; phone (716) 475-2186.

Scholarships

The RIT Board of Trustees has provided a scholarship fund from which general awards are made to entering freshman and transfer students. Other scholarships have been provided by the gifts of the alumni, friends, corporations, foundations, and the income from permanent funds.

Scholarships from these sources may vary in amounts from \$100 to \$5,559. The amount of the scholarships and the recipients are determined on the basis of entrance examination data, high school and/or previous college record, and the need for financial aid. These are one-year scholarships. Students receiving scholarship aid may apply for renewal of their award each subsequent year. In all cases the stipend is based on financial need.

A number of industry or business sponsored scholarships are available to entering students in specific departments. In some cases the scholarships are restricted to students from a particular geographic area. In general, scholarships of this type are for three to five years of study, and the student must maintain a specified academic average. Scholarships in this category vary in size from \$300 to \$5064.

The Financial Aid Form (FAF) of the College Scholarship Service (CSS) is required each year for scholarship consideration. Financial Aid Forms received at CSS on or before March 1 each year receive first priority consideration. Applications received after that date will be considered if funds remain available.

International student scholarship fund

The purpose of this scholarship is to assist international students attending RIT who qualify in meeting their educational obligations. A limited number of small scholarships are awarded annually winter quarter. Applicants must possess an F-1 visa, be full-time matriculated students and should not already be on a fully funded scholarship. To be eligible, applicants must also be in residence at RIT for three quarters if an undergraduate or one quarter if a graduate

student and should not be a previous recipient of this scholarship. Awards are determined by the International Student Scholarship Committee. Criteria for selection include academic performance with a G.P.A. of 2.8 and demonstrated financial need. For further information, visit the Office of International Student Affairs located on the second floor of the Administration Building.

Tuition payment plans

Monthly payment programs are available through a number of commercial banks and agencies. Inquiries regarding these programs should be directed to the RIT Student Financial Aid Office.

Non-residents

There are no additional charges or fees for RIT students coming from states other than New York State.

To apply for aid

To be considered for financial aid, a student should be enrolled as a full-time or part-time student or have been offered admission as a full-time student.

Although applications for financial aid aren't processed until a student has been accepted, a student shouldn't wait until receiving notification of acceptance to file for financial aid. This should be done when applying to the Institute. Students are urged to file the Financial Aid Form with the College Scholarship Service between January 1 and March 1 each year. Applications received in Princeton after March 1 will receive secondary consideration depending upon the availability of funds.

The Financial Aid Form is the basic form used in determining eligibility for most financial aid programs.

Completion of this form entitles an applicant to be considered for all types of financial aid offered through RIT. (In a few cases special applications are required and eligible applicants will be notified.)

The confidential statement forms published by the College Scholarship Service may be obtained at local high school guidance offices, local college's financial aid offices, RIT's Financial Aid Office, or by writing directly to College Scholarship Service, Box 176, Princeton, New Jersey 08540.

Freshman and transfer students can expect notification of financial aid awards by April 15, and upperclass students can expect award notification during May and June.

RIT awards financial assistance primarily on the basis of need. Financial

need is defined as the difference between the cost of education and the amount of money that the student has available from outside resources. Outside resources include the expected parental contribution based on their income and assets, student's assets and expected summer savings, outside grants, scholarships, and funds borrowed through the guaranteed student loan program.

Selection and eligibility—campus based aid programs

Campus based aid programs include National Direct Student Loan, Supplemental Education and Opportunity Grant, College Work Study, RIT Grants, and RIT Scholarships.

To be awarded financial aid, an individual must be admitted as a degree candidate. The student must be a matriculated student at the time he/she receives aid. RIT makes every effort to continue financial assistance to students each year provided they remain in good academic standing, file the required applications by the recommended deadlines, and financial need continues to be demonstrated.

Continued receipt of financial assistance is contingent upon continued demonstration of academic progress. A student may become ineligible to receive further assistance for any of the following reasons:

- Failure to demonstrate academic progress according to the standards set by the dean of the student's college.
- Loss of matriculated (degree seeking) status.
- Failure to meet minimum standards of progress established by the New York State Education Department for the awarding of state tuition grants and scholarships. These standards for associate's degree and bachelor's degree programs are listed on the next page.

Awards are based primarily on financial need and the availability of funds. Academic achievements and community involvement may also be considered. Renewal awards to upperclassmen may be increased or decreased and may be offered in different combinations of grant, loan and work.

Students who are not registered for a minimum of 12 credit hours will not receive campus based awards for that quarter.

State Aid—New York Tuition Assistance Program (For N.Y. Residents Only) (TAP)

The tuition assistance program attempts to minimize the difference in cost normally found between New

York public and independent colleges so that students are able to make their choice based on program characteristics alone and not the difference in cost. There is no competition for TAP support.

Selection and eligibility for New York State Tuition Assistance Program

In order for a student to receive a Tuition Assistance Program Grant, an

individual must be admitted as a full-time matriculated student, meet New York State income requirements, must pursue the program of study in which he/she is enrolled and must make satisfactory progress towards completion of his/her program of study. Listed below are the approved standards of satisfactory progress for the associate degree and baccalaureate degree respectively.

Responsibilities

Recipients of financial aid from the Institute are responsible for reporting any significant changes in their financial situation during the year to the director of Financial Aid, who will review and may revise the applicant's financial aid accordingly. Financial aid recipients are also expected to assist in financing their education.

Standard of Satisfactory Progress for the Purpose of Determining Eligibility for State Student Aid

Baccalaureate Degree - Quarter System

Before Being Certified for This Payment	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
A Student Must Have Accrued at Least This Many Credits	0	3	9	20	32	44	56	68	80	92	104	116	132	148	164
With at Least This Cumulative Grade Point Average	0	.50	.75	1.00	1.20	1.30	1.40	1.50	1.60	1.65	1.70	1.75	1.80	1.85	1.90

**Only students in the HEOP program at RIT are eligible for more than 12 quarters of undergraduate awards.*

Standard of Satisfactory Progress for the Purpose of Determining Eligibility for State Student Aid

Associate Degree - Quarter System

Before Being Certified for This Payment	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
A Student Must Have Accrued at Least This Many Credits	0	3	9	20	32	44	56	68	80
With at Least This Cumulative Grade Point Average	0	.50	.75	1.00	1.20	1.30	1.40	1.60	1.80

Undergraduate Financial Aid at a Glance

Scholarship/Grant	Eligibility	Amounts	Where to apply
Regents College Scholarship (New York State)	New York State residents who plan to attend college full-time and qualify through an examination in the senior year of high school.	\$250 per year.	N.Y.S. Higher Education Services Corp., 99 Washington Ave., Albany, NY. 12255
Regents Award for Children of Deceased Police Officers or Firefighters	Residents of New York State who are children of certain deceased policemen or firefighters.	\$450 per year.	N.Y.S. Higher Education Services Corp., 99 Washington Ave., Albany, NY. 12255
Tuition Assistance Program (New York State)	New York State residents who show ability to pursue full-time programs and meet state income requirements.	\$250 to \$2,200 per year.	N.Y.S. Higher Education Services Corp., 99 Washington Ave., Albany, NY. 12255
Regents Awards for Children of Deceased and Disabled Veterans (New York State)	New York State residents who are children of certain deceased and disabled veterans, and are enrolled full-time.	\$450 per year.	N.Y.S. Higher Education Services Corp., 99 Washington Ave., Albany, NY. 12255
Pell Grant (Formerly Basic Educational Opportunity Grants) (Federal)	Undergraduate students who are pursuing their first bachelor's degree, in financial need, attending post-secondary institutions on at least a half-time basis.	\$135 to \$1,800 per year.	File Financial Aid Form requesting submission to Pell Grant or file separate Pell Grant application.
Supplemental Educational Opportunity Grants (Federal)	Students of academic promise who are accepted for college study and are in exceptional financial need, and are pursuing their first bachelor's degree.	\$200 to \$2,200 per year for full-time students.	Through RIT by use of the Financial Aid Form. File F.A.F. between Jan. 1 and Mar. 1 each year."
War Orphans Educational Assistance (Federal)	Children of certain deceased or disabled veterans.	Up to \$220 per month.	Veterans Administration.
Social Security Education Assistance	Children whose parent(s) is deceased or retired.	Amounts per month vary.	Social Security Administration.
ROTC	Students enrolling in ROTC and who are academically qualified.	Tuition, fees, books, and monthly stipend.	RIT Department of Military Science.
Veterans Benefits	Veterans.	Amounts per month vary upon full-time/part-time status and number of dependents.	RIT Veteran Affairs Office.
RIT Scholarships and Grants	Eligibility varies.	Amounts vary.	File Financial Aid Form between Jan. 1 and Mar. 1 of each year."
Higher Education Opportunities Program (HEOP)	Economically and academically disadvantaged residents of New York State.	Amounts vary.	Director of HEOP at RIT.
Other State Grants	Eligibility varies.	Amounts vary.	Consult your state's education department.
Student Loans			
Guaranteed Student Loan (GSL)	Must be at least a half-time student.	Undergraduates - up to \$2,500 per year. \$12,500 cumulative maximum.	Local Lenders.
Auxiliary Loan to Assist Students (ALAS)	Must be at least half-time and qualify as an independent student.	\$2,500 per year minus any amount borrowed under Guaranteed Student Loan in the same year.	Local Lenders (It is recommended that the student apply for Guaranteed Student Loan First.)
Parent Loan for Undergraduate Students (PLUS)	Parent with a dependent who is full-time student.	\$3,000 per year for each dependent who is a full-time student	Local Lenders.
National Direct Student Loans	College students who meet financial need requirements established by Federal Government.	Up to \$3,000 for first two years of undergraduate study. Maximum of \$6,000 for four and five years of undergraduate study; \$5,000 for graduate study.	Through RIT by use of the Financial Aid Form. File between Jan. 1 and Mar. 1 each year."
Employment			
College Work Study Program (Federal)	College students in full- and part-time degree programs who meet financial need requirements established by Federal Government.	Varies, depending on hours and wage rate. Wages range from \$3.35 to \$4.95	Through RIT by use of the Financial Aid Form. File between Jan. 1 and Mar. 1 each year."
Other college part-time work	Considerable variation in kinds of positions, hours, and wages.		Consult other RIT publications and RIT Student Employment Office.

¹NOTE: For first priority consideration, the F.A.F. must be **received** in Princeton, New Jersey, by March 1 each year. To assure timely receipt, it is recommended that the document be mailed by February 20 each year.

Admission Procedures and Services

¹Specific entrance data for each college is listed in a chart near the beginning of each college section in this bulletin. For each program, we have indicated the required high school subjects, desirable elective subjects and other factors considered by the Admissions Committee. We have also indicated minimum grade point averages required of students who are transferring from another college.

General information

Your high school or previous college record is usually the best predictor of success. If your high school rank is below the 50th percentile of your class, some other factors that could indicate a potential for success are: (1) better than average grades in the required high school subjects, (2) an improving record of achievement as you progressed through high school/college, (3) above average admission test scores, (4) graduation from a highly competitive high school whose graduates are usually successful in college, and (5) post high school experience in service or employment that gives evidence of potential for success.

When applying for admission to RIT, one applies for a degree program in one of the individual colleges. However, there is opportunity for electing courses in other colleges as they meet personal goal objectives, and some programs are purposely designed for interdisciplinary experience. In general, serious thought about a career is assumed. Education is thus more direct, and graduates are eagerly sought for their professional competence.

To apply as a freshman student

To apply as a freshman student, you submit your completed undergraduate application and nonrefundable \$25 fee, official high school transcript and entrance examination scores. Applicants are required to have results of the Scholastic Aptitude Test (SAT) or the American College Test (ACT) submitted to the Admissions Office. Locations of test centers throughout the world, test dates, and application fee information can be obtained from your school or by writing to: College Entrance Examination Board, P.O. Box 592, Princeton, N.J. 08540; or P.O. Box 1025, Berkeley, Calif. 94701; The American College Testing Program, P.O. Box 414, Iowa City, Iowa 52243.

To apply as a transfer student

RIT welcomes transfer students. Currently, more than 45 percent of our students began their education at another college.

To apply as a transfer student, you submit your completed undergraduate application and nonrefundable \$25 fee to the Admissions Office. In addition, the following rules apply to transfers:

1. You do need to submit official transcripts of all college study completed.
2. Provide us with a list of the courses you are now taking not listed on your transcript, and any others you expect to complete prior to enrollment at RIT.
3. If you've already earned 16 or more college credits, submission of SAT or ACT test scores is optional.
4. If you've completed two or more years of college prior to enrollment at RIT, you do not need to submit your high school transcript.

All transfer applicants are responsible for insuring that required official transcripts and other documents have been received by the RIT Admissions Office.

Transfer credit

If you've completed studies at another college before coming to RIT, we'll place you at the highest level at which your success in a program can reasonably be expected.

We'll give you junior or senior standing in most programs if you've earned an associate's degree (AS or AAS) or equivalent in programs comparable to the RIT program you select. A cumulative average of "C" or better is required.

We'll admit you to transfer adjustment study in the summer term to facilitate your transfer, particularly if you'll be majoring in electrical engineering, fine arts or photography. See applicable program descriptions in this bulletin.

If you've had only a small amount of college study or will be making a significant program change when you come to RIT, we'll determine your transfer credit by an evaluation of individual courses in which you earned a "C" grade or better. Admission will be based on our prediction of probable success in the RIT program of your choice.

RIT students who wish to take courses at other accredited institutions and receive transfer credit

towards their RIT degree need to secure the prior written approval of the dean(s) of the RIT college(s) concerned in order to assure the appropriateness of the course content and course level for those courses.

Credit by examination

RIT grants credit for satisfactory scores on examinations covering objectives and contents parallel to the RIT courses for which you seek credit. Usually these are CEEB Advanced Placement or College Level Examinations, New York State Proficiency Examinations, or RIT-prepared examinations. Contact the director of Admissions for procedures.

Credit for non-traditional learning

Credit may be acquired through an evaluation of non-traditional studies or learning acquired from life experience. Requests for credits where no existing course at RIT matches the student's experiential learning should be directed to the Admissions Office.

Visit to campus

We encourage campus visits and personal interviews in order that you may see firsthand the modern 1,300 acre campus and be provided answers to questions you may have. A personal visit will further overall understanding of the Institute, what it has to offer academically and the many services that are available.

To arrange for a tour or counselor interview, simply call the Admissions Office, (716) 475-6631, Monday through Friday between 9 a.m. and 4:30 p.m.

Action on applications

RIT accepts students on a "rolling admissions" basis. This means that applications are reviewed and decisions regarding acceptance are made within a few weeks after the application and supporting documents are received in the Office of Admissions. RIT begins accepting applications in September for the following September.

Because of this policy, and because many of RIT's programs fill to capacity very early in the year, it is to a student's advantage to apply as early as possible for admission.

When all required information is received, you will be notified of one of the following actions:

1. Acceptance to your program of study. A transfer student will receive

an evaluation showing credit granted and our estimate of time needed to complete your selected program.

2. Acceptance to program of study, but placed on a waiting list because available places in that curriculum have been filled. When vacancies occur, those judged to be the strongest candidates are selected from the waiting list. The probability of vacancies for those on the waiting list is not predictable. Those remaining on waiting lists will be considered for future entrance dates only if they specifically so request.

3. Deferral of action until more recent grades, test scores or other data requested are available.

RIT admits students without regard to race, color, sex, marital status, disability, or national or ethnic origin.

Early admissions

Occasionally a student will complete the prescribed number and adequate distribution of high school units in three years of high school with the exception of fourth year English and/or history. In such instances, he/she may seek admission to RIT under the Early Admissions Program; i.e., without certification of high school graduation. If admitted, the student must fulfill the senior year high school course and first year college course concurrently, and upon successful completion of the course, is then certified for high school graduation by the high school.

Physical examination

A physical examination is required. Submit your exam report on the form provided with your offer of admission before your first RIT registration.

Admission deposit

A \$200 nonrefundable advanced acceptance of admission deposit reserves a place in your class and is credited to your first quarter's tuition. The due date will be indicated with your offer of admission. For students entering in September, this is May 1, or within two weeks after acceptance, whichever is later.

International students

Students from countries outside the United States are extended a cordial welcome to study at RIT. Arthur Friedel, assistant director of Admissions, handles international student admissions. He assists students from other lands with some of the questions they face in the admissions process. His telephone number is (716) 475-6631.

The international community is well represented at RIT, with approximately 70 faculty and nearly 250 students from more than 45 countries.

Requirements of admission include the satisfactory completion of secondary schools, which may vary from country to country, but generally represent 12 years of study.

Students who have attended other colleges or universities must arrange to have the college or university send complete, official transcripts, with English translations, directly to the Admissions Office for evaluation. Credit for advanced standing may be awarded only for courses comparable to those offered at RIT and with a grade of at least "C" or the equivalent.

International students should be prepared to meet all expenses in full, as employment opportunities are limited and student aid is rarely available.

Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) administered by the Educational Testing Service, Box 899, Princeton, New Jersey, 08540, USA. This test will be given throughout the world in these months: September, November, February, April, and May. The minimum score for admission is 525.

When applicants are judged acceptable, RIT will prepare and forward an official letter of admission and copy of Certificate of Eligibility, Form I-20. The I-20 should be taken to the nearest American Consul for the purpose of securing a Non-Immigrant "F" Student Visa. Applicants must also show evidence of their ability to pay all their expenses, through their own means, for the entire period of their stay in the United States by submitting the Declaration and Certification of Finances. Usually some time is required to complete this operation.

The Office of International Student Affairs serves as the focal point on campus for all international students regardless of their programs of study. The office provides assistance with student immigration matters, serves as a resource center for campus and community activities, and helps students solve problems encountered while away from home. The office staff also plans a five-day orientation program for new international students each fall quarter and facilitates contact with the Rochester International Friendship Council to provide friendship and hospitality to international students. After acceptance, the international student may wish to correspond with:

Mrs. Barbara Letvin
Director, International Student Affairs
Rochester Institute of Technology
One Lomb Memorial Drive
Box 9887

Rochester, New York 14623

The RIT International Student Association is committed to providing support and assistance to international students as well as working with the Office of International Student Affairs to develop intercultural programs and activities. International applicants who wish to correspond with a student from their country should write to: President of RIT International Student Association, in care of Barbara Letvin, at the address above.

ESOL Department

The ESOL (English to Speakers of Other Languages) Department in the Learning Development Center provides individual instruction and classes in pronunciation, grammar, writing, conversation and reading as a support service to matriculated international students. For a fee international students can receive assistance in any aspect of the English language. A full-time intensive English language program is also available.

All international students are required, upon their arrival, to take a battery of English tests. The results of these tests are sent to the student's department chairman with recommendations of course load. If students' scores indicate that they are deficient in English, they will be required to take a minimum of two hours per week of English language instruction per quarter at a cost of \$100.

Deaf students

Students with a severe to profound hearing loss may be eligible for admission to RIT with the support of the National Technical Institute for the Deaf (NTID).

NTID is described in greater detail on pages 120-123 of this bulletin. Deaf students can request additional information about NTID at RIT by writing to:

Associate Director of Admissions
(NTID)
Rochester Institute of Technology
One Lomb Memorial Drive
P.O. Box 9887
Rochester, New York 14623

Registration and Student Records

Office of the Registrar

The Office of the Registrar operates the systems in which courses are scheduled, students register and student academic records are maintained.

The scheduling process

The development of the quarterly course and exam schedule is coordinated by the Registrar's Office in conjunction with the academic departments. The goal is to produce schedules that provide:

- (1) effective utilization of resources (e.g., classrooms, instructors, time)
- (2) equitable accessibility to courses and
- (3) ample opportunity for normal progress toward degrees.

In short, course and examination schedules are directed at fulfilling curricular requirements while accommodating student interests.

Registration

RIT provides three opportunities to register for classes. These are: pre-registration, open registration, and late registration. The earlier the registration in which students participate, the better the opportunity of obtaining their choices. To be officially enrolled in the Institute, students must be academically eligible, scheduled into courses, and must have made the required financial commitment.

Students are expected to complete registration (including the payment of all fees) by the dates prescribed in the Institute Calendar. Students who elect to register after Open Registration will be assessed a \$25 late fee. After registration, any student who has added a course, but who has not made his or her financial commitment with the Bursar's Office, will be dropped from all courses during the second week of the quarter.

Non-matriculated registration

Students who are not formally accepted into a program register as non-matriculated students. This registration occurs the day following Open Registration. Students who participate in this registration are not subject to the late registration fee.

Changes of registration

Any change in enrollment must be recorded with the Office of the Registrar. Students may add classes to their academic schedule during the first five days of a quarter, and drop classes during the first two weeks (excluding Saturday, Sunday, and holidays).

Student records

Confidentiality of records. In accordance with the Family Education Rights and Privacy Act of 1974 (commonly known as the Buckley Amendment), RIT students have the right to inspect, review, and challenge the accuracy of official educational records.

RIT policy ensures that only proper use is made of such records. Therefore, with the exception of copies made for internal use (e.g., those provided to departments for advising functions), in most cases, no copy of a student's permanent record (transcript) or non-public information from student records will be released to anyone without the student's written consent. If an employer, for example, requests a transcript, he or she will have to obtain a written request from the student. For more detailed information concerning the Act, see the FACTS booklet.

At the time of registration, but not later than 14 days after the beginning of a term, students may request the Office of the Registrar, in writing, not to release directory information pertaining to them. "Directory Information" includes the following: a student's name, mailing address and telephone number, date and place of birth, major field of study, participation records in official RIT activities and sports, weight and height if a member of an athletic team, dates of attendance at RIT, degrees and awards received.

Transcripts. A transcript of a student's official academic records is maintained in the Office of the Registrar. It contains a detailed statement of the scholastic record.

All requests for transcripts must be in written form. Each transcript request should include full name or names used, social security number, and dates of attendance to assure proper identification of the record requested. The charge for each copy of a transcript is \$2. Transcripts can usually be obtained by a student within 48 hours after the request is submitted. During exam week and the week following exams, it may take longer to prepare a complete transcript.

No partial transcript will be issued.

No transcript will be issued to a student who is indebted to the Institute.

Transcripts issued directly to students are stamped STUDENT COPY.

Grade reports. Grade reports are prepared after the completion of each quarter. For Fall and Winter Quarters, day college undergraduate students will receive their grade reports through their department mail folders. For Spring and Summer Quarters, all grade reports will be mailed directly to the permanent address.

Change of name or address

It is the obligation of every student to notify the Office of the Registrar of any changes in name or address. Failure to do so can cause serious delay in handling student records.

Student retention

Based on a summary of the most recent cohort survival statistics, RIT's student retention rate is 49 percent for students entering at the first year level and graduating four to five years later (the period between entry and graduation depending upon a student's particular program of study).

Excluding part-time and non-degree students in the College of Continuing Education, 77.48 percent of first year full-time day students register for their second year; and 80.03 percent of third year students continue through graduation (fourth or fifth year depending upon the program).

RIT is currently developing a comprehensive study of the progress of students, which would include factors to predict retention for all student populations such as those on cooperative education work blocks and the large number of part-time and non-degree students.

The statistics reported herein have been computed in a manner consistent with data reported to the State Education Department through the Institute's Office of Institutional Research.

Academic Standards and Regulations

Rochester Institute of Technology stresses programs that lead to a high level of technical and professional competence. Programs of study are offered which lead to degrees at the associate, baccalaureate, and master's levels. Certificate, diploma and associate's degree programs are offered by the College of Continuing Education and the National Technical Institute for the Deaf. For information on these programs please refer to the individual college's catalog or bulletin.

Graduate degree programs

The many programs leading to graduate degrees are fully described in the separate Graduate Bulletin, available from the Admissions Office.

Grading system

Grades representing students' progress in each of the courses for which they are registered are given on a grade report form at the end of each quarter of attendance.

The letter grades are as follows:

- A Excellent
- B Good
- C Satisfactory
- D Minimum Passing
- E Conditional Failure
- F Failure
- I Incomplete
- R Registered
- S Satisfactory (non-credit)
- W Withdrawn
- X Credit by Examination
- Z Audit

A grade of "W" will be assigned in courses from which a student withdraws after the second week of classes or if a student withdraws from all courses in a given quarter. A student can change from credit to audit or from audit to credit status for a course only during the first 10 days of classes.

An X grade indicates successful completion of an external or Institute examination, provided such examination covers or parallels the objectives and content of the indicated course. Credit must be assigned in advance of any credit received through registration for the indicated course.

For exact policy and procedural statements on the above see the Educational Policy and Procedures Manual available in the Student Affairs Office or on reserve in the Wallace Memorial Library.

Quality points

Each course has credit hour value based upon the number of hours per week in class, laboratory or studio, and the amount of outside work expected of the student.

Each letter grade yields quality points per credit hour as follows:

- A — 4 quality points
 - B — 3 quality points
 - C — 2 quality points
 - D — 1 quality point
- E and F count as 0 in computing grade point average (G.P.A.) R, W, Z, S, X and I grades are not used in computing G.P.A.

The grade point average is computed by the following formula:

$$GPA = \frac{\text{Total Quality Points earned}}{\text{Total quality hours}}$$

Academic probation and suspension policy

Matriculated undergraduate full-time and part-time degree students will be placed on probation or suspended from the Institute according to the criteria enumerated herein. All actions are taken at the end of the quarter. However, a student may petition the dean of the college for reconsideration of probation or suspension should the removal of an incomplete grade (I) raise the appropriate Grade Point Average above those stated below. Each matriculated student will generate three different grade point averages. The *Institute* average reflects all course work completed at RIT. The *Program* reflects course work completed at RIT applicable to graduation in a student's current academic program. The current academic program refers to the Institute and college degree course requirements specified by the degree granting college and noted in the Institute catalog. The third average, in the *Principal Field of Study*, reflects course work completed in a student's specialized field of study.

1. Any student whose program Quarterly Grade Point Average falls below 2.00* or whose Cumulative Grade Point Average in the principal field of study** (based upon at least 20 credit hours attempted in the principal field at RIT) falls below 2.00 will be *placed on probation*.

2. Any student who has been placed on probation according to (1) above is *removed from probation* for achievement of both a 2.00 Program Quarterly Grade Point Average and a 2.00 Cumulative Grade Point Average in the principal field of study, based upon at least 20 credit hours attempted in the principal field at RIT.

3. Any student who is on probation according to (1) above and who is not removed from probation in the two succeeding periods of study in which credit is earned, will be

suspended from RIT for a period of not less than one quarter.

4. Any student who has been placed on probation after having been removed from probation and whose Program Cumulative Grade Point Average is below 2.00 will be suspended. Any student who has been placed on probation after having been removed from probation and whose Program Cumulative Grade Point Average is 2.00 or above will be granted one quarter to be removed from probation or he/she will be suspended from RIT.

5. Any student whose Program Quarterly Grade Point Average falls below 1.00 will be suspended from RIT.

6. Any student who has been readmitted to his or her original program, after being suspended, and then goes on probation will be suspended from RIT.

7. A suspended student may not enroll in any academic course at the Institute while on suspension. When there is evidence that the student's scholastic problems are the result of inappropriate choice, or other extenuating circumstances, the suspension may be waived or the student may be admitted to another program or allowed to take courses on a non-matriculated basis if it is approved by the dean of the college in which the enrollment is required.

In evaluating the request for waiver of suspension, the dean may seek the recommendation of the Counseling Center as to the appropriateness of the program for the career goals of the student under consideration.

8. A student may apply to the Office of Admissions for re-admission at the end of his suspension. His re-admission must be approved by the dean of the college he wishes to attend upon his return (this may be his original college or another).

Disciplinary probation

Students are expected to conduct themselves at all times in such a way as to reflect credit on themselves and the Institute. Any student guilty of flagrant violation of good conduct may be warned, placed on probation, or in serious cases, dismissed from the Institute.

*"C" Average

"The principal field of study is defined to be all courses within the college offering the program. For the Computer Engineering, Packaging, Criminal Justice, Social Work and Printing Systems Management programs, programs within the College of Continuing Education and NTID, and new interdisciplinary programs the appropriate professional courses will be identified (and so indicated in official publications) as being part of the principal field of study."

Class attendance and other rules

Students are expected to fulfill the attendance requirements of their individual classes. Rules and regulations relating to conduct in the residence halls and use of general campus facilities are issued directly by the appropriate offices of the Institute and published in the student handbook.

It is the responsibility of all students to attend their scheduled classes regularly and punctually in order to promote their progress and to maintain conditions conducive to effective learning.

Absences for whatever reason do not relieve students of responsibility for fulfilling normal requirements in any course. In particular, it is the student's responsibility to make individual arrangements in advance of missing class due to personal obligations such as religious holidays, job interviews, athletic contests, etc., in order that they may meet their obligations without penalty for missing class.

Attendance at Saturday classes may be required. The Institute reserves the right to alter any of its courses at any time.

What You'll Need For Graduation

The following general requirements apply to students who are candidates for an undergraduate degree.

Certificates and diplomas

1. Satisfactorily meet the program requirements of the college.

Associate's and baccalaureate degrees

1. Successfully complete all required courses of the Institute and

college including cooperative employment where applicable.

2. Full payment or satisfactory adjustment of all financial obligations.

3. A minimum of 45 quarter credit hours shall be successfully completed in residence at the Institute in the college granting the degree (inclusive of service courses). If the student has successfully completed 45 credit hours in residence he or she may petition the dean to study 15 quarter credit hours in absentia in the final year of the degree; a minimum 30 of the 45 quarter hours are to be completed in residence.

4. A program grade point average of 2.00.

5. Minimum number of quarter credit hours as required by that college, but in no case shall this be less than 90 quarter credit hours for the associate's degree and 180 quarter credit hours for the baccalaureate degree.

6. Physical education requirements as published in this *Official Bulletin*.

7. Demonstrate competence in writing skills as established in the Institute's writing policies.

Writing policy

The writing policy of Rochester Institute of Technology is meant to insure that each graduate develops sufficient skill in the use of the English language to function as an educated member of society and to meet any special demands for written communications likely to be expected in his or her intended career.

Students must demonstrate that they have the writing skills needed for successful entry into their chosen careers. At least three academic quarters before the student's anticipated completion of baccalaureate degree requirements, the department faculty will determine whether the

student has met departmental writing standards. A full description of these standards and certification procedures is available from each department. Students whose writing does not meet standards will have to take remedial measures recommended by the department.

Students must meet the departmental writing standards before they can graduate. The nature and standards of departmental writing requirements will be consistent with Institute policy and will be reviewed by the Institute Writing Committee.

For the master's degree

See separate Graduate Bulletin, available from the Admissions Office.

Commencement

Candidates for the Institute's certificates, diplomas, associate, baccalaureate and master's degrees are expected to attend commencement ceremonies. Candidates may be excused from such attendance with the explicit approval of their dean.

Certification for degree

Upon completion of the stipulated requirements, a student's academic department certifies him or her for a degree. A statement of requirement completion will be listed on the transcript in the appropriate term. *After commencement*, a statement verifying that a degree has been awarded will be posted to the transcript. Degrees for fall, winter, and spring graduates are mailed during the Summer Quarter. Degrees for summer graduates are mailed during the Fall Quarter.

Student Affairs Offers Services For Help in and out of Classroom

What happens in the classroom is a part of a college education. But what happens outside the classroom can be almost as important.

The Division of Student Affairs at RIT coordinates many services provided to students during their years at college.

The division includes Physical Education, Intercollegiate Athletics, Residence Life, Student Health Service, Student Activities, International Student Affairs, College-Alumni

Union, Religious Activities and the Chaplaincy, Counseling Center, Minority Affairs, Higher Education Opportunity Program (HEOP), Orientation and Special Programs, Upward Bound, Special Services, Judicial Affairs and Horton Child Care Center.

Life on campus is a living, as well as a learning, experience. Students, with the counseling of trained resident staffs, have their own governing organizations and develop social programs. A wide variety of athletic,

social and professional activities is available for all students.

Complementary Education

Viewed as a necessary dimension of the student's education at RIT, Complementary Education formally recognizes and encourages important experiences that happen outside the classroom that complete and enhance the traditional academic activities of the Institute. Its essential aim is to further the professional development

of students by aiding the colleges in establishing programs within the context of their own curricula. It will supplement their curricula in four broad content areas—personal and social development, learning skill development, civic competence, and leisure and avocational skills.

Complementary Education is multifaceted. The Complementary Education Grants Program makes funds available to students, faculty and staff who want to develop unique kinds of experiences. These projects are not credit bearing, but formal recognition that describes what was learned is offered.

Some specific programs that make up the total Complementary Education concept include the Community Services Program, which provides students with the opportunities to volunteer with non-profit agencies in the Rochester area and which focuses on the importance of civic awareness; the Educational Travel Program, which is unique in its approach to exploring new places behind the scenes and in expanding the campus outside the walls of RIT; the Outdoor Education Program, which is an intriguing way to learn decision-making and group interaction skills using the outdoors as the classroom, and the Student Speakers' Bureau, a new program that recruits, trains, and places student speakers in the community to share their interests and represent RIT. Each of these activities offers formal learning before the event takes place and evaluation and sharing of the experience. Students will have the chance to expand their learning environment.

Certification also is given to non-funded projects already underway that involve students in extended activities that do not entail academic credit. Such documentation is valuable to students in developing their employment placement credentials. Complementary Education also sponsors the Institute Forum, a year-long series of nationally known speakers that focuses each year on a different topic related to the quality of life and our society.

Extra Help for Those Who Need It: HEOP

"Basically, what we're doing is making it possible for disadvantaged students to come to college. Without HEOP, these students wouldn't have been offered acceptance to RIT," says Barbara Chambers-Ekpo, the director

of RIT's Higher Education Opportunity Program.

"The students in the program not only have financial difficulty, but they also have not excelled in school," she explains. "However, it's had nothing to do with academic potential. They've had problems historically with lack of encouragement from guidance counselors, poor schools, younger sisters and brothers to take care of, time-consuming jobs—any number of things. It's not that these students aren't college material, it's just that they're underprepared.

"HEOP's responsibility is to help them to reach and maintain academic competence."

Many of the students who are in RIT's HEOP are deficient in essential math and verbal skills. But they're competing with students who have been nurtured in supportive environments and have graduated from competitive schools. Professors are rarely aware that a student is in HEOP.

"We make acceptance and financial aid decisions, provide remedial instruction and tutoring, and do personal, academic and career counseling. At the same time, our students have complete access to all of RIT's student services."

The HEOP staff maintains an open-door policy.

All students admitted to the program as freshmen must enter a five-week pre-freshman program conducted the first summer. They take math and remedial reading as necessary. But everyone has to take Introduction to Psychology, which prepares them for the real thing. The instructor tries to incorporate different facets of a college course, such as a research paper, a personal opinion paper, and different types of tests. Students learn to use the library, organize a paper, and read a textbook effectively.

In the nine years of its existence, HEOP has graduated more than 100 students, many of whom have landed excellent jobs. Graduates in technical fields have the highest success rate.

Every student admitted into HEOP must be both academically and financially disadvantaged. They are all provided with full financial support, which is provided jointly by RIT and state and federal money. Up to a year's supplemental grant is available to any student who may need extra time to complete his or her program of study.

International Student Affairs

The Office of International Student Affairs is a resource center for students on visas or those who seek cross-cultural learning. The office provides assistance with immigration regulations and travel documents, and coordinates various aspects of campus life which support personal growth including cross-cultural programming. The staff works closely with RITISA, the international student organization, and serves as a liaison with off-campus groups who seek to extend friendship to international students. The office is located in the Administration Building, second floor, in the Learning Development Center. Phone 475-6943 for more information.

international student emergency loan fund

The purpose of this loan fund is to provide emergency financial assistance to international students on visas. Loans cannot exceed \$200 and must be repaid in two months. Students applying must have a good track record of payment with the bursar and must not have any outstanding debt to the emergency loan fund. For further information, visit the Office of International Student Affairs.

Counseling Center

The Counseling Center, located in Grace Watson Hall, offers a variety of services to RIT students. These services include:

- Personal Counseling
- Career Counseling
- Career Decision Program
- Career Resource Center
- SIGI
- Testing
- Research
- Developmental Programs
- Consultation

Counseling Center hours are 8:30-4:30, Monday through Friday. For more information about Counseling Center services, please call 475-2261.

Personal counseling

Problems are a part of living. Vet problems often influence how we feel about ourselves and others, impose limitations upon our effectiveness, and interfere with our ability to achieve desired goals. While you are at RIT, you may experience personal

problems such as feeling anxious, depressed, having difficulty with friends, courses or professors, or being concerned about your relationship with your parents. Seeking individual help can be useful in coping with both large and small problems, and may be the first step toward handling them in a positive and effective way. Individual and group counseling is available for students who could benefit from meeting with a counselor to explore, for example, more effective ways of: dealing with conflict and stress, managing feelings and emotions, developing satisfying relationships, communicating with others, and coping with a personal crisis. Counselors can be seen initially without an appointment. Just stop by the Counseling Center between 9-1-2 or 1-4, Monday through Friday. There is no cost and you can be assured of confidentiality.

Individual career counseling

Career counseling is also available at the Counseling Center. Counselors can assist you in making thorough appraisals of your interests, abilities, and personality traits so that you can use this information in developing educational and vocational plans. Tests of aptitude, interest and personality may be used in this assessment process.

Group career exploration

For the student who would like assistance with choosing or reexamining a chosen field of study, the Counseling Center also offers a 3-credit Career Exploration course which provides students with an opportunity to increase their awareness of themselves, career options, and the process of career decision making.

Career Decision Program

The Career Decision Program has been designed to provide RIT students with the opportunity for an in-depth structured career guidance experience as they choose or change a specific program of study. The program provides enrollment to selected students for up to three quarters and includes the following elements:

1. Intensive career/academic advisement during a period of exploration and choice;
2. Opportunity to sample preferred coursework across as many as 3 majors before narrowing to a single field of concentration;
3. Continuation of financial aid for students receiving assistance (the program carries the benefits of full matriculation for students carrying a minimum of 12 credit hours);

4. Participation in the 3-credit Career Exploration Course referred to under "Group Career Exploration."

Since enrollment is limited and sufficient time is required for a thorough assessment of a student's situation, it is advisable to apply as early in the quarter as possible for the coming quarter. Interviews can be arranged by calling RIT Counseling Center, 475-2261.

Career Resource Center

Located in the reception area of the Counseling Center is a Career Resource Center which contains occupational information on a variety of careers, vocational and educational reference books, and college catalogues on microfiche. Students are welcome to browse through these materials during the Counseling Center's regular hours: 8:30 - 4:30, Monday through Friday.

SIGI

SIGI (pronounced SIGGY) stands for System of Interactive Guidance and Information. It is a computer-based guidance system designed to help you make informed and appropriate career decisions. SIGI is often used as part of the career counseling process.

Testing

The Counseling Center administers a number of psychological tests and interest inventories as part of the counseling process for some individuals. In addition, the Counseling Center administers a number of National Tests. Advance credit exams (CLEP) are also given.

Research

The Counseling Center conducts research activities related to the quality of student life. One major research project is the In-Coming Student Questionnaire which assesses the expectations of in-coming students on such factors as academic goals, study habits, self-esteem, and level of career planning.

Developmental programs

Staff members of the Counseling Center will provide presentations and workshops to interested student groups on a wide range of topics, for example, assertion awareness, values clarification, communication skills, leadership development, and human sexuality. Interested student groups are invited to contact the Counseling Center at 475-2261.

Consultation

Staff members of the Counseling Center will provide consultation

services to interested student groups and organizations in a number of areas within the scope and expertise of the Counseling Center staff. Some examples of consultation services requested by student groups are as follows: 1) designing training programs, 2) problem-solving, 3) conflict management, and 4) improving organizational effectiveness.

Office of Special Services

Pursuing a college education is a major challenge. The goal of the Office of Special Services is to provide the necessary academic and personal support that will enable students who qualify to realize fully their potential and to complete successfully their college career.

Special Services provides individual and group tutoring, study skills development and academic advisement. Also offered are individual and group counseling, specialized assistance for disabled students (i.e., readers, coordination or notetakers), advocacy and liaison with other campus and community resources.

Some of the activities featured are: Achievement Awards Program—annual dinner to give recognition to and award student for academic or social achievement and to honor graduating members of the program. Physical Challenges Days: Abled/Disabled Events — a series of activities and presentations designed to create a better awareness of disabled students at RIT and their needs. Politics and Poverty Seminar - a program sponsored jointly with the Higher Education Opportunity Program gives interested students the opportunity to learn more about our political system and how to take a more active part in it. The seminar culminates in a three day trip to Washington, D.C.

The Office of Special Services is also designed, in part, to provide support services to physically disabled students at RIT. Support services include tutoring and additional academic support, counseling, career development, special programs, advocacy and referral resources in the community. The staff strives to assist students resolve educational and non-educational problems that are related to academic success such as gaining accessibility to elevators and securing specially designed instructional materials or programs. Campus maps, the **Disabled Students' Guide to RIT** and information regarding any issue relating to accessibility—physical or academic—will be provided.

Contact the office at 475-2832 or -2833. It is located in Grace Watson Hall (wheelchair or orthopedically limited students may use the Campus Safety entrance).

The Office of Special Services is federally funded under the Office of Education. Eligibility for the program is determined by financial need, physical disability, or first-generation college status. Any student who is a citizen of the United States and meets one of the eligibility requirements may become a member of Special Services.

Foremost, the staff provides personal concern for and attention to each student enrolled.

Student Health Service

Student Health Service provides primary level medical care on an out-patient basis. The staff includes a full-time physician; part-time physicians; medical nurse practitioners; registered nurses; and an interpreter for the deaf. Some specialties—psychiatry; gynecology, ENT, ophthalmology—are available on campus by appointment. In addition, Student Health Service provides health education programs.

Student Health Service is located on the second floor of the administration building. Students are seen on a walk-in basis during the day (Monday through Friday, 8:30 a.m. to 4:00 p.m.; 8:30 a.m. to 4:30 p.m. for emergencies). Appointments for follow-up treatment are arranged when necessary. A registered nurse is on duty in the Nathaniel Rochester Hall in the evening.

For emergency transportation at times when the health service is not open, the RIT ambulance is available. The unit can be reached through Campus Safety.

Students who need immunizations for passports may be immunized at Student Health Service. First, find out from the Health Department of the place where you obtain your passport exactly against what you will need to be immunized. Take the list to the Student Health Service to obtain prescriptions for the necessary drugs. Once you have the drugs, Student Health Service will administer the shots.

A Student Health fee of \$20.00 per quarter is mandatory for all full-time undergraduate students. All other students pay either the quarterly fee or on a fee-for-service basis. Some laboratory work ordered through

Student Health Service is not covered by this fee; there is a nominal charge for this service. Prescription medicines are available through Health Service or local pharmacies. The health fee does not include prescription medications.

The Institute **requires** you to maintain health insurance coverage as long as you are a student at RIT. You may obtain coverage either through RIT or your personal coverage.

If you have any questions about Student Health Service or health insurance, please contact the office, 475-2255.

Health records

Your medical record is confidential, and information will not be released without your written consent. Exceptions to this rule are made only when reports are required by the public health laws of New York State.

RIT ambulance

The RIT ambulance is a New York State certified volunteer ambulance service that operates in and around the RIT campus. The organization is an auxiliary of the Student Health Service. Its primary territory includes the main campus, Riverknoll, Perkin's Green, Colony Manor and Racquet Club apartment complexes and the Hilton Inn.

Any student, faculty or staff member of RIT who is at least 18 years of age is eligible to join the ambulance crew. Although most members eventually become certified emergency medical technicians, minimum requirements are a valid certification in CPR, a valid driver's license with a good driving record, and a sincere interest in ambulance work.

Applications may be obtained and submitted through Student Health Service on the second floor of Building 1 (administration building). To obtain more information, leave a message with the Student Health Service at 475-2255.

Student Housing

The residence halls

The Department of Residence Life provides a living environment for approximately 6,000 students in residence halls or apartments. The Department of Residence Life, part of the Division of Student Affairs, has as its primary goal the development of a residential setting consistent with the overall educational philosophy of the Institute.

RIT recognizes the significant effect the on-campus living environment has on the social, academic, educational, and overall development of the student. The aim of the Residence Life Department is to create a positive environment to promote this development.

All first-year students are required to live in the residence halls, except those who live with their families. Resident students enrolled in cooperative programs are charged only for the period of occupancy. Each student is required to sign a Room and Board Request and Assignment Form, which is included with the housing information mailing.

Students cannot be guaranteed accommodations in the residence halls for more than one year due to current demand for housing.

Whenever housing projections indicate the need to do so, a number of upperclass students are required to vacate the residence halls to provide adequate space for new students. Most students leaving the residence halls can be accommodated in apartments near the campus.

RIT realizes that the student body is not homogeneous and that students have diverse interests, backgrounds, experiences, needs and maturity. In recognition of this, a variety of living options is available. Many residence areas are coeducational; men and women live on the same floor. Many Greek organizations (fraternities and sororities) have their own houses. There are also academic houses in art, business, computer science, engineering, and photography; International House for both international and American students; and Unity House, which emphasizes the development of black culture.

Most residence hall units have double rooms only, although some units do include a limited number of single rooms. These single rooms are not available to entering students. During fall quarter some entering students may be assigned to triple rooms.

All corridors and rooms are carpeted. A bed, desk, chair, dresser, closet, and window covering are provided for each student in a room. Each corridor in the unit has its own bathroom, equipped with showers. Some suites are available, composed of three bedrooms connected to a common bathroom. Each house has its own lounge furnished for study and relaxation. Coin-operated laundry facilities are available in the basement.

Each student is furnished with information on residence hall living by the Department of Residence Life after he or she is accepted.

All residence hall students must participate in one of the Institute board plans. The charges for residence and meals are included in the section on student expenses.

Apartment housing

Apartment housing is available to single or married undergraduate and graduate students in Institute managed apartments and town-houses. Contracts for single students run September through May. A mixture consisting of each housing group can be found in each apartment complex on campus. All apartments are equipped with refrigerator and stove but are otherwise unfurnished. However, furniture may be leased readily from local rental companies. All Institute apartments are located less than a mile and a half from the center of campus and are serviced by RIT's shuttle bus system. A brochure describing the four complexes—Colony Manor, Perkins Green, Riverknoll, and Racquet Club—is available from the Office of Off-Campus and Apartment Life, One Lomb Memorial Drive, P.O. Box 9887, Rochester, N.Y., 14623; (716) 475-6920.

Off-campus housing

The Office of Off-Campus and Apartment Life provides an Off-Campus Center that strives to meet the needs of off-campus students by providing a variety of services and programs. The center maintains up-to-date listings of available rooms, apartments, and houses in the Rochester area and operates a Roommate Locator Service to help students find compatible roommates. The Off-Campus Center is located in the Residence Life Office and is open Monday through Friday from 8:30 a.m. to 5 p.m.

New Student Orientation

In the summer and fall of each year, RIT provides freshmen and transfer students with orientation programs to help familiarize them with their new environment. These programs include academic advisement, tours, faculty/staff interaction, parents sessions and social events. The summer orientation programs consist of four sessions (two for freshmen and two for transfer students) that deal mainly with academics, pre-registration, and support services offered by the

Institute. The fall program concentrates on promoting student interaction and building a sense of community. It has been shown that a student will receive the greatest benefit if he/she is able to participate in both the summer and fall programs.

During the orientation process, students are given a copy of *FACTS*, a student handbook that contains RIT policies, procedures and helpful survival hints.

Student Clubs and Organizations

Off Campus Student Association

OCSA is the representative student government for all RIT students who do not reside in the dormitory. The Off Campus Student Council, formed in 1978, is composed of off-campus students from the nine colleges and the four RIT-operated apartment complexes. Through the council, a standing Housing Committee has been set up to deal with the varied housing problems that RIT students may face. The council is the voice of the off-campus students to the administration.

OCSA also has many student committees that work on programming for the off-campus student and provide needed services such as lockers, a computerized ride pool system and off-campus survival booklets. The OCSA lounge, located in the basement of the College-Alumni Union, is a place for the off-campus student to relax. OCSA also publishes a newsletter twice per quarter that contains beneficial off-campus news.

If you are interested in getting involved, stop in at the OCSA office in the basement of the Union, or call 475-6680 for more information.

Student Directorate

The Student Directorate is the governing body for students. It represents the student population by working with RIT administration, faculty and staff to communicate the needs and desires of the student body and to communicate the decisions of the administration to the students. It pulls together the student body to formulate and express student opinion and the Student Hearing Board, which provides for the self-discipline of the student body.

Off-campus students are encouraged to live in the residence halls during the summer program to experience residence life for two days and attend special workshops geared to meet their needs as off-campus students.

Concurrent with Student Orientation is a special orientation for parents.

A mandatory \$35 program fee is charged to each new full-time day, matriculated student to cover program development costs.

All full-time and part-time undergraduate and graduate students become members of the RIT Student Directorate through payment of the Student Activities Fee. All other students may become members of the Student Directorate if they wish to participate in student-sponsored activities by paying the Student Activities Fee.

College-Alumni Union

The College-Alumni Union, a primary focal point at the main entrance to the academic plaza, is designed specifically to service events sponsored by and for the entire campus community—students, faculty, administrative groups, alumni and guests. A staff is available to assist and advise the various individuals and groups in planning and coordinating their activities. In addition, a complete information service is located in the main foyer.

The three-level facility, the center of co-curricular activities, features the 525-seat Ingle Auditorium; a self-service bookstore; a complete game room for bowling, billiards, foosball, and electronic games; a uni-sex hair-styling salon; a candy and tobacco counter; three separate dining areas comprised of the main cafeteria, the Ritskellar, and the Clark Dining Room; meeting rooms and lounges. In addition to offices for the staff, there are the offices of Career Education, Special Events, Student Affairs, Orientation, Chaplains, Complementary Education, College Activities Board, Student Directorate, WITR radio station, Student Television Systems, *Techmila*, *Reporter*, Off-Campus Student Association, and other student organization offices.

The College Activities Board

The College Activities Board, which is composed of students, faculty and staff advisors and a College-Alumni Union staff representative, is responsible for providing a balanced program of activities that reflect and enhance the special social, cultural, recreational and educational needs of the campus community.

Social events

Major social events on the activities calendar include Spring-In, Homecoming, and Winter Weekend. Many other dances, parties, speakers and events are sponsored by the College Activities Board, the Residence Hall Association, the Greek Council, special interest clubs of many kinds, and departmental and professional associations such as Alpha Chi Sigma, Delta Lambda Epsilon, Delta Sigma Pi, and Sigma Pi Sigma. Two national sororities and nine national fraternities offer social activities and promote high scholastic and social standards among members.

Student professional associations

A number of national technical associations have student affiliate chapters on the RIT campus. Frequently sponsored by parent chapters in Rochester, these societies play an important part in Institute life by bringing together students who have common interests in special subjects. The associations are both professional and social in purpose.

Student publications

RIT students produce some of the most professional collegiate publications in the country. The Student Activities Fee helps to finance most student publications, distributed to all full-time students.

The *Reporter* is published by students weekly, except during examinations and holidays, and serves as the student news magazine.

Techmila, the student yearbook, contains a student-edited pictorial and written description of student life at the Institute during the year. The *Reporter* and *Techmila* have consistently won state and national awards.

An activities calendar is issued quarterly.

A student handbook is issued early in the year, as a cooperative effort of students and staff. This includes the student directory listing addresses, telephone numbers, and other information about students. This becomes a handy year-long reference of activities and people.

These publications draw their talented staff—artists, photographers, writers, managers and printers—from the entire student body.

Religious activities

The religious program is voluntary, active and enlightened, designed to minister to the varieties of religious faith in a responsible, attractive manner among future-oriented students. Chaplains representing the three major religious groupings maintain offices on the campus. They are available for pastoral counseling, advisory work, teaching, and sacramental ministries. There is a regular schedule of religious services on campus. Churches in the area have shown interest in establishing relations with students, and transportation to and from services may be arranged.

Hillel Foundation, Catholic Campus Ministry, and Lutheran Campus Ministry have local branches on campus, and other religious organizations are welcome to use the facilities in the College-Alumni Union. Representatives of these campus organizations form the RIT Office of Campus Ministry.

The Black Awareness Coordinating Committee

The Black Awareness Coordinating Committee is organized to foster an awareness of the role of black men and women in the total society, and to create a greater understanding among the black Students at RIT. Each year the committee sponsors various social and cultural programs which are designed to achieve these objectives.

Performing arts

The Division of Performing Arts at NTID supports a variety of activities.

- The NTID Theatre presents three plays during the year. These plays

use deaf and hearing actors working together and are performed in both sign language and voice for the enjoyment of all audiences.

- The NTID Lab Theatre offers experimental, new or unusual productions. In addition, new directors and student writers use the space for developing their skills.
- The RIT Dance Company includes deaf and hearing dancers in at least one concert each year. They rehearse three times a week throughout the year; the company's emphasis is on modern dance.
- Sunshine and Company consists of students and faculty who perform for special RIT events and community activities. Their shows include signed songs, dance, and drama for deaf and hearing audiences.
- Sunshine Too is a company of six performers traveling throughout the country from October to June. They present shows for schools, alumni groups, special RIT groups, and the general public. They provide information on RIT and deafness during their performances and workshops.
- The RIT Tiger Band performs at athletic events and RIT special events. In addition, they have concert appearances at various times during the year.
- The Sign/Sing Chorus includes students, faculty, and staff, who present a holiday show and a winter/spring event. Songs are sung by a chorus of 25-30 members and signed by another group of 10-15 people. Rehearsals are once a week.
- The NTID Music Combo is composed of NTID music students who perform contemporary music for RIT and community events.
- Guest artists are invited to perform in the NTID Theatre. A dance company, a professional mime, and the National Theatre of the Deaf are typical presentations each year.

Physical Education at RIT

Rochester Institute of Technology recognizes the need for physical fitness and recreation in today's society. To meet this demand, the Institute offers an exceptional program of courses designed to aid the student in developing and maintaining fitness, acquiring physical skills in a variety of lifetime activities and providing principles and elements for utilizing free time in an enjoyable and constructive manner.

The PE requirement is built on the premise that the attainment of good health and fitness are basic elements in the pursuit of excellence in many aspects of campus life. The learning experiences provided through the physical education curriculum are an integral part of the total educational experiences at RIT.

Institute's PE Policy

Baccalaureate Degree—All day-school candidates for the baccalaureate degree entering as first or second year day-school students must successfully complete six quarters, or the equivalent of two years of physical education. This requirement is normally met during the first and second years at RIT, but may be completed at any time during succeeding academic quarters.

Those entering as third or fourth year students must successfully complete three quarters of physical education unless they have completed the equivalent of three quarters or more of physical education or earned a baccalaureate degree at another institution.

Associate Degree—All day-school candidates for the associate degree are required to successfully complete three quarters, or the equivalent of one year of physical education. This is normally met during the first year at RIT, but may be completed at any time during succeeding academic" quarters.

Transfer Credit—One semester of credit at another school equals one quarter of RIT credit; two semesters equals three quarters. Credit for independent activity may be granted if completed within one year before matriculation at RIT and approved by the Physical Education Department. Students who have met requirements may enroll in Physical Education on an elective basis.

Exceptions

Permanent Medical Excuse—This will be granted only by the RIT Student Health Service. One copy of the medical excuse should be filed with the Physical Education Department and the other copy taken to the student's department. Medical excuses from your family physician will not be accepted.

Intercollegiate Athletics—Students participating in the Institute's intercollegiate athletic programs will be excused from physical education during the season of participation. This experience will generate P.E. credit.

Veterans—Students who have completed six months or more of active military duty are not required to participate in the physical education program, but may voluntarily enroll in any course on a space available basis.

Age—Students who are 25 or older at the date of matriculation are exempt from the physical education requirement but may voluntarily enroll in any courses on a space available basis.

In the event a student is unable to fulfill the requirement for either a baccalaureate or associate's degree due to extenuating circumstances, the student's academic advisor must be consulted.

Physical Education Classes

Physical education courses are offered during all academic quarters, including summer. More than 60 courses are available during the year. Not all courses are offered every quarter. Registration is conducted by the entire Physical Education Staff in the main gymnasium within a week following academic registration. Hours for registration are 7:00 a.m. - 3:00 p.m. A nominal fee is charged in some courses requiring specialized instruction and/or facilities.

The following classes are Offered as selections in the Physical Education Department:

Cardio and strength activities

Aerobic Dance, Army Conditioning Methods, Bicycling, Circuit Training, Conditioning, Fitness for Life, Jogging, Judo, Karate, Kung Fu, ROTC,

Swimming for Fitness, Weight Training, Yoga.

Recreation and sports activities

Afro-Caribbean Dance, Archery, Badminton, Ballroom Dance, Basketball Officiating, Billiards, Bowling, Canoeing, Cross Country Skiing, Dance Performance I & II, Disco Swing Dance, Diving, English Horseback, Fencing, Fishing, Frisbee, Golf, Hunting, Ice Skating, Juggling, Modern Dance, Outdoor Living, Racquetball, Scuba Diving, Self-Defense/Women, Sign Dance, Skiing (downhill), Swimming, Tennis, Water Polo, Western Horseback.

Team activities

Basketball, Field Hockey, Ice Hockey, Lacrosse, Soccer, Softball, Touch Football, Volleyball.

Life support and safety programs

Advanced First Aid, Care & Prevention of Athletic Injuries, CPR & Multi-Media First Aid, Emergency Medical Tech Training, Life Saving, Water Safety.

Intramural Activities at RIT

An extensive program of intramural activities is offered at RIT. Under the direction of the Department of Physical Education, Recreation and Intramurals, activities include co-rec, men's and women's teams in basketball, volleyball, softball, ice hockey, flag football, soccer, inner-tube water polo, bowling, tennis and golf.

Recreation at RIT

RIT offers some of the finest university recreational facilities available. Indoor facilities feature two gymnasiums, ice rink (with running surface around upper level), swimming pool, physical fitness and weight training center, wrestling room and game room (bowling, video games, billiards). Outdoor facilities include 12 tennis courts, an all-weather track and numerous athletic fields. The equipment cage provides equipment for recreation, athletic instruction and intramural needs and interests. Services include general information center, assignments of lockers, towel service, equipment loan and lost and found.

Intercollegiate Athletics *

At RIT, intercollegiate athletics is an integral part of the total educational environment. Participation on a team or as a spectator greatly enhances campus spirit and student life.

The growth and success of intercollegiate athletics at the Institute has been tremendous in recent years. Last fall the men's soccer team posted its best record ever at 14-2-3 and competed for the first time in the post-season national Collegiate Athletic Association (NCAA) Division III championships. The cross country team was 13-1 in dual meets, won the Upper New York State (UNYS) championship and placed 17th in the nationals.

Women's tennis continued its unbeaten string (26) and collected second-place honors in the New York State Association of Intercollegiate Athletics for Women (NYSIAIW) Championship. Women's volleyball produced its most successful campaign, finishing with a 17-6 dual record and advancing to the state championship. Women's soccer was elevated to varsity status in 1982, and the prospects for the future are excellent.

In winter, competition is offered in basketball, men's and women's hockey, men's and women's swimming and wrestling. The basketball team earned co-champion honors in the Independent College Athletic Conference (ICAC), posting a 10-2 league record. Men's hockey, RIT's lone Division II sport, continued its success story by qualifying for NAAs and hosting the championships. The icemen won the New York Collegiate Hockey Association (NYCHA) title and the national Division II title for the first time in 1982-83.

Swimming continued to provide much excitement at the Institute. More than 50 men and women have earned All-American status, placed by Barry Zacharias, the first national champion in RIT men's swim history. Zacharias captured the 400-yard individual medley title in 1982. In wrestling, Darrell Leslie won the 142-pound national title in 1983. It marked his fourth straight All-American crown.

Spring competition features baseball, lacrosse, softball, men's tennis and men's and women's track. The lacrosse team won its first ICAC title in 1982 with a 10-2 overall record. The softball squad won the Rochester Area Colleges (RAC) Invitational and

the men's track team boasted its 14th straight UNYS championship. The men's track team has a phenomenal record of 148-7 under coach Peter Todd.

In addition to the NCAA, ICAC, NYSIAIW and NYCHA, the Tigers are members of the Eastern College Athletic Conference (ECAC) and United States Intercollegiate Lacrosse Association (USILA). With the exception of men's hockey, teams compete in Division III. All are governed by NCAA and ECAC rules. A student must be full-time (minimum 12 credit hours) and making satisfactory progress towards a baccalaureate degree to be eligible for intercollegiate competition.

In addition to the formal competition, students may become involved in intercollegiate athletics in a variety of ways. The Institute has a Tiger Pep Band, a precision dance corps (known as the Tigerettes), and a booster support group (T.I.G.E.R.S., Inc.). We invite you to participate and follow the teams throughout the year.

Resources for RIT Community Living

Day care

The Horton Child Care Center is a preschool kindergarten for children of students, faculty and staff at RIT. It is located in Riverknoll housing, adjacent to the academic buildings. The center offers all-day and half-day programs for children ages 2 years 9 months through 5 and has an after-school care program for children ages 6-7. It is open all four academic quarters. The summer quarter has a day camp format and is open to children 2 years and 9 months through 7. Some tuition aid is available.

Inquiries and application can be made by writing the Director, Horton Child Care Center, 85 Kimball Drive, Rochester, NY 14623, (716) 424-1244.

Identification card

All day students and evening students (CCE) are required to have an official Institute Identification Card. Your card must be carried with you at all times, and loss reported at once, to the I.D. Office, 475-2125.

All I.D. cards must be validated quarterly. Replacement of lost cards is \$5.

Automobile registration

All New York State motor vehicle traffic laws are in effect on the RIT campus. RIT vehicle regulations supplement State Laws. All drivers on

RIT properties must make themselves aware of and abide by these regulations. These regulations require that all vehicles operated on the RIT campus by students, faculty and staff must be registered with the Campus Safety Department. There is no fee attached to vehicle registration.

Failure to register a vehicle parked on campus will result in a \$10.00 fine. Fines for other infractions of regulations are \$5.00 and \$10.00.

Questions regarding parking regulations should be addressed to the Traffic Coordinator at (475) 2074.

Campus Safety Department

The Campus Safety Department is a professional security agency that serves and protects the college community 24 hours a day, 7 days a week. While this staff constantly patrols all campus areas, RIT does not assume liability for lost or stolen personal effects of students, faculty or staff. We therefore urge you to maintain an insurance policy on your own through your family insurance program. The Campus Safety Department provides services in: fire safety, criminal investigations, and lost-and-found property services.

You can contact the Campus Safety Department at these numbers:
General Information (475) 2853
Vehicle and Traffic Questions

(475) 2074
Escort Service (475) 2853
Emergency (475) 3333
TTY (475) 6654

The Campus Safety Offices are located in the Grace Watson Dining Hall, building number 25.

RIT bookstores

Textbooks, school supplies, art and design supplies, and photographic equipment may be purchased at the RIT bookstore. Also in stock are general reading material and insignia items. An estimate of expenses likely to be incurred in a specific area of study may be obtained by contacting departmental offices. The major portion of the expenditures for textbooks and supplies is made at the beginning of each quarter (see also "Books and Supplies" on page 7). For hours of operation and special events call the Bookstore Infoline at 475-6033.

Alumni Association

The RIT Alumni Association is an organization of more than 40,000 graduates. All graduates are automatically members of the association, which is governed by the National Alumni Council. Council members come from all parts of the United States; one member is from Mexico.'

The objectives of the association are to advance the growth and development of RIT through individual and group endeavors within industry and the community, to support the fund raising objectives of the Institute; to foster beneficial relationships among alumni, students and the Institute; and to encourage outstanding academic and extracurricular achievement by the undergraduates.

There are a number of services available to alumni, including a travel program to destinations throughout the world; the *Alumni News*, published four times a year; use of the library and athletic facilities (with ID card); help from the Center for Cooperative Education and Career Services in locating a job, and many social events, including Homecoming.

There are also many programs within which the alumni work with the Institute's various departments. These include admissions, placement, and alumni-student interaction programs. Alumni in many metropolitan areas throughout the country participate in activities of service to the Institute. The Institute recognizes the value of

its alumni and places a strong emphasis on their participation in planning for the future.

Alumni may assist the financial development of the Institute by giving to the RIT Fund, which provides needed support for student financial aid and other operations of the Institute.

Alumni House, located at John and Wilson streets, houses the Office of Alumni Relations and is the center of alumni activity on campus. The office maintains the alumni records, assists in conducting the business of the association, and serves as the communications center and clearinghouse for all alumni activities. Alumni are always welcome at this office.

Student Academic Development

Learning Development Center

RIT students have a unique opportunity to improve their reading efficiency, study techniques, vocabulary mastery, effective listening and critical thinking abilities, mathematical understandings, computation skills, writing competence, and general facility in the uses of the English language through individual or group instruction provided by the center.

There is also instruction for students who speak English as the non-native language. In addition, the center makes arrangements for peer tutoring in most college level courses. Special programs, built around student requests, are provided for student groups and clubs as well. In cooperation with the Counseling Center, the Learning Development Center also provides counsel, diagnosis, and corrective development background instruction for students not working up to capacity or whose achievement records are unsatisfactory because of needs in basic academic areas.

Consultation, testing, and instructional services are free to all RIT students with the exception of some ESOL (English For Speakers of Other Languages) instruction.

In addition to these programs the center offers three full-time programs of study: A College Anticipation

Program, a specialized program of instruction for high school graduates desiring additional preparation prior to full matriculation at a college/ university; an instructional program for students who have been suspended or are liable to suspension from college for academic reasons, and an ESOL (English for Speakers of Other Languages) program for students who do not meet the RIT admissions requirements on the TOEFL (Test of English as a Foreign Language) or who want to improve their English skills.

A Place for Students to Learn How to Learn

"Educational troubleshooters" is how the director describes himself and his faculty.

"We usually work with individuals on a short-term basis to correct a specific learning problem," says Paul Kazmierski, director of the Learning Development Center. LDC is beginning its third decade of operation as an academic support service to RIT students, faculty and the Rochester community. Known by many alumni and friends of the Institute as the Reading and Study Clinic, the center officially adopted its new name in 1974.

"Our subject here really is 'learning about learning' and we wanted our name to reflect that scope," explains Dr. Kazmierski.

The new name fits especially well with the center's expanding efforts in faculty development. When the center began operation on the RIT campus in the 1950s, RIT was just moving toward offering degree programs. At that time skill development for students became especially critical and faculty was involved at the center in student referrals and some shared teaching. In the future, LDC hoped to see more interfacing with faculty to improve instruction.

"We will be spending more time on process education," predicts Dr. Kazmierski. (Process education includes the skills, systems and methods of learning, exclusive of specific content.)

"We feel that it is important that RIT students become more active participants in the learning process—not passive recipients of a service," says Irene Payne, associate director of the College Program. "It is important for students to become more knowledgeable and analytical about their own learning. In our interaction with students, we guide them to explore their own approaches to learning, evaluate them and develop appropriate strategies for lifelong learning."

Students seeking the services of the Learning Development Center have various options. The center

offers each quarter a variety of different courses in reading, writing, ESOL, and listening skills plus a series of study skills mini workshops. A student can request an appointment with one of the learning specialists on the faculty for a personal interview to diagnose skill needs and plan an individualized course of action which would lead to more efficient learning for the student. The center also maintains labs for reading, writing, ESOL and mathematics where students can get help with a specific problem, pursue a longer course of study or just practice skills.

During the 1981-82 school year the Learning Development Center saw more than 4,000 RIT students. The current LDC faculty consists of 10 full-time members and several part-time instructors. The center also trains students to assist in a number of programs.

No "typical" student uses the Learning Development Center, according to the director, who cited several examples of students with widely different interests, needs, and grade point averages. People with "A" averages enroll as readily as students who are failing.

The center has developed two programs geared especially for students who are failing or who anticipate difficulty gaining entrance to college: the College Anticipation Program and the College Restoration Program. Both programs are highly structured and require students to attend classes approximately six hours a day, five days a week, for the academic term.

Although the majority of LDC's work is centered on the RIT students and faculty, the center's services are well known throughout the Rochester community. Educational institutions, businesses and industries refer clients to the center for diagnostic evaluation, classes or individualized instruction. Forty-two adjunct faculty have augmented the efforts of the 10 full-time faculty in delivering instruction to more than 830 community clients during the past year. In addition, the center has conducted training workshops for organizations in Rochester and across the nation.

Full-time programs

Students acceptance in the Learning Development Center's full-time programs is determined after a review of academic records, an interview, and diagnostic testing. After having been accepted into a program, the student is classified as an RIT Special Student and an individual program is planned to meet the student's needs.

The student is enrolled in a block of LDC laboratories, classes and workshops. Individual tutoring is arranged as needed. One or more credit courses from the Institute's regular offerings may be part of the program. Selection of these courses is under the guidance of the Learning Development Center.

College Anticipation Program: Helping The Student to Prepare

The College Anticipation Program is designed for the college-bound high school graduate who desires further skill development before matriculating in a full college program.

Diagnostic testing includes measurements of aptitude, interest, achievement and personality. Once the educational diagnosis has been analyzed, and it has been determined that the College Anticipation Program is appropriate for the student, an individual program is designed.

This program generally includes a content course*, LDC instruction and academic counseling. The work is based upon a system of established deadlines and immediate evaluation of progress.

Participation in the program cannot guarantee that a student will be admitted to the college or university of his or her choice; however, professional resumes of student achievement in the program are sent to colleges upon request of the student.

The College Restoration Program: Helping The Student to Come Back

The College Restoration Program is a specialized program of instruction for students who have been suspended from college.

A course of action can be recommended only after the reason for academic difficulty has been established. If after diagnostic testing, which includes measures of aptitude,

interest, achievement and personality, it is determined that CRP can be helpful, a very structured program, including content courses*, LDC instruction and counseling is arranged.

The student meets weekly with an academic advisor to clarify directions and goals, to discuss relationships between the skills courses and review progress. The student is also provided the opportunity to discuss problems, their causes and effects, with an RIT counselor at the Counseling Center if he or she desires.

The entire program is designed to strengthen the student's self-confidence. Successful completion of this program should qualify students for readmission to the college or department of their choice or for entrance to another educational program.

Although the College Restoration Program does not guarantee a participant readmission to his or her former college or status as a transfer student at another school, the center does provide recommendations and resumes of student achievement in the program to colleges upon request of the student.

ESOL (English to Speakers of Other Languages) Program

The Learning Development Center offers three separate packages for full-time study of the English language. Classes include pronunciation, conversation, grammar, writing, reading, TOEFL preparation, English for printers, and English for academic purposes.

Arrangements may also be made to receive individual instruction and to work in the language lab. A fee is charged for these services.

Students may come to the ESOL writing lab during scheduled hours free of charge. Here students will receive help with assignments, learn to edit their work and review English grammar.

Before a specific package is selected, each student is tested to determine the level of his or her English skills and to diagnose specific needs.

All packages conform to National Association for Foreign Student

*Student must have permission from college offering course.

Affairs (NAFSA) guidelines and meet immigration requirements of 1-20 student status.

The characteristics of the three packages are as follows:

Intensive study

- for students with beginning to intermediate English skills
- 15 hours class or individual study
- 10 hours language and/or writing lab

Semi-intensive study

- for students with intermediate to advanced English skills
- 5 hours language and/or writing lab
- 4 hour credit course*

Support study

- for students with advanced English skills
- 4-5 hours of class or individual instruction
- optional language/writing lab
- 8 hours credit courses*

For more information about Learning Development Center services contact the center at 475-6682 (Eastman Memorial Building, second floor, north wing).

The ESOL Department has recently initiated a program in which international students teach their native language. The international student meets with a trained language

instructor who assists in the development of the curriculum, the design of exercises and the uses of appropriate materials. The international student then instructs in his/her native tongue. The language, the culture, and customs can all be part of this program. For more information about learning a new language or teaching your native language contact Rhona Genzel, supervisor of ESOL Programs, at the Learning Development Center.

Academic Services Supports instruction

The Division of Academic Services is made up of three areas that support instruction at RIT: Instructional Media Services, Wallace Memorial Library and the Office of the Registrar. The goals of the division are to improve learning by providing a full range of media related resources and efficient service.

Specific functions of the areas include: providing and producing audiovisual instructional materials and providing equipment facilities, and assistance needed for their use (Instructional Media Services); selecting, distributing, and providing bibliographic services for the instructional use of printed materials (Wallace Memorial Library), and the full services of the Office of the Registrar, described on page 15.

Instructional Media Services

Reno Antonietti, Director

Instructional Media Services provides a complete range of audiovisual support services to faculty and students. IMS consists of a television center, production services, audiovisual distribution services and a Media Resource Center.

Television

This center is utilized as both a distribution system for delivery of instructional media to locations

throughout the campus and as a production system to create both black and white and color programming. A professional staff of producer/directors and graphic artists and engineers are available to aid faculty in the development of programs ranging from complete courses to short modules for use within a course. The center has a wide variety of video cameras and recorders including portable units for remote location programs and fully equipped color studios. Thus, flexibility is available to meet the instructional needs of the Institute. Several videotape formats are available ranging from two-inch broadcast to half-inch and three-quarter-inch videocassette.

The television center provides distribution of programming over a cable system that reaches academic, administrative and residence areas. A master antenna system is operated in conjunction with the closed-circuit system to provide local broadcast stations (TV and radio) to faculty and students. The center also maintains a large library of videotapes on a wide variety of subjects and has access to videotape libraries throughout the country.

The center supports the RIT Cable Television courses.

Production services

A professional staff of producer/directors, designers, artists and photographers are available to assist faculty in creating instructional media.

The services are at two levels:

1. General services to meet the daily routine needs of faculty and students and,
2. Producer services to aid the faculty in the development of more sophisticated mediated instruction.

In addition, consultation and advisement is provided in the selection, purchase and use of television, photography, cinematography, animation, graphics and audio.

Audiovisual distribution services

Faculty and students are provided access to the large number of instructional materials available from sources throughout the country. Research assistance is provided to search out and recommend the best of these materials. Equipment and projectionist services are also available as well as the loan of a variety of audiovisual hardware.

Media Resource Center

This center, located just inside the library entrance on the main floor, contains a variety of nonprint media and audiovisual equipment for individual student use. In addition, the center contains an outstanding collection of over 75,000 slides as well as viewing facilities for the collection of approximately 600 motion picture prints. Videocassette playback equipment is also available for individual use.

Wallace Memorial Library

Information comes in many forms other than printed pages bound between two covers. When a student wants to research a topic at RIT's Wallace Memorial Library, he or she will not only find a variety of print and non-print forms in which to locate information but also a unique on-line computer catalog where the search for references may be made.

Particularly adapted to an institution of technology and the arts and sciences, the Wallace Memorial Library contains, in addition to material in the usual form of books, magazines, newspapers, and pamphlets, material in the form of microfilm, microfiche, motion pictures, recordings, audio and video cassettes, slide/tapes and filmstrips. RIT has the largest microfilm collection and the greatest use of non-print media of any area college library.

The library is a true multi-media learning center with expanded services and innovative procedures to increase its usefulness. To assist the students in the use of all these resources, reference librarians are on duty during the week and on weekends. Located throughout the three floors of the library are more than 700 student stations, including individual study carrels and group study rooms.

During the year student work in art and photography is exhibited in display gallery areas. Outstanding student art and photography work is permanently displayed within the building. Several lounge areas also are located throughout the building.

The library contains a special collection of materials on the deaf to serve the National Technical Institute for the Deaf and to support research by anyone wishing to pursue studies in the problems of deafness. A Special Collections area houses the archives, rare books, faculty writings and RIT theses, and a separate Chemistry Library houses selected science material.

In addition the library offers computerized searching of information data bases and interlibrary loan service. Use of these services provides access to virtually all publicly available printed material.

The regular hours for the library are: Monday - Thursday, 8 a.m. - 11 p.m.; Friday, 8 a.m. - 9 p.m.; Saturday, 9 a.m. - 6 p.m.; Sunday, noon - 11 p.m. Special hours for exam time, breaks, and holidays are posted and publicized.

Faculty and Program Development Supports Better Teaching

The Division of Faculty and Program Development provides an array of services designed to enhance the quality and effectiveness of RIT's educational programs.

Its specific functions include searching out and implementing ways of improving courses of instruction and curriculum design. This is achieved through cooperative efforts with the faculty in the planning, design, implementation and evaluation of learning systems appropriate to the Institute. The Division of Faculty and Program Development works closely with the colleges in implementing the Institute's academic computing objectives and, in general, supports the use of innovative instructional methods and technologies.

In addition, the division assists individual faculty in gaining additional professional and educational experience. It coordinates the Institute's faculty career development programs such as exchanges and leaves.

The Division of Faculty and Program Development supports the Institute's numerous faculty and instructional development programs.

College of Applied Science And Technology

Dennis C. Nystrom, Dean

Organized in 1973, the College of Applied Science and Technology incorporates the School of Engineering Technology; the School of Computer Science and Technology; the School of Food, Hotel, and Tourism Management; the Department of Packaging Science, the Department of Instructional Technology; and the Department of Career and Human Resource Development. The college has programs at the associate's, baccalaureate's, and master's degree levels.

The School of Engineering Technology has primarily upper-division programs accepting transfer students with appropriate associate's degrees. The exception is the school's new program in computer technology, which accepts freshman students. With its excellent laboratories, strong tradition of cooperative education, and experienced faculty, the school offers quality programs emphasizing the application of existing technology to engineering problems in manufacturing, production, construction, and environmental concerns.

The School of Computer Science and Technology, started in 1971, is one of the largest schools of computer science in the nation. All programs in the school can be entered as a freshman or as a transfer student. To support its laboratories, the school is equipped with two Vax 11/780's, PDP 11/34, 11/45, and 11/70, and an array of mini, micro, and graphics computer facilities. Cooperative education is required of all students, further emphasizing the hands-on approach.

The School of Food, Hotel and Tourism Management became part of the College of Applied Science and Technology in 1982, but it has roots in the early history of RIT. With its recently remodeled laboratories, the programs offer a variety of state-of-the-art equipment and systems. Cooperative education, which alternates periods of study and employment, is required of all students and provides the possibility of assignments at locations throughout the country. Graduates who earn a BS degree with a major in dietetics are qualified to apply for American Dietetic Association internships.

The Department of Packaging Science, one of only a handful of baccalaureate degree packaging programs in the nation, draws heavily upon courses offered in other schools and colleges of the Institute. With a core of experientially based packaging courses, the broadly-developed curriculum is representative of the areas of knowledge that are basic to the packaging science industry. The cooperative education program is optional in this department.

The Department of Instructional Technology offers both upper-division work in audiovisual communications and graduate programs in instructional technology. The audiovisual communications program is one of only a few such baccalaureate degree programs in the country. Students obtain direct experience in creating and running multi-image presentations requiring 15 or more slide projectors.

The Department of Career and Human Resource Development offers only the master's degree program.

Resources

The experiential nature of all of the programs in the College of Applied Science and Technology requires excellent facilities and equipment. The Institute continually updates and adds equipment to maintain laboratories that contain state-of-the-art equipment. The engineering technology programs share facilities with the College of Engineering with additional laboratories in CAD/CAM systems, robotics, and soils. The extensive computer facilities mentioned previously are totally dedicated to academic support. The packaging science laboratory has some of the most advanced and sophisticated packaging testing equipment in the country. The laboratories in the School of Food, Hotel and Tourism Management rival those in the industry and are coordinated by computer systems. The audiovisual communications laboratory is probably the only one in the world with the resources required to produce and stage 30 projector multi-language shows on three different major programming systems.

Acceptance of the associate's degree

With the exception of the computer technology program, the School of

Engineering Technology and the Department of Instructional Technology (audiovisual communications) function as upper-division units only. Holders of an appropriate associate's degree from a community, junior, or technical college (or other similar two-year institutions) will receive full credit for those curricula leading to the bachelor's degree.

Engineering technology students may receive the engineering technology B. Tech degree in three years of additional study in the cooperative educational program.

Audiovisual communications transfers may receive the BS degree with two additional years of study.

The School of Computer Science and Technology and the Department of Packaging Science admit students into upper division years and accept the associate degree at full value if the associate degree is obtained in a computer related program or a packaging science program, respectively. They also conduct a curriculum into which high school graduates are admitted.

Faculty

Members of the professional staff have had considerable experience in the industrial field and/or teaching in two-year and four-year colleges, and have completed graduate programs in the various fields of their specialties.

Program planning

Each student in CAST is considered individually when his or her program is planned. The diversity of subject background from the two-year colleges necessitates an almost tailor-made pattern of courses for the individual. In this process, students can be assured of building upon previous courses and knowledge of their particular field, assuring that their associate's degrees retain the integrity they deserve, and guaranteeing, as far as possible, that previously studied material will not be repeated.

Admission at a Glance:

General Information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

College of Applied Science and Technology Programs

The College of Applied Science and Technology prepares students for a world of rapidly expanding technological applications. The programs reflect RIT's goal of offering students relevant, career-oriented

programs that lead to rewarding employment.

The college includes the Department of Instructional Technology, the School of Engineering Technology, the School of Computer Science and Technology, the Department of Packaging Science, and the School of Food, Hotel and Tourism Management.

Computer Science: The computer science program educates students for positions requiring a strong background in computing theory and practice. Graduates are prepared to enter graduate school, or to pursue careers as research programmers, systems programmers, applications specialists, or computer systems analysts. Degrees granted: AAS-2 year; BS—4-5 year.

Information Systems: The computer systems option is designed for students interested in business applications programming, systems analysis, and information systems design. The systems software option prepares students for careers as systems programmers or systems software specialists: Degrees granted: AAS-2 year; B. Tech—4-5 year.

Computer Engineering: A program jointly offered with the Department of Electrical Engineering. Oriented to prepare students in hardware design, interface, and process control. Degree granted: BS—5 year with co-op.

Packaging Science: The two options—management or technical—prepare students for initial employment in such areas as management, sales, marketing, purchasing, structural

design, product development, and the technical and engineering phases of production and package development. Degree granted: BS-4 year.

***Civil Engineering Technology:** This program offers two options—environmental controls, and construction. The environmental option places emphasis on water and wastewater treatment and pollution abatement. The construction option is oriented toward building construction and construction management. Degree granted: B. Tech.—3 year with co-op.

Computer Technology: A program of electronic hardware and computer software as applied to digital computers. Courses emphasize current technology in computers and graduates are prepared for employ-

Freshman Admission Requirements

Transfer Admission with junior standing

Program†	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable Minimum GPA
Computer Systems Systems Software Science	Elem. Algebra Inter. Algebra		Data processing, business, or equivalent computer technology	2.25
Applied Software Science Computer Science	Elem. Algebra; Inter. Algebra Trigonometry Plane Geometry Physics or Chemistry	Additional mathematics and science	Computer Science, engineering, mathematics and science.	2.3
Packaging Science	Elem. Algebra; Inter. Algebra 1 year any science Additionally for the Technical option; Plane Geometry; Trigonometry	Additional mathematics, science	Packaging Science, business administration, engineering technology, science, or equivalent	2.3
Civil Engineering Technology	First two years available at many two year colleges.		Civil, construction technology, or equivalent.	2.3
Electrical Engineering Technology	First two years available at many two-year colleges and RIT's College of Continuing Education.		Electrical technology, electronics technology or equivalent.	2.3
Mechanical Engineering Technology	First two years available at many two-year colleges and RIT's College of Continuing Education.		Mechanical technology or equivalent.	2.3
Manufacturing Engineering Technology	First two years available at some two-year colleges and RIT's College of Continuing Education		Manufacturing technology, mechanical technology, drafting & design technology or equivalent.	2.3
Energy Technology	First two years available at some two-year colleges		Air Conditioning Technology, Energy Technology, Solar Technology, Environmental Systems Technology or equivalent.	2.3
Audiovisual Communications	First two years available at some two-year colleges.		Audiovisual technology, television production, communications electronics, or comparable programs.	2.3
Food Management, Hotel and Resort Management Option, Travel Option	Elem. Algebra; Inter. Algebra; 1 year chemistry preferred	Additional mathematics and science	Food service administration; hotel-motel management or equivalent.	2.25
Dietetics	Elem. Algebra; Inter. Algebra; 1 year chemistry preferred	Biology; additional mathematics	Dietetics or equivalent.	2.3

† All options include electives in social science, literature and humanities.

*Four years of English are required in all programs, except where state requirements differ.

ment in designing, manufacturing, and servicing computer systems. Transfer into the program with junior standing is available for those with associate degrees in appropriate fields. Degrees granted: AAS—2 year; B. Tech.—5 year with co-op.

'Electrical Engineering Technology: Early emphasis in this program is on further mastery in electronics circuit theory, and materials for design and mathematics. Later courses are elective options in electrical power, communications, and digital computer design. Degree granted: B. Tech.—3 year with co-op.

'Mechanical Engineering Technology: Early emphasis in this program is on further mastery of mechanics, electricity, and mathematics. Later courses are elective options in either manufacturing, energy or mechanical design. The practical and applied are emphasized. Degree granted: B. Tech.—3 year with co-op.

'Manufacturing Engineering Technology: A program to prepare persons to apply sophisticated techniques to production processes. Courses will emphasize computer aided manufacturing, productivity, and the related activities required to enter this increasingly complex field. Degree granted: B. Tech.—3 year with co-op.

'Energy Technology: A program to prepare specialists in the field of residential, commercial and industrial energy management and control. Degree granted: B. Tech.—3 years with co-op.

'Audiovisual Communications: Prepares students with production/ design abilities to use various media. The graduate becomes an audiovisual communications specialist or an audiovisual producer. Degree granted: BS—2 year.

Food Service Administration: Prepares graduates for managerial positions in restaurants and food service operations such as hotels, schools, business firms, and governmental agencies. The Hotel and Resort Management option develops comprehensive skills that prepare students for management training positions in the hotel/resort industry. The Travel Management option prepares graduates to plan, arrange, and coordinate travel for business and industry, wholesale tour operations, travel agencies and convention bureaus. Degrees granted: AAS—2 year; BS—4 year.

Dietetics: Graduates can develop within a broad spectrum of interests from service to management positions in hospitals, nursing homes, and in the growing field of community nutrition (sponsored by national, state

and local agencies). Also, large national restaurant chains often have dietitians in responsible staff positions. Degrees granted: AAS—2 year; BS—4 year.

'Upper division program only

Department of Instructional Technology

Clint Wallington, Director

Bachelor of science in audiovisual communications

Audiovisual support for a speaker used to be something special. Now it is commonplace. Presentations that, a decade ago, would have used one slide projector now use half-a-dozen. Not so long ago, audiovisual was thought of as an adjunct to communications. Today it is hard to think of communications without thinking of audiovisual. Behind the scenes of every show, every presentation, every training package is a core of professional audiovisual communications specialists who translate ideas into the reality of media. While the growth of audiovisual communications brings about a need for specialists in a particular medium like television, there is also a demand for a generalist in audiovisual—someone who can work in a variety of media formats and who can work at any stage of the process, from determining the client's need to staging the final presentation.

RIT's audiovisual communications program is specifically designed to expand and improve the skills of graduates of two-year programs in media or audiovisual technology. The

RIT program is an upper division transfer program leading to a bachelor of science degree after only two years of study. It is one of the very few programs in the nation featuring high technology audiovisual communications.

RIT's audiovisual communications program is an important stepping-stone to job opportunities with audiovisual production companies. The program is innovative in concept, pragmatic in its approach, and stresses the experiential base required for a career in audiovisual communications and specializing in multi-image production and staging.

Objectives

The primary objective of the audiovisual communications program is to fully prepare qualified individuals for professional employment as audiovisual communications specialists. The program emphasizes the technical skills needed to enter the job market and the creative and management skills required for career advancement. To help meet these objectives, faculty and students in the program participate in professional audiovisual associations and are involved in the design, production, and staging of audiovisual presentations for a wide range of clients. An advisory committee composed of audiovisual leaders and practitioners from both the private and public sector reviews the program periodically to keep the curriculum and educational activities up-to-date and relevant.

Curriculum

The curriculum concentrates on three major areas: designing audiovisual presentations, producing audiovisual presentations, and designing and

Yr.	Audiovisual Communication, BS degree	Qtr. Credit Hours		
		FALL	WTR.	SPG.
3	ICIC-401 Message Design	4		
	ICIC-430 Audiovisual Presentation Design	4		
	ICIC-489 Audio for AV Presentations	4		
	ICIC-440 Audiovisual Program Design I		4	
	ICIC-424 Visual Production Technique		4	
	ICIC-450 Audiovisual Design II			4
	ICIC-510 Writing for AV Programs			4
	GLLC-402 Conference Techniques		4	
	SSEG-201 Contemporary Science			4
	Liberal Arts	4	4	4
Physical Education	0	0	0	
4	ICIC-595 Senior Project I	2		
	ICIC-405 AV Seminar		2	
	ICIC-596 Senior Project II		2	
	SSEG-202, 203 Contemporary Science		4	4
	AV Production Elective	4		
	Management Elective			4
	Liberal Arts	4		8
	Liberal Arts		2	
	Professional Elective	4		
Free Elective	4	4		
Physical Education	0	0	0	

coordinating audiovisual programs which have one or more audiovisual presentations as well as other activities leading to the communications goals of the program. Featured as a specialty within presentation design and production is multi-image—the use of multiple slide projectors for high impact communications.

The emphasis of the curriculum is on technical competence combined with creative design skills and the interpersonal skills needed to work with clients and other production team members. Course assignments, stress direct, hands-on experience in the technical skills area. The practical skills are balanced with the theory of why and how audiovisual communications work. A project—the design and production of an audiovisual presentation for a client—is required.

Admission requirements

The two-year BS degree program accepts transfer students of two-year colleges who hold an associate's degree in such areas as audiovisual technology, media technology, photography, film making, television production, graphic design,

Graduates from other programs in two-year colleges will be considered but may be required to take courses to make up any deficiencies in audiovisual production skills.

Graduation requirements

The BS in audiovisual communications degree requires the completion of a minimum of 192 quarter credit hours. Normally, entering students will have completed one half of this amount in a two-year program. In addition to the coursework, a design and production project is also required. All students must also meet the writing competency requirements of the program. In addition to the professional courses, liberal arts, sciences, and physical education courses are required.

Audiovisual production electives

- ICIC-489 Audio for AV Productions
- ICIC-490 Audio Techniques
- ICIC-503 Practicum in Production
- ICIC-580 Producing Multi-image Presentations I
- ICIC-581 Producing Multi-image Presentations II
- ICIC-583 Advanced Multi-image Project
- ICIC-585 Producing Special Effects Slides

Other electives may be taken in the College of Continuing Education, the School of Engineering Technology, and the School of Photographic Arts

and Sciences, with permission of the appropriate department and the student's academic advisor.

School of Computer Science and Technology

Wiley R. McKinzie, Director

The School of Computer Science and Technology offers programs leading to BS, B. Tech., and MS degrees. The school accepts both high school graduates and two-year college graduates as freshmen and upper division classmen, respectively. All

degree programs offered in the School of Computer Science and Technology are designed to meet the staffing demands of industry, government, and educational institutions. In addition to theoretical foundations, practical aspects of computer science or computer technology are emphasized. The opportunity for hands-on experience with computer systems is provided and encouraged. Graduates of the School of Computer Science and Technology are fully prepared for employment in computer hardware and software industries and computer applications departments of other major industries, or enrollment in graduate schools to pursue advanced degrees.

Yr. Computer Science program, BS degree

Qtr. Credit Hours

Yr.	Course	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	ICSS-202 Introduction to Computer Science	4		
	ICSP-241 Programming I-Algorithmic Structures	4		
	ICSP-242 Programming II-Data Structures		4	
	ICSP-243 Programming III-Design and Implementation			4
	SMAM-251, 252, 253 Calculus	4	4	4
	SPSP-311 University Physics (Mechanics)			4
	GLLC-220 English Composition	4		
2	Liberal Arts or other related fields		8	4
	Physical Education Electives	0	0	0
2	ICSP-305 Assembly Language Programming	4		
	ICSS-315 Digital Computer Organization		4	
	ICSS-325 Data Organization and Management		4	
	Professional Computer Science Elective [1]			4
	SPSP-313 University Physics (Electricity and Magnetism)	4		
	SMAM-305 Calculus	4		
	SMAM-351 Probability		4	
	SMAM-352 Applied Statistics I			4
	SMAM-265 Foundations of Discrete Mathematics			4
	Liberal Arts	4	4	4
Physical Education Electives	0	0	0	
3	ICIC-444 Technical Writing for Computer Scientists			2
	ICSS-440 Operating Systems			4
4	ICSS-420 Data Communication Subsystems			4
	ICSP-450 Programming Language Concepts			4
5	Computer Science Concentration [2]			12
	Computer Science Electives [3]			16
	Minor [4]			18-20
	Liberal Arts			26
	Free Electives [5]			8
	Cooperative Education (4 quarters)			

[1] The professional computer science elective in the second year must be chosen from the following courses:
 ICSP-306 Systems Programming Fundamentals
 ICSP-307 Business Applications Programming
 ICSP-319 Scientific Applications Programming

[2] The computer science concentration consists of one of the following course sequences:

- Computer Information Systems
- ICSS-435 Systems Specification, Design and Implementation
- ICSS-485 Database Concepts
- ICSP-488 Programming Systems Workshop
- Systems Software
- ICSS-520 Computer Architecture I
- ICSS-540 Operating Systems Laboratory
- ICSS-580 Language Processors
- Computer Science Theory
- ICSS-470 Finite State Machines
- ICSS-480 Formal Languages
- ICSS-515 Analysis of Algorithms

[3] Computer science courses may be taken as computer science electives except as noted in the Course Description Catalog.

[4] A minor consists of a set of coherent courses giving the student significant expertise in an area other than computer science.

[5] Any course open to computer science majors may be taken as a free elective.

Computer science and technology covers a very wide spectrum of the field of computing. A computer scientist or technologist can specialize in areas such as computing theory, scientific computing, information systems, systems software, numerical analysis, operating systems, database systems, programming languages, and systems analysis, to name just a few. It is important to note that programming is merely a tool, albeit an important one, and is not itself computer science. An undergraduate computer science technology student is required to take a certain number of computer science courses that will provide both a solid foundation in computing and a specialization useful for employment.

Programs

The School of Computer Science and Technology offers the following programs:

1. A computer science (BS) degree program with several upper division specialization tracks.
2. An information systems (B. Tech) degree program with options in computer systems and systems software science.

Students entering as freshmen may change programs or options during the first three years of study without losing credit, as long as they meet the math and science requirements of the BS program. All students in the school are required to obtain credit for one year (four quarters) of co-operative education prior to graduation. To help insure that the goals of integrated academic and experiential education are attained, students must attend classes at RIT for at least one quarter after their final co-op block.

Computer science program

The computer science program of the School of Computer Science and Technology is designed for students who are interested in both the technical aspects and the underlying mathematical theory of the field. Many employers look for students who not only are good scientists, but who also understand the tools and techniques of mathematics, science, and business. Thus the BS program is for the mathematically adept student who wishes to become a computing professional with knowledge of relevant applications areas. This program will also be attractive to students transferring to RIT with an associate's degree in computer science, or with an associate's degree in data processing

Yr.	Computer Technology, B. Tech degree	Qtr. Credit Hours			
		FALL	WTR.	SPG.	SMR.
1	SMAM-204 College Algebra and Trigonometry	4			
	SMAT-420 Calculus for Technologists I		4		
	SMAT-421 Calculus for Technologists II . . . ?			4	
	ICSP-241 Programming I	4			
	ICSP-242 Programming II		4		
	ICSP-243 Programming III			4	
	ITEE-201 DC Circuits	4			
	ITEE-202 AC Circuits		4		
	ITEE-203 Electronic Devices				4
	Liberal Arts (Core)	4	4	4	
Physical Education	0	0	0		
2	SPSP 211 College Physics I	3			
	SPSP 212 College Physics II		3		
	SPSP 213 College Physics III			3	
	SPSP 271, 272, 273 College Physics Labs	1	1	1	
	ICSS 325 Digital Organization and Management	4			
	ITEE301 Digital Fundamentals	4			
	SMAT-422 Solution of Engineering Problems (B. Tech) or Liberal Arts (AAS)	4			
	ICSP-305 Assembly Language Programming		4		
	ITEE-302 Linear integrated Circuits		4		
	Liberal Arts (Core)		4		
	ITEE-303 Microprocessors			4	
	ITEE-305 Drafting and Fabrication			4	
	SMAM-205 Finite Mathematics			4	
Physical Education	0	0	0		
3	SMAM-206 Probability	4			
	Liberal Arts (Core)	4			
	ITEE-538 Digital Computer Design I	4			
	ITEE-409 Technical Reports	4			
	SMAM-207 Statistics			4	
	ITEE-403 Advanced Circuits			4	
	ITEE-539 Digital Computer Design II			4	
ICSS-440 Operating Systems			4		
4	ITEE-429 Advanced Electronics		4		
	ITEE-405 Power Controls		4		
	ICSS-420 Data Communications		4		
	Liberal Arts (Core) (Concentration)		4		4
	ITEE-527 Semiconductor Devices				4
	ICSS-500 Computer Architecture I				4
ITEE-472 Instrumentation				4	
	ITEE-471 Topics in Computer Technology		4		
	Liberal Arts (Concentration)		4		4
	Liberal Arts (Senior Seminar)			2	
	Professional Electives		8	8	

backed up by significant course work in mathematics and science. Students interested in computer science and technology but who are weak in mathematics should consider the B. Tech options.

The program of study in computer science can be broken down into five major areas:

1. Computer science—required and elective courses in the areas of program development, computer organization, and systems software. Each student must complete a three-course concentration to attain advanced knowledge in a specialized area.
2. Mathematics and science—each student must take seven courses in the areas of calculus, physics, probability and statistics, and discrete mathematics.
3. Liberal arts—courses in language and literature, humanities, social science.
4. Minor—a coherent set of courses designed to provide experience in a discipline other than computer science.

5. Free electives—two courses chosen by the student based on his or her personal preferences.

The primary goal of the computer science program is to prepare well-rounded graduates who possess significant skills in mathematics, computer science, and at least one other discipline. Graduates of the computer science program are fully prepared for entry into professional computing positions or for continued education in graduate school.

Information systems

The information systems program of the School of Computer Science and Technology offers two options leading to the bachelor of technology degree. Course work reflects how these options are more specialized and directed toward particular areas than is the case for the bachelor of science program.

The options of this program are structured so that approximately 25 percent of the course work is in computer science, 25 percent is in liberal arts and sciences, and 25

structured so that appro

percent is in a professional elective area chosen outside computer science from such areas as business, mathematics, and engineering technology. This additional course work permits students to tailor their overall programs to a computer application or technical area of their own choosing.

The liberal arts, portion of the program consists of basic course work in language and literature, the humanities, and the social sciences. Students in this program are also required to take an applied calculus sequence and a course in statistics. These mathematics courses provide the necessary background for dealing with many applications of computer science and technology. Students who desire a more intensive background in mathematics can take the calculus, probability, and statistics sequence required in the BS program, applying the extra credits towards the professional elective requirements.

Students transferring to RIT with an associates degree in data processing and related areas will find the bachelor of technology program particularly attractive. Except in unusual cases, these students can expect to receive both full transfer credit for their AAS course work and a balanced mapping of these courses into the required curriculum. Since most students transfer into the program with junior standing, they are normally eligible for co-operative education after one quarter of course work at RIT.

Most graduates of the information systems program go on to full-time employment in their chosen area of computer science. Some, however, choose to continue on to graduate school; the appropriateness of their undergraduate degree for graduate study largely depends on the composition of their professional elective area.

Computer systems option

The goal of this program is to provide students with the skills and technology fundamental to a career in business applications computing. Graduates from this program must master the principles and skills which underlie the disciplines of business data processing and data management. These include hardware organization and assembly language, data structures, file management, business applications programming, system specification and design, data communications, and database design and implementation.

Yr.	Computer Systems option, B. Tech. degree	Qtr.			Credit Hours	
		FALL	WTR.	SPG.		
1	ICSS-202 Introduction to Computer Science	4				
	ICSP-241 Programming I-Algorithmic Structures	4				
	ICSP-242 Programming II-Data Structures		4			
	ICSP-243 Programming III-Design and Implementation			4		
	SMAM-214, 215 Introductory Calculus [3]	3	3			
	SMAM-309 Statistics [3]			4		
	GLLC-220 English Composition	4				
2	Liberal Arts		8	8		
	Physical Education Electives	0	0	0		
	ICSP-305 Assembly Language Programming	4				
	ICSS-315 Digital Computer Organization		4			
	ICSS-325 Data Organization and Management		4			
	ICSP-307 Business Applications Programming			4		
	Computer Science Elective [1]			4		
3	BBUB-320 Organizational Behavior	4				
	BBUA-301 Financial Accounting		4			
	Professional Electives			8		
	Liberal Arts	8	4			
	Physical Education Electives	0	0	0		
	4	ICIC-444 Technical Writing for Computer Scientists			2	
		ICSS-435 Systems Specification, Design and Implementation ...			4	
ICSS-420 Data Communication Systems				4		
ICSS-485 Database Concepts				4		
ICSP-488 Programming Systems Workshop				4		
Restricted Computer Science Electives [2]				8		
5		Computer Science Electives [1]			32	
	BBUQ-334 Management Science			4		
	Professional Electives			20		
	Liberal Arts			14		
	Cooperative Education (4 quarters)					

[1] Computer Science courses may be taken as Computer Science Electives except as noted in the Course Description Catalog.

[2] Restricted Computer Science Electives for the Computer Systems option: Students must take one course from Group A and one course from Group B.

Group A: Systems Software—Software Emphasis
 ICSP-450 Programming Language Concepts
 ICSS-440 Operating Systems

ICSS-530 Fundamentals of Discrete Simulation
 ICSS-570 Introduction to Computer Graphics

Group B: Systems Software—Hardware Emphasis
 ICSS-565 Computer Systems Selection
 ICSS-520 Computer Architecture I

ICSS-521 Introduction to Microprocessor Systems

[3] Mathematically inclined students may satisfy the mathematics requirement by substituting SMAM-251, 252, 253, 351 and 352 for the listed SMAM courses. The additional courses will be counted as professional electives.

Positions in business data processing and data management not only require a strong computing background, but also a solid set of analytical and business skills. For this reason, students are required to take a basic sequence of courses from the College of Business and the Department of Mathematics. The student may continue his or her

professional elective concentration in either business or mathematics, or may choose yet another relevant discipline at RIT.

The computer systems curriculum is designed to facilitate transfer for graduates of two-year programs in data processing or business computing.

Systems software science option

The goal of this program is to provide students with a background in the principles of systems software as well as experience in the design, implementation, and maintenance of systems programs. Systems programs are those which enhance the performance, utility, or flexibility of a computer system. In many respects, a systems programmer is a toolmaker whose tools are used by other programmers. These tools include operating systems, language translators and interpreters, text editors, and database systems.

Students in this option must learn to understand, design, and implement the lowest level programs in a computer system. For this reason, a deep understanding of hardware concepts and assembly language programming is essential. In addition, a strong background in operating systems principles, language processors, and data communications is necessary.

Graduates are prepared for employment as systems programmers or systems software specialists. Any relevant curriculum at RIT may be chosen for professional electives.

Yr.	Systems Software Science option, B. Tech. degree	Otr. Credit Hours		
		FALL	WTR	SPG.
1	ICSS-202 Introduction to Computer Science	4		
	ICSP-241 Programming I-Algorithmic Structures	4		
	ICSP-242 Programming II-Data Structures		4	
	ICSP-243 Programming III-Design and Implementation			4
	SMAM-214, 215 Introductory Calculus [3]	3	3	
	SMAM-309 Statistics [3]			4
	GLLC-220 English Composition	4		
	Liberal Arts		8	8
2	Physical Education Electives	0	0	0
	ICSP-305 Assembly Language Programming	4		
	ICSS-315 Digital Computer Organization		4	
	ICSP-306 Systems Programming Fundamentals			4
	ICSS-325 Data organization and Management		4	
	Computer Science Electives [1]			4
	Professional Electives	4	4	8
	Liberal Arts	8	4	
3	Physical Education Electives	0	0	0
	ICIC-444 Technical Writing for Computer Scientists		2	
	ICSS-450 Programming Language Concepts		4	
	ICSS-420 Data Communication Systems		4	
	ICSS-440 Operating Systems		4	
	ICSS-580 Language Processors		4	
	Restricted Computer Science Electives [2]		12	
	Computer Science Electives [1]		28	
5	Professional Electives		24	
	Liberal Arts		14	
	Cooperative Education (4 quarters)			

[1] Computer Science courses may be taken as Computer Science Electives except as noted in the Course Description Catalog.

[2] Restricted Computer Science Electives for the System Software Science option: Students must take one course from Group A, one course from Group B, and one course from Group C.

- Group A: Advanced Software Techniques
 - ICSS-540 Operating Systems Laboratory
 - ICSS-560 Compiler Construction Laboratory
 - ICSS-585 Systems Programming Laboratory
- Group B: Advanced Digital Computer Principles
 - ICSS-520 Computer Architecture I
 - ICSS-521 Introduction to Microprocessor Systems
- Group C: Application Areas
 - ICSS-485 Database Concepts
 - ICSS-515 Analysis of Algorithms
 - ICSS-530 Fundamentals of Discrete Simulation
 - ICSS-570 Introduction to Computer Graphics

[3] Mathematically inclined students may satisfy the mathematics requirement by substituting SMAM-251, 252, 253, 351 and 352 for the listed SMAM courses. The additional courses will be counted as professional electives.

School of Engineering Technology

W. David Baker, Director

Engineering technology is a relatively new field in higher education, and RIT was a pioneer in the development of such programs. Originally conceived as associate's degree level educational programs, engineering technology curricula were designed to prepare people to work with engineers and scientists as technicians. This educational role is presently being carried out primarily in two-year community colleges and technical institutes.

More recently, RIT again was a pioneer in the development of baccalaureate programs in engineering technology.

Upper-division programs

The School of Engineering Technology offers the following upper-division (junior-senior) programs leading to the bachelor of technology (B. Tech) degree:

1. Civil Engineering Technology with options in construction and environmental controls
2. Electrical Engineering Technology
3. Mechanical Engineering Technology
4. Manufacturing Engineering Technology
5. Energy Technology

The School of Engineering Technology upper-division programs are designed specifically to accept graduates of associate's degree programs in similar engineering technology fields, and provide a continuation of study in the student's area of specialization. Each program area consists of a carefully integrated program heavily involved in professional studies, coupled with liberal education, mathematics, and on-the-job experience. Through the selection of technical electives students can build and tailor their program based on previous knowledge and co-op experience to launch a career that best meets their needs and aspirations.

Five-year program

The School of Engineering Technology offers a five-year cooperative education program leading to the bachelor of technology degree in computer technology. Students have the option of exiting the program after two years with an AAS degree. Transfer into to the

upper division of the program is available to graduates of associate degree programs in related engineering technology fields.

Careers

The B. Tech graduate—an engineering technologist—is a distinct type of professional whose main concern and interest is with existing operation, maintenance, and management of products and processes. As such, the graduate qualifies for positions to fulfill a role within the broad engineering requirements of business, industry and government. At the present time, the New York State Board for Engineering and Land Surveying requires the B. Tech graduate to achieve additional experience prior to becoming eligible for the New York State Professional Engineer examination. Requirements differ in other states.

The AAS graduate—an engineering technician—works closely with engineers and technologists and is prepared for positions requiring skills in fabricating and producing equipment as well as maintaining and operating apparatus and systems.

Cooperative work plan

An integral and significant part of each School of Engineering Technology program in engineering technology is on-the-job experience through the cooperative education plan. This involves alternate periods of academic study and related industrial employment.

The co-op plan provides opportunity for individual students to learn and become familiar with direct application of techniques, skills, and the latest developments in their field. Students are encouraged to explore and test the wide range of opportunities available. Such things as the specific type of work, the size of the company, the geographic location, and familiarization with the industrial community and environment can and do affect an individual's decision on the direction a future career might take. Only co-op can provide a suitable trial ground.

Obviously, co-op can also provide a significant income during the work periods which helps defray a major portion of one's educational expenses.

In the School of Engineering Technology each student is assisted in finding work related to specific career goals, however, as is the case in any employment situation, the major impetus must originate with the individual student. In some of the upper-division programs the entering

(junior) class is divided into two sections with one half of the class beginning their RIT program on a co-op job, and the other half beginning with their academic work. Detailed schedules are provided in the description of the individual programs on the following pages.

Admission requirements

Admission to the upper-division programs in the School of Engineering Technology is open to persons holding an associate's degree in appropriate engineering technology fields, or an acceptable equivalent. Please refer to individual department requirements for a more complete definition of an acceptable degree.

Admission may be offered to students with other associate degrees or program backgrounds. In such cases, students should contact the School of Engineering Technology for an individual evaluation of the appropriateness of their previous academic experience.

Admission to the five-year computer technology program is open to high school graduates who have completed elementary and intermediate algebra, plane geometry, trigonometry, and physics or chemistry. Emphasis is placed on math and science skills. Transfer admission is open to graduates of appropriate two-year college programs.

Program requirements

In addition to the required technical courses of each program, a minimum of 38 quarter credit hours of liberal arts and 35 quarter credit hours of mathematics/sciences is required for the B. Tech degree. For transfer students, the quantity of credits to be completed at RIT is the specified minimums minus the amount of credits of liberal arts and mathematics/sciences transferred from the two-year college.

Graduation requirements

The minimum academic requirements in the School of Engineering Technology are:

AAS degree—The degree of associate in applied science is awarded upon earning a minimum grade point average of 2.0 in the departmentally approved program.

B. Tech degree—The bachelor of technology degree is granted if the student has (1) earned a minimum grade point average of 2.0 in the departmentally approved program, and (2) completed the required number of cooperative education blocks for the program.

Accreditation

The programs of study leading to the bachelor of technology degree in civil engineering technology, (environmental and construction options.), electrical engineering technology, and mechanical engineering technology, are all accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). The School of Engineering Technology is a member institution of the American Society for Engineering Education.

Civil Engineering Technology Department

Kevin M. Foley, Chairman

Civil Engineering Technology, upper division baccalaureate program

The civil engineering profession requires the services of many individuals with a wide range of backgrounds and interests-technicians, technologists, and engineers.

The technologist translates the innovative concepts of the engineer into functioning systems and structures, using the language of codes, work drawings, specifications, and construction.

Entering students have a choice of following either a curriculum oriented towards environmental controls or towards the construction industry. However, since both programs of study are sufficiently broad in scope and allow for elective courses, graduates of either program of study should find wide-ranging employment opportunities.

Admission requirements

All students enter this program at the third-year level or higher having already received an appropriate associate's degree in Civil Engineering technology or an acceptable equivalent. An appropriate associate's degree should include:

- Technical Math (2 college-level courses with introduction to calculus)
- Drafting
- Technical Physics
- Soil Mechanics
- Surveying (2 semesters including Route Surveying)
- Statics and Strength of Materials
- Structural Design

Students lacking these courses may be required to take the missing courses prior to entry into the

Yr. Civil Engineering Technology, B. Tech degree-Environmental option

Otr. Credit Hours

		FALL-WTR.		SPG. SMR.
1	Completion of an appropriate Associate's degree at a two-year college			
2				
3	#ITEC-420 Hydraulics	4		
	ITEC-428 Report Writing	2		
	SCHG-271 Chemistry of Water I	4		
	SMAT-421 Calculus for Technologists II	4		
	‡‡SMAT-420 Calculus for Technologists I	(4)		
	Liberal Arts	4		
	‡Physical Education Elective	0		
	ITEC-404 Applied Mechanics of Materials			3
	SCHG-272 Chemistry of Water II			3
	SBIG-440 Environmental Microbiology			4
	SMAT-422 Solution of Engineering Problems			4
	‡‡SMAT-421 Calculus for Technologists II			(4)
*Liberal Arts			4	
‡Physical Education Elective			0	
4	ITEC-432 Water Transport Systems	3		
	ITEC-434 Environmental Pollution	3		
	ITEC-438 Principles of Treatment of Water and Sewage	4		
	ICSP-205 Computer Techniques	3		
	ITEE-414 Basic Electrical Principles	4		
	‡‡SMAT-422 Solution of Engineering Problems	(4)		
	‡Physical Education Elective	0		
	ITEC-510 Design of Water Treatment Facilities			3
	ITEC-514 Land Planning			2
	ITEC-516 Analysis of Reinforced Concrete Structures			4
Technical Elective			4	
*Liberal Arts			4	
5	ITEC-513 Computer Techniques	1		
	ITEC-520 Design of Wastewater Treatment Facilities	4		
	ITEC-527 Soil Mechanics and Foundations	4		
	Technical Elective	4		
	‡‡ITEE-414 Basic Electrical Principles	(4)		
	Liberal Arts	4		
	**ITEC-544 Contracts and Specifications			3
	**ITEC-546 Professional Principles & Practices			1
	Technical Elective			4
	Free Elective			4
*Liberal Arts			4	
*Liberal Arts (Seminar)			2	

#Students who successfully complete a proficiency examination in hydraulics will take an elective in lieu of ITEC-420
 ‡‡Entering students will take SMA T-420 or SMA T-421 depending on an evaluation of their mathematics background. Those students assigned to SMA T-420 will be taking a 3-course sequence in mathematics and will, therefore, defer taking ITEE-414 until the first quarter of the fifth year (in lieu of a technical elective)
 **Offered in Spring Quarter only
 ‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

program or concurrently within a reasonable time.

Cooperative education plan

Work experience gained while completing alternating work and study quarters is especially valuable. A typical co-op job at a consulting firm might include assisting engineers in design drafting, feasibility or preliminary report writing or inspecting, surveying, or investigating in the field. Other co-op students work in water treatment plants, checking control panels; operating valves, pumps, and other equipment; performing laboratory tests; or doing maintenance work.

The scope of work accomplished varies with the interests of each student and increases in complexity with each succeeding job. Construction companies, larger corporations' construction and engineering departments, testing agencies, and all branches of government employ our students.

Some students work their co-op quarters with the same employer while others choose various work experiences. All are expected to use their education on the job and to bring back innovative, new and unusually successful technologies and ideas to share with-classmates.

Graduates

Past graduates with their B. Tech. in civil engineering technology are employed by consulting engineers, construction companies, industries, and by federal, state, and local governmental agencies. They are scattered from coast to coast and from New York to Texas. Their titles range from project or design engineer to plant operator, inspector, field party chief, and environmental officer. Also several graduates have successfully completed master's degrees at other universities and have also registered as professional engineers in several states.

Civil Engineering Technology cooperative education plan

Year	Block	Fall	Winter	Spring	Summer
3	A	RIT.	Work	RIT	Work
	B	Work	RIT	Work	RIT
4	A	Work	RIT	Work	RIT
	B	RIT	Work	RIT	Work
5	A	RIT	Work	RIT	
	B	Work	RIT	RIT	

Technical electives

ITEC-480 Groundwater Hydraulics 3 credits
 ITEC-505 Construction Safety 3 credits
 ITEC-549 Environmental Engineering Project 4 credits
 ITEC-550 Construction Practices 4 credits
 ITEC-552 Structural Analysis & Design II (structural steel) 4 credits
 ITEC-580 Senior Construction Seminar 3 credits
 CTEM-560 Legal and Ethical Responsibilities of the Field Engineer (Evening course)*. 4 credits
 ITEC-556, 557 Wastewater Treatment Plant Operation and Control I & II 1-4 credits
 With departmental approval, technical electives may be selected from existing courses in mathematics, chemistry, physics, engineering, and technology. Also, independent study projects may be pursued for credit in cases where students demonstrate unusual ability and obtain sponsorship of a faculty advisor.

Students are encouraged to utilize the first-class computer facilities and to work with professors on additional applications of computer graphics. The RIT College of Continuing Education offers evening courses, and all of the day college courses are open if schedules can be arranged and the students have the capacity to handle additional credits.

Yr. Civil Engineering Technology, B. Tech degree-Construction option

1 2	Completion of an appropriate associate's degree at a two-year college	Qtr. Credit Hours	
		FALL-WTR.	SPG. SMR.
3	#ITEC-420 Hydraulics	4	
	ITEC-428 Report Writing	2	
	SCHG-271 Chemistry of Water I	4	
	SMAT-421 Calculus for Technologists II	4	
	##SMAT-420 Calculus for Technologists I	(4)	
	ITEF-436 Engineering Economics	4	
	‡Physical Education Elective	0	
	ITEC-460 Construction Equipment		3
	ITEC-404 Applied Mechanics of Materials		3
	BBUB-245 Business Management		4
4	SMAT-422 Solution of Engineering Problems		4
	##SMAT-421 Calculus for Technologists II		(4)
	*Liberal Arts		4
	‡Physical Education Elective		0
	ITEC-470 Timber Design & Construction	3	
	ITEC-422 Elements of Building Construction	4	
	ICSP-205 Computer Techniques	3	
	ITEE-414 Basic Electrical Principles	4	
	##SMAT-422 Solution of Engineering Problems	(4)	
	*Liberal Arts	4	
5	‡Physical Education Elective	0	
	ITEC-516 Analysis of Reinforced Concrete Structures		4
	ITEC-500 Labor Relations		4
	Technical Elective		4
	*Liberal Arts		4
	ITEC-508 Cost Estimates	2	
	ITEC-509 Estimating Problems	1	
	ITEC-527 Soil Mechanics and Foundations	4	
	ITEC-444 Mechanical Equipment for Buildings	3	
	Technical Elective	3	
5	##ITEE-414 Basic Electrical Principles	(4)	
	*Liberal Arts	4	
	*ITEC-544 Contracts & Specifications		3
	**ITEC-546 Professional Principles & Practices		1
	**ITEC-450 Construction Project Management		4
	Free Elective		4
	*Liberal Arts		4
	Liberal Arts (Seminar)		2

#Students who successfully complete a proficiency examination in hydraulics will take an elective in lieu of ITEC-420
 ##Entering students will take SMAT-420 or SMAT-421 depending on an evaluation of their mathematics background. Those students assigned to SMAT-420 will be taking a 3-course sequence in mathematics, and will, therefore, defer taking ITEE-414 until the first quarter of the fifth year in lieu of a technical elective)
 **Offered in Spring Quarter only
 *See Pg. 23 for Policy on Physical Education-
 *See Pg. 97 for Liberal Arts requirements.

Electrical Engineering Technology Department

John A. Stratton, Chairman

Electrical Engineering Technology, upper division baccalaureate program

The bachelor of technology degree in electrical engineering technology is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

This relatively new profession program is designed to meet the growing needs for technologists in a technologically oriented society.

The term technologist is used to define the graduate of this program, one whose professional training is in the application of existing technology and devices to the solution of routine engineering design problems.

The bachelor of technology program in electrical engineering technology offered at Rochester Institute of Technology is an upper-division program. The upper-division feature of the program provides a viable transfer option to those students who have completed their associate's degree and desire to continue their education in technology.

The first two quarters of course work are designed to provide uniform mastery in the fields of mathematics and circuit theory. The remaining four quarters of course work consist of professional courses with elective options in the fields of electrical power, communications, and digital computer design.

Elective courses are available for the student to pursue his or her chosen option and to provide course work that complements his or her professional objectives. Professional electives are normally assumed to be those shown as technical electives. However, the Institute provides a wide variety of course offerings and students are urged to make full use of these offerings in developing their professional programs. Academic advisors are provided to assist the student in this selection process.

For students who wish to concentrate their electives in a particular area, a sequence of courses is shown which provides a strong program in this area.

The curriculum also includes one year of cooperative work experience,

Electrical Engineering Technology cooperative education plan

Year		Fall	Winter	Spring	Summer
3 and 4	A	RIT	Work	RIT	Work
	B	Work	RIT	Work	RIT
5	A	RIT	Work	RIT	.
	B	Work	RIT	RIT	.

Yr. Electrical Engineering Technology, B. Tech degree Qtr. Credit Hours

Yr.	Electrical Engineering Technology, B. Tech degree	FALL-WTR.	SPG. SMR.
1	Completion of an appropriate Associate's degree at a two-year college		
3	ITEE-401 Circuit Theory I	4	
	ITEE-424 Logic and Digital Devices	4	
	**SMAT-420 Calculus for Technologists I	(4)	
	SMAT-421 Calculus for Technologists II	4	
	*Liberal Arts (Core)	4	
	‡Physical Education Elective	0	
	ITEE-402 Circuit Theory II		4
	ITEE-428 Linear Amplifier Design		4
	**SMAT-421 Calculus for Technologists II		(4)
	SMAT-422 Solution of Engineering Problems		4
4	ICSP-205 Computer Techniques		3
	ITEE-425 Power Concepts		3
	‡Physical Education Elective		0
	**SMAT-422 Solution of Engineering Problems	(4)	
	ITEE-404 Control Systems I	4	
	ITEE-532 Power Amplifier Design	4	
	ITEE-542 Microprocessors	4	
	*Liberal Arts (Core)	4	
	‡Physical Education Elective	0	
	ITEE-520 Electrostatic and Magnetic Fields		4
5	ITEE-530 Applications of Discrete and Integrated Circuit Elements		4
	*Liberal Arts (Concentration)		4
	Technical Specialization Option: (Digital Design I, Power Systems I, Transmission Lines and Antennas)		4
	ITEM-411 Engineering Materials I		4
	*Liberal Arts (Concentration)	4	
	ITEF-436 Engineering Economics	4	
	*Liberal Arts (Seminar)	2	
	Technical Specialization Option: (Digital Design II, Protective Relaying, Communications I)	4	
	ITEM-408 Introduction to Strength of Materials	4	
	*Liberal Arts (Concentration)		4
Free Elective		4	
Technical Elective		4	

**Entering students will take SMAT-420 or SMAT-421 depending on the evaluation of their mathematical background. Those students assigned to SMAT-420 will be taking 3-course sequence in Calculus for Technologists and will therefore, defer taking one fourth year Liberal Arts Elective until their fifth year, thus, reducing the elective choices by one course.
‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

Elective Sequence-Computer Design Specialization

4th Year Spring/Summer	ITEE-538 Computer Design I
5th Year Fall/Winter Spring	ITEE-539 Computer Design II ITEE-543 Minicomputers, Controllers and Peripherals

and thus, provides important training in the solution of real technical problems.

Entering students are divided into two groups, A and B, and are assigned to work or school according to the schedules shown. Note that half of the entering students will begin their program of studies at RIT by working on their co-op job.

Admission requirements

All students enter the program at the % third year or junior level as transfers from existing two-year associate's degree electrical technology programs. Students from associate's degree programs that are closely related to electrical technology and that have appropriate circuits and electronic course levels are also accepted but may be required to take remedial courses prior to matriculating into the program.

Technical electives

(each carries 4 quarter credit hours)

ITEE-524 Microwave Systems
 ITEE-528 Introduction to Minicomputers
 ITEE-534 Communication Systems I
 ITEE-535 Communication Systems II
 ITEE-536 Control Systems II
 ITEE-538 Digital Computer Design I
 ITEE-539 Digital Computer Design II
 ITEE-543 Minicomputers, Controllers and Peripherals
 ITEE-546 Industrial Electronics
 ITEE-547 Digital Processing of Signals
 ITEE-550 Power Systems I
 ITEE-551 Protective Relaying
 ITEE-552 Power Systems II
 ITEE-554 Electronic Optic Devices
 ITEE-555 Transmission Lines and Antennas
 ITEE-560 Microelectronics I
 ITEE-561 Microelectronics II
 ITEE-562 Construction and Failure Analysis
 ITEE-580 Senior Project
 ITEF-424 Statistical Quality Control I
 ITEM-550 Topics in Machine Design for Electrical Majors

Computer technology program

The demand for graduates who are able to use both knowledge of computer programming and computer electronic hardware is very great. This is true for both technicians with an AAS degree and for technologists with the bachelor of technology degree.

Based on a foundation in physics and applied mathematics, the computer technology program is designed to develop the hardware and software skills necessary for design and development of systems involving computers. The upper

division of the program also includes a required co-op work/study component, giving the student valid work experience before graduation.

Students completing a slightly modified first two years of the program will be eligible to receive the AAS degree and enter the employment field as a computer technician.

Electives are available in the upper division and may be taken from computer science or electrical engineering technology courses. Other courses are available on approval by an advisor.

Admission requirements

Freshmen are admitted by normal RIT procedures with an emphasis given to mathematics and science skills.

Transfer admission is open to graduates of closely allied associate degree programs. Transfer students from these closely allied programs may normally expect to complete the requirements for the B. Tech degree in three years which includes seven academic quarters and four quarters of cooperative employment experience. Recognizing that no single program of study can effectively integrate all AAS transfer students into the curriculum, each qualified transfer student will be evaluated on a course-by-course evaluation and will be given a specific program of study that best meets his or her career goals, provides a meaningful cooperative work experience, and permits the student to fulfill the degree requirements in a reasonable period of time.

Cooperative education plan

Students in the five-year program attend classes during the Fall, Winter, and Spring quarters of their first and second years and begin their cooperative education plan during the third year. Students transferring with an associate degree in a similar program begin their cooperative education plan during their first year of the program. The charts illustrate the cooperative education plan for the five-year program and shows a typical plan for those transferring with an AAS degree.

Technical electives

A wide variety of technical electives can be taken from existing courses in Computer Science and Electrical Engineering Technology. Examples of these are:

- A. ICSP 350 Professional Language Concepts
 ICSS 580 Language Processors
- B. ICSP 306 Advanced Assembly Language
 ICSS 540 Operating Systems Lab.

- C. ICSS 541 Introduction to Computer Networks
 ICSS 545 Computer Architecture II
- D. ITEE 528 Introduction to Minicomputers
 ITEE 543 Minicomputers, Controllers and Peripherals
- E. ITEE 520 Electrostatic and Magnetic Fields
 ITEE 534 Communications Systems I
 ITEE 535 Communications Systems II
- F. ITEE 560 Microelectronics I
 ITEE 561 Microelectronics II
 ITEE 562 Construction and Failure Analysis
- G. ITEE 550 Power Systems I
 ITEE 551 Protective Relaying
 ITEE 552 Power Systems II

Other special electives might be:

- ITEE 524 Microwave Systems
- ITEE 547 Digital Processing of Signals
- ITEE 554 Electronic Optic Devices
- ITEE 555 Transmission Lines and Antennas
- ITEE 570 Introduction to Computer Graphics

Elective sequences

Digital Computer Design

- ITEE 538 Digital Computer Design I
- ITEE 539 Digital Computer Design II
- ITEE 543 Minicomputers, Controllers and Peripherals

Electronic Communications

- ITEE 524 Microwave Systems
- ITEE 534 Communications Systems I
- ITEE 535 Communications Systems II
- ITEE 547 Digital Processing of Signals
- ITEE 555 Transmission Lines and Antennas

Electric Power Systems

- ITEE 550 Power Systems I
- ITEE 551 Protective Relaying
- ITEE 552 Power Systems II

Microelectronics

- ITEE 560 Microelectronics I
- ITEE 561 Microelectronics II
- ITEE 562 Construction and Failure Analysis

Mechanical Engineering Technology Department

Charles DeRoller, Chairman

Mechanical Engineering Technology, upper division baccalaureate program

Background

The demand for technology graduates to support the wide ranging activities of the mechanical engineering industries is ever on the increase due to discoveries, inventions, and the new needs which arise from the desire to do things in a more creative and efficient manner. The central theme of all industry is to successfully design and produce a functional, reliable and profitable product, or service. This task can only be accomplished by individuals who are familiar with concepts, the body of knowledge, and a set of learned skills which apply to their specific field.

The Mechanical Engineering Technology Program develops in the student the ability to conceive the design problem and to derive solutions through the application of familiar concepts in innovative ways, so that he can make his vital contribution to the objective of technological enterprise in his subsequent career.

The program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering Technology and is operated on the cooperative education plan.

Objectives of the program

The objectives of this program are to prepare the student to occupy professional positions in mechanical design, test engineering, field service engineering, technical sales, and plant operations upon graduation. The program emphasizes the development of a design methodology, and this is reinforced through the use of project-oriented assignments which challenge the student to develop his design abilities.

Curriculum

In the early quarters, the student expands his skills in the fundamentals of mechanics, mathematics and materials technology.

In the senior quarters, the main concentration is in machine design, and a range of electives are available in this area.

Mechanical Engineering Technology cooperative education plan

Year		Fall	Winter	Spring	Summer
3 and 4	A	RIT	Work	RIT	Work
	B	Work	RIT	Work	RIT
5	A	RIT	Work	RIT	-
	B	Work	RIT	RIT	-

Yr. Mechanical Engineering Technology, B. Tech degree

Otr. Credit Hours

1,2	Completion of appropriate Associate's degree or equivalent	FALL		SPG.
		WTR.		SMR.
3	**SMAT-420 Calculus for Technologists I	(4)		
	**SMAT-421 Calculus for Technologists II	4		
	ICSP-205 Computer Techniques	3		
	ITEM-404 Applied Mechanics of Materials	4		
	ITEM-407 Mechanical Engineering Technology Lab I	3		
	ITEM-414 Materials Technology I	3		
	‡Physical Education	0		
	**SMAT-421 Calculus for Technologists II			(4)
	**SMAT-422 Solution of Engineering Problems			4
	ITEM-405 Applied Dynamics			4
	ITEM-409 Mechanical Engineering Technology Lab II			2
	ITEM-415 Materials Technology II			3
*Liberal Arts			4	
‡Physical Education			0	
4	**SMAT-422 Solution of Engineering Problems	(4)		
	ITEM-440 Applied Thermodynamics	4		
	ITEE-411 Electrical Principles for Design I	4		
	Technical Elective	4		
	*Liberal Arts	4		
	‡Physical Education	0		
	ITEM-460 Applied Fluid Mechanics			4
	ITEM-506 Machine Design			4
	ITEE-412 Electrical Principles for Design II			4
	*Liberal Arts			4
5	ITEM-465 Thermofluid Laboratory	3		
	ITEM-521 Logic Control Systems	4		
	Technical Elective	4		
	*Liberal Arts	4		
	Technical Elective			4
	Technical Elective			4
	Free Elective			4
	*Liberal Arts			4
Liberal Arts (Seminar)			2	

***Entering students will take SMAT-420 or -421 depending on an evaluation of their mathematics background. Those assigned to SMAT-420 will not be required to take a fourth-year technical elective.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Individuals will be allowed to select electives from energy specialization or the manufacturing technology program, provided they satisfy the prerequisites for the courses elected.

A substantial measure of laboratory work is required, including the preparation of quality reports.

Admission requirements

All students enter this program at the third-year level having received an appropriate associate's degree in mechanical technology, design-

drafting technology or an acceptable equivalent. It is expected that these programs will have provided the entrant with background in the following:

Mathematics through Introductory Calculus
Physics

Mechanical Drafting
Manufacturing Processes
Statics and Elementary Strength of Materials
Machine Design

Technical electives-mechanical

- ITEF-437 Value Analysis
- ITEM-406 Dynamics of Machinery
- ITEM-442 Heat Transfer
- ITEM-451 Vibration and Noise
- ITEM-508 Special Topics in Machine Design
- ITEM-530 Instrumentation
- ITEM-540 Thermal Technology
- ITEM-599 Independent Study

Energy Technology, upper division baccalaureate program

Background

Recent history has brought energy to the forefront of the news on a daily basis. Energy is the life blood of the national economy and has wide-ranging international, political and economic impact. Industrial, commercial and governmental groups as well as individuals are now focusing a great deal of attention on energy conservation and energy management techniques. The increasing importance of this vital field has created a strong demand for persons who are well grounded in energy technology.

Objectives of the program

The Energy Technology Program was developed to provide a direct route for persons having associate's degrees in energy related technologies to gain professional positions in the energy field. It is designed to prepare individuals to work in the areas of building energy system design, energy conservation, and energy management. These positions are with consulting engineering firms, industrial corporations, building owners, mechanical contractors and companies manufacturing and marketing HVAC apparatus.

The curriculum

The curriculum in energy technology has been designed with the assistance of professionals in the field and educators from two-year programs in air conditioning technology. It includes courses which these professionals feel are fundamental for success in the field. There is a very strong emphasis on energy topics: thermal energy, heat transfer, fluid mechanics and electrical energy. Integrated with the energy courses are supporting courses in mathematics, computer science, engineering economics, and civil engineering technology. In addition to the required courses, students are encouraged to select technical electives to enhance their particular area of interest.

Energy Technology co-operative education plan

Year	Fall	Winter	Spring	Summer
3	RIT	RIT	Work	Work
4	RIT	Work	RIT	Work
5	Work	RIT	RIT	

Yr. Energy Technology, B. Tech degree

Qtr. Credit Hours

1 2	Completion of appropriate Associate's degree or equivalent	Qtr. Credit Hours		
		FALL	WTR.	SPG.
3	**SMAT-420 Calculus for Technologists I	(4)		
	**SMAT-421 Calculus for Technologists II	4		
	ITEM-408 Introduction to Strength of Materials	4		
	ICSP-205 Computer Techniques	3		
	ITEF-436 Engineering Economics	4		
	ITEC-428 Report Writing	2		
	**SMAT-421 Calculus for Technologists II		(4)	
	**SMAT-422 Solution of Engineering Problems		4	
	ITEM-440 Applied Thermodynamics		4	
	ITEM-542 HVAC System Engineering		4	
*Liberal Arts		4		
‡Physical Education		0		
4	**SMAT-422 Solution of Engineering Problems	(4)		
	ITEE-411 Electrical Principles for Design I	4		
	ITEM-460 Applied Fluid Mechanics	4		
	ITEM-442 Heat Transfer	4		
	*Liberal Arts	4		
	‡Physical Education	0		
	ITEM-465 Thermofluid Laboratory			3
	ITEM-540 Thermal Technology			4
	ITEE-412 Electrical Principles for Design II			4
	*Liberal Arts			4
‡Physical Education			0	
5	ITEM-522 HVAC Control Systems		4	
	Technical Elective		4	
	Technical Elective		4	
	*Liberal Arts		4	
	Technical Elective			4
	Technical Elective			4
	Free Elective			4
	*Liberal Arts			4
Liberal Arts (Seminar)			2	

***Entering students will take SMAT-420 or -421 depending on an evaluation of their mathematics background. Those assigned to SMAT-420 will not be required to take a fourth-year technical elective.
 ‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

Admission requirements

The Energy Technology Program admits students holding an associate's degree in air conditioning technology, energy technology, environmental control technology or the equivalent. Interested persons not holding an associate's degree in one of these areas are advised to contact the department to discuss admission.

Technical electives-energy technology

- ITEC-544 Contracts and Specifications
- ITEC-550 Construction Practices
- ITEE-425 Power Concepts
- ITEE-550 Power Systems I
- ITEM-404 Applied Mechanics of Materials
- ITEM-405 Applied Dynamics
- ITEM-541 Alternative Energy Applications I
- ITEM-543 Energy Management I

- ITEM-544 Energy Management II
- ITEM-545 Solar Thermal Applications
- ITEM-547 Special Topics
- ITEM-530 Instrumentation
- ITEM-560 Pipe Design
- ITEM-565 Duct Design
- ITEM-570 HVAC Load Analysis
- ITEM-575 Computer-Aided HVAC Design
- ITEM-580 Power Plant Design

**Manufacturing Engineering
Technology, upper division
baccalaureate program**

Background

Leaders in the manufacturing engineering profession estimate that the present shortage of qualified manufacturing technologists is between 50,000 and 100,000 people—and this need is increasing. The two principle factors generating this demand are industrial productivity and technological innovations. The rate of increase of productivity in American industry is lagging that of most industrial nations.

Realizing that competitive position in world markets, domestic markets, and profits are tied to the productivity of manufacturing units, there is considerable effort by industrial organizations to improve their productivity. This nation-wide effort is causing organizational and planning changes in many corporations which now recognize the manufacturing unit as the key to profits—for example, many corporations have placed manufacturing engineers in charge of new product design functions in an effort to insure product *manufacturability*.

These efforts to improve productivity have led to the rapid introduction of new, often exotic, processes, equipment, and increased amounts of automation. This factor has created a demand for personnel well versed in the new manufacturing technologies: numerical control, machine tools, micro-processor controls, robotics, computer-aided manufacturing, and manufacturing systems.

Objectives of the program

The primary objective of the manufacturing engineering technology program is to prepare individuals for professional employment as manufacturing technologists. This program is designed to provide the academic skills necessary for applying both today's and tomorrow's manufacturing technologies. These academic skills are enhanced by a full co-op program in manufacturing industries. Throughout the academic program, a large measure of hands-on laboratory experiences related to manufacturing technology are provided.

Curriculum

The manufacturing engineering technology curriculum has been designed with the aid and consultation of professionals in the field. It includes those courses which these people feel are fundamental for professional success in industry. The

Manufacturing Engineering Technology cooperative education plan

Year		Fall	Winter	Spring	Summer
3 and 4	A	RIT	Work	RIT	Work
	B	Work	RIT	Work	RIT
5	A	RIT	Work	RIT	.
	B	Work	RIT	RIT	.

Yr. Manufacturing Engineering Technology, B. Tech degree Qtr. Credit Hours

Yr.	Manufacturing Engineering Technology, B. Tech degree	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1,2	Completion of appropriate Associate's degree or equivalent			
3	**SMAT-420 Calculus for Technologists I	(4)		
	**SMAT-421 Calculus for Technologists II	4		
	ICSP-205 Computer Techniques	3		
	ITEF-403 Machine Elements	4		
	ITEF-436 Engineering Economics	4		
	‡Physical Education	0		
	**SMAT-421 Calculus for Technologists II		(4)	
	**SMAT-422 Solution of Engineering Problems		4	
	ITEF-471 Computer Numerical Control		4	
	ITEF-434 Operations Management		4	
*Liberal Arts		4		
4	Technical Elective	4		
	**SMAT-422 Solution of Engineering Problems	(4)		
	ITEF-502 Advanced Manufacturing Processes	4		
	ITEE-411 Electrical Principles I	4		
	*Liberal Arts	4		
	‡Physical Education	0		
	ITEE-412 Electrical Principles II			4
	ITEF-424 Statistical Quality Control I			4
ITEF-475 Computer-Aided Manufacturing			4	
*Liberal Arts			4	
5	ITEF-437 Value Analysis		3	
	ITEF-472 Tool Engineering		4	
	Technical Elective		4	
	*Liberal Arts		4	
	ITEF-510 Process Design I			4
	Technical Elective			4
	Free Elective			3-5
	*Liberal Arts			4
Liberal Arts (Seminar)			2	

**Entering students will take SMAT-420 or -421 depending on an evaluation of their mathematics background. Those assigned to SMAT-420 will not be required to take a fourth-year technical elective.
‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

program includes courses in Advanced Manufacturing Processes, Computer Numerical Control, Computer-Aided Manufacturing, Manufacturing Laboratory and Management Studies. Students are encouraged to select technical electives to enhance their particular areas of interest.

Admission requirements

The most appropriate qualification for students entering the third-year level of the program is the associate degree in mechanical or manufacturing technology. It is expected that these programs will have provided coverage in the following topics:

Mathematics through pre-calculus
Physics
Strength of Materials
Materials Technology
Manufacturing Processes
Numerical Control
Metrology

Students from other backgrounds will be considered, but they may be required to take additional courses as prerequisites to the main program of study.

Technical electives-manufacturing engineering technology

ITEF-460 Computer-Aided Design
ITEF-485 Robots in Manufacturing
ITEF-473 Compact II
ITEF-491 Production Control
ITEF-511 Process Design II
ITEF-425 Statistical Quality Control II

ITEF-526 Quality Systems
 ITEF-481 Work Simplification and Measurement
 ITEF-599 Independent Study
 Other electives may be taken in the College of Applied Science and Technology, College of Continuing Education, College of Engineering and College of Science with the approval of the appropriate department and the student's academic advisor.

School of Food, Hotel and Tourism Management

George T. Alley, Director

RIT's School of Food, Hotel, and Tourism Management is preparing students for a wide variety of careers ranging from restaurant, hotel and tourism management to dietetics. A career in the food and hospitality industries has become highly specialized in the business world. Efficient and sophisticated management is vital and requires a diversity of skills from many disciplines. Students study accounting, economics, computer science, business management, behavioral science, food preparation, nutrition, and other related areas.

The philosophy of the school requires that each student must combine practical experience with classroom theory to meet graduation requirements. Under a cooperative employment plan work assignments are related to the students' interests in the hospitality field. They are diversified in order to provide a variety of experiences, and are progressive, reflecting growth in knowledge and practical experience. The department requires 1,600 hours of work experience between the freshman and senior years. The work-study program can provide financial assistance, stimulate classroom experience and serves as a preview for determining career direction in the industry.

Objectives

It is the mission of the School to prepare students to excel in their chosen profession by developing:

1. theoretical and technical knowledge essential to successful attainment of professional, executive level management,
2. the ability to apply knowledge and original thinking to solving management problems,
3. the skills and techniques of leadership,

Yr.	Food Management	Quarter Credit Hours			
		FALL	WTR.	SPG.	SMR.
1	ISMF-210 Introduction to Food, Hotel & Tourism Management	4			
	ISMF-220 Hospitality Career Seminar	1			
	ISMF-215 Principles of Food Production	5			
	GLLC-220 English Composition	4			
	SMAM-225 Algebra for Mgmt. Sciences	4			
	GSSE-210 Intro to Economics		4		
	GLLL-332 Literature		4		
	SMAM-226 Calculus for Mgmt. Sciences		4		
	ISMF-314 Fund. of Food Sanitation		2		
	BBUA-301 Financial Accounting			4	
	ISMD-213 Nutrition Sciences			4	
	SBIG-210 Microbiology OR			4	
	SCHG 289 Cont. Science Chem.			4	
	*Liberal Arts			4	
	‡Physical Education	0	0	0	
	ISMF-499 Cooperative Education				0
2†	ISMF-321 Menu Planning & Merchandising	4			
	BBUB-201 Management Concepts	4			
	BBUQ-351 Statistics I	4			
	ICSS-200 Survey of Computer Science	4			
	ISMF-425 Purchasing & Inventory Control		3		
	ISMF-425 Purchasing Lab		2		
	BBUA-302 Managerial Accounting		4		
	BBUQ-352 Statistics II		4		
	Liberal Arts		4		
	ISMF-331 Food Systems Management			5	
	*Liberal Arts			12	
‡Physical Education	0	0	0		
ISMF-499 Cooperative Education				0	
3	BBUM-463 Principles of Marketing	4			
	BBUA-431 Cost Accounting OR	4			
	BBUF-441 Corporate Finance				
	ISMF-426 Personnel & Training	4			
	Liberal Arts	4			
	ISMF-311 Design & Equipment Engr.		4		
	ISMF-340 Beverage Operations		3		
	ISMF-341 Beverage Operations Lab		2		
	ISMF-416 Product Development		4		
	ISMF-424 Food/Labor/Cost Control		4		
	ISMF Elective			4	
*Liberal Arts			12		
ISMF-499 Cooperative Education				0	
4	ISMF-430 Restaurant Management		5		
	ISMF-554 Senior Career Seminar		1		
	Electives		8		
	*Liberal Arts		4		
	ISMF-499 Cooperative Education			0	
	ISMF-511 Banquet & Catering				4
	Electives				8
Liberal Arts (Senior Seminar)				2	
*Liberal Arts				4	

†Upon successful completion of the second year, the associate in applied science is awarded.
 ‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

4. an awareness and desire for a lifetime of learning,
5. an intellectual spirit for constructive thought and action in building a good life and effective citizenship.

Programs of study Food management

The food service industry employs more people than any other in the nation. The industry covers the wide scope of public feeding, lodging and tourism. The program is designed to prepare persons for management training positions in restaurants and food service operations of differing types of institutions such as hotels, motor lodges, resorts, clubs, airlines, colleges and schools, business firms and governmental agencies.

Hotel and resort management

The Hotel and Resort Management option is a professionally oriented curriculum for students seeking careers involving the development, management, and operation of hotel and recreation enterprises. The composite of discipline areas allows the student to understand the physical characteristics of tourist and recreation properties, as well as gaining the business expertise to manage and successfully market their recreational attributes.

The U.S. Department of Labor predicts that between 1978 and 1985 over 7,000 hotel managers or assistant manager positions will be available for qualified personnel in each of those years.

Yr. Hotel and Resort Management

Quarter Credit Hours

		FALL	WTR.	SPG.	SMR.
1	ISMF-210 Introduction to Food, Hotel & Tourism Management.....	4			
	ISMF-220 Career Seminar.....	1			
	ISMF-215 Principles of Food Production.....	5			
	GLLC-220 English Composition.....	4			
	SMAM-225 Algebra for Mgmt. Sciences.....	4			
	GSSE-210 Intro. to Economics.....		4		
	GLLL-332 Literature.....		4		
	SMAM-226 Calculus for Mgmt. Sciences.....		4		
	ISMF-314 Fundamentals of Food Sanitation.....		2		
	BBUQ-301 Financial Accounting.....			4	
	ISMF-213 Nutrition Science.....			4	
	SBIG-210 Microbiology OR.....			4	
	SCHG-289 Cont. Science—Chemistry.....				4
	*Liberal Arts.....			0	
‡Physical Education.....	0	0			
ISMF-499 Cooperative Education.....				0	
2	BBUB-201 Management Concepts.....	4			
	BBUQ-351 Statistics I.....	4			
	ICSS-200 Survey of Computer Science.....	4			
	Liberal Arts.....	4			
	ISMF-400 Resort & Recreation Enterprises.....		4		
	ISMF-401, 402, 403, 404, 406 Resort & Rec. Ent. Lab.....		1		
	BBUA 302 Managerial Accounting.....		4		
	BBUQ-352 Statistics II.....		4		
	Liberal Arts.....		4		
	ISMF-331 Food Systems Management.....			5	
	ISMF/ISMH/ISMT Elective.....			4	
*Liberal Arts.....			8		
‡Physical Education.....	0	0	0		
ISMF-499 Cooperative Education.....	0	0	0		
3	BBUM-463 Principles of Marketing.....	4			
	ISMF-426 Personnel & Training.....	4			
	ISMH-423 Hotel Operations.....	5			
	ISMT-220 Travel Intermediaries.....	4			
	ISMH-420 Hotel & Travel Law.....		4		
	ISMF-340 Beverage Operations.....		3		
	ISMF-341 Beverage Operations Lab.....		2		
	ISMF-424 Food/Labor/Cost Control.....		4		
	Liberal Arts.....		4		
	ISMF/ISMH/ISMT Elective.....			4	
*Liberal Arts.....			12		
ISMF-499 Cooperative Education.....				0	
4	*BBUA-431 Cost Accounting OR.....	4			
	BBUF-441 Corporate Finance.....				
	ISMF-554 Senior Career Seminar.....	1			
	ISMH-412 Maint. Hotel/Resort.....	4			
	ISMF/ISMH/ISMT Elective.....	4			
	Liberal Arts.....	4			
	ISMF-499 Cooperative Education.....		0		
	ISMF-511 Banquet & Catering.....			4	
	ISMF-450 Hotel Marketing/Convention Sales.....			4	
	ISMF/ISMH/ISMT Elective.....			4	
Liberal Arts (Senior Seminar).....			2		
*Liberal Arts.....			4		

‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

Travel management

The dynamic growth of modern travel has created many technical problems for the traveling public and with them the need to consult highly qualified experts, to plan, arrange and coordinate travel. Today, more than ever before, travelers are faced with a myriad of alternatives for transportation, accommodations and other travel services, and are increasingly beginning to rely upon the travel professional to help guide them wisely and honestly. Travel agencies and travel counselors have an important* impact on tourist economics and on firms (food service, lodging, transportation) which supply services to tourists.

The Travel Management program combines a study of specialized courses in travel management with a sound general education. In addition to the specialty courses, students are provided a broad-based curricular approach with courses in accounting, management principles, marketing, business law, foreign languages, and the computer sciences. The program is structured so as to provide the students with a balance of "hands on" experience and business theory. This is necessary to further their understanding as to the "whys" the travel industry operates as it does in its business environment. Thus, this career education orientation provides both the four year student and the transfer student with a balance of the-

oretical classroom based instruction with the experiential opportunities that are furnished by cooperative education.

Students are prepared for management careers in Tour Promotion; Corporate Travel Planning; Federal and State Tourist Boards; Convention Bureaus; Airline/Steamship/Motor Coach Companies; retail and wholesale Travel Bureaus; Hotel/Resorts and a variety of leisure business industries.

Opportunities

Our nation is now a service economy which means that the majority of employment will be service oriented. The food service areas ranks as the nation's fourth largest industry while hotels rank seventh. Combined, they enjoy a rank of third. The closely interrelated tourism industry is one of the fastest developing businesses in the United States. With the continued expansion of U.S. food companies and hotels into foreign markets, international tourism offers ever increasing opportunities for professionally trained individuals.

Cooperative work experience

RIT's hospitality education program is relevant to what's happening in the world today by blending classroom study with the on-the-job, paid work experience. Students study the theory of a discipline and have 1,600 hours of practical application. Their diversified academic and practical backgrounds enhance their career opportunities.

Two-year transfer program for food management and hotel and resort management

Students who have earned an appropriate associate's degree or its equivalent prior to enrollment at RIT may normally expect to complete the requirements for the BS degree in two years which includes six academic quarters and two quarters of cooperative employment experience.

Transfer students must complete a minimum of 102 quarter credit hours with an earned minimum grade point average of 2.0 in the departmentally approved program, and complete two quarters of approved cooperative education assignments.

Transfer students with less than two years of college or from other educational backgrounds can be accommodated. The amount of transfer credit will be determined by evaluation of the individual's transcript.

In every instance, it is the policy of the college to recognize as fully as possible the past academic accomplishments of each student.

General dietetics and nutritional care. Dietetics encompasses the complete range of nutritional services from management of food service systems to therapeutics. The term dietitian has been defined as a specialist educated for a profession responsible for the nutritional care of individuals and groups. Many in this field have positions of management, not only on the staff of hospitals, but also in supervisory posts in government agencies—national, state, local—and in the growing field of community nutrition.

Opportunities
As a dietitian you will be involved with people of all ages, cultures and economic means. If you enjoy people and learn to understand them as individuals, then you can help solve their food needs.

Dietitians are health professionals who apply the science and art of human nutrition. They help individuals and families choose foods for adequate nutrition in health or disease throughout the life cycle. Dietitians also supervise the preparation and service of food to groups, develop modified diets, participate in nutrition research and supervise the nutritional aspects of health care.

Programs
The School of Food, Hotel and Tourism Management offers two options in dietetics: the traditional program in general dietetics and the Coordinated Undergraduate Program (CUP) in general dietetics.

I. The traditional program in general dietetics

The curriculum in general dietetics leading to a baccalaureate degree at RIT meets the education requirements of the American Dietetic Association. The courses included are in the areas of physical, biological and social sciences; food principles and management; nutrition in health and disease; accounting and finance. Four year students must complete three quarters of approved cooperative work experience.

Due to the special professional requirements of the American Dietetic Association, the amount of transferable credit and estimated time to complete work for the BS degree in General Dietetics must be determined by evaluation of each individual's record.

Yr. Travel Management

Quarter Credit Hours

		FALL	WTR.	SPG.	SMR.
1	ISMF-210 Introduction to Food, Hotel & Tourism Management	4			
	ISMF-220 Career Seminar	1			
	GLLC-220 English Composition	4			
	SMAM-225 Algebra for Mgmt. Sciences	4			
	GLLL-332 Literature	4			
	GSSE-210 Introduction to Economics		4		
	SMAM-226 Calculus for Mgmt. Sciences		4		
	ICSS-200 Survey of Computer Science		4		
	Liberal Arts		4		
	BBUB-201 Management Concepts			4	
	BBUA-301 Financial Accounting			4	
	ISMF/ISMH/ISMT Elective			4	
*Liberal Arts			4		
‡Physical Education	0	0	0		
ISMF-499 Cooperative Education or Language Instr.				0	
2	BBUQ-351 Statistics I	4			
	ISMT-201 Travel Lab I	3			
	ISMH-400 Resort & Recreation Enterprises	4			
	ISMH-401, 402, 403, 404, 405, 406 Resort & Recreation Lab	1			
	Liberal Arts	4			
	BBUA-302 Managerial Accounting		4		
	BBUQ-352 Statistics II		4		
	ISMT-202 Travel Lab II		2		
	ISMF/ISMH/ISMT Elective		4		
	Liberal Arts		4		
	ISMT-220 Travel Intermediaries			4	
	ISMF/ISMH/ISMT Electives			8	
*Liberal Arts			4		
‡Physical Education	0	0	0		
ISMF-499 Cooperative Education or Language Instr.				0	
3	BBUM-463 Principles of Marketing	4			
	ISMF-426 Personnel & Training	4			
	ISMH-423 Hotel Operations	5			
	ISMT-320 Passenger Transportation Systems	4			
	ISMT-303 Travel Lab III		2		
	ISMH-420 Hotel & Travel Law		4		
	Liberal Arts		8		
	ISMF/ISMH/ISMT Elective		4		
	ISMT-370 Passenger Transportation Policy			4	
	*Liberal Arts			8	
	ISMF/ISMH/ISMT Elective			4	
	ISMF-499 Cooperative Education			0	
4	BBUA-431 Cost Accounting OR	4			
	BBUF-441 Corporate Finance	1			
	ISMF-554 Senior Career Seminar	1			
	ISMT-410 Tourism Consumption Analysis	4			
	ISMF/ISMH/ISMT Electives	8			
	ISMF-499 Cooperative Education		0		
	ISMH-450 Hotel Marketing Convention Sales			4	
	ISMF/ISMH/ISMT Elective			4	
Liberal Arts (Senior Seminar)			2		
*Liberal Arts			8		

‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

Transfer students must complete a minimum of 102 quarter credit hours with an earned minimum grade point average of 2.0 in the departmentally approved program, and complete two quarters of approved cooperative education assignments.

In addition to completing an approved academic program, persons seeking certification as a Registered Dietician (R.D.) need to have an approved clinical experience and pass the qualifying comprehensive examination of the American Dietetic Association.

II. Coordinated undergraduate program in general dietetics (CUP)

The coordinated dietetics program combines the undergraduate curriculum and planned clinical study

to meet the academic and clinical requirements for membership in the American Dietetic Association (ADA).

This program is planned to integrate formal teaching and supervised clinical experience in hospitals, nursing homes, school food services and community health agencies. Clinical facilities in several large hospitals provide a comprehensive health care environment for student learning. Academic and clinical phases are taught together to reinforce each other. Learning experience involves team teaching by RIT faculty and clinical instructors, each contributing their expertise in the profession.

Completion of the program leads to a bachelor of science degree plus

ADA membership. Successful completion of a national examination qualifies the member to become a registered dietitian.

All RIT dietetics students are enrolled in the traditional program in general dietetics in the first two years. Upon completion of the necessary preprofessional (first and second year) courses, students may apply for admission into the coordinated dietetics program. Applications for the coordinated undergraduate program must be submitted by March 1, to be considered for admission into the professional phase the following September.

Cooperative work experience is not required of students in the coordinated program because clinical hours have been planned in the junior and senior years of the professional phase.

Another set of CUP application forms from the School must be completed and submitted to the department by March 1.

Two-year transfer program for coordinated dietetics

RIT makes every effort to facilitate transfer credit. Due to specific areas of study required by the American Dietetic Association and RIT, transfer students applying for admission to the professional phase of CUP in Dietetics must meet course prerequisites listed in the preprofessional phase. The following areas of study must be completed:

- Food and Nutrition Principles
- General and Organic Chemistry
- Biochemistry I

Physiology

Management Courses:

- Mathematics, Accounting and Statistics
- Economics

TOTAL of 24 credit hours of Liberal Arts (including Introduction to Sociology). Applicants are required to have a minimum grade point average of 2.5 on the basis of 4.0 scale from two years of basic professional courses before they are considered for admission in the coordinated program.

Students who are not accepted in the coordinated program may be admitted to the traditional program in general dietetics. Due to the special professional requirements of the American Dietetic Association, the amount of transferable credit and estimated time to complete work for the BS degree must be determined by evaluation of each individual's transcript.

Yr.	General Dietetics ¹	Quarter Credit Hours			
		FALL	WTR.	SPG.	SMR.
1	ISMF-215 Principles of Food Production	5			
	**SCHG-201, 221 General Inorganic Chemistry (plus lab) ...	4			
	GLLC-220 English Composition	4			
	SMAM-225 Algebra for Mgmt. Sciences	4			
	BBUB-201 Management Concepts		4		
	BBUA-301 Financial Accounting		4		
	**SCHG-202, 222 Organic Chemistry (plus lab)		4		
	GLLL-332 Literature		4		
	ISMJ-213 Nutrition Science			4	
	ICSS-200 Survey of Computer Science			4	
	**SCHG-203 Biochemistry I			4	
*Liberal Arts			4		
‡Physical Education	0	0	0		
2†	ISMF-321 Menu Planning & Merchandising	4			
	**SBIG-210, 220 Microbiology (plus lab)	4			
	**SCHG-204 Biochemistry II	4		4	
	GSSE-210 Introduction to Economics			4	
	BBUQ-351 Statistics I		4		
	**SBIO-305, 306 Anatomy & Physiology (plus lab) OR		4	4	
	SBIG-211, 212 Human Biology II, III				
	ISMF-314 Sanitation and Safety			2	
	ISMF/ISMH/ISMT Elective			4	
	*Liberal Arts	4	8	4	
	ISMF-499 Cooperative Education				0
‡Physical Education	0	0	0		
3	ISMF-416 Product Development	4			
	ISMF-425 Purchasing & Inventory (plus lab)	5			
	ISMF-331 Food Systems Management		5		
	ISMF-311 Equipment Design & Engineering		4		
	ISMF-426 Personnel & Training		4		
	*Liberal Arts	8	4		
ISMF-499 Cooperative Education			0	0	
4	ISMF-424 Food and Labor Cost Control	4			
	**ISMJ-525 Advanced Nutrition/Diet Therapy I	5			
	Liberal Arts (Senior Seminar)		2		
	**ISMJ-526 Advanced Nutrition/Diet Therapy II		4		
	**ISMJ-554 Nutrition in Life Cycle		4		
	ICIC-519 Educational Methods		4		
	**ISMJ-550 Community Nutrition			4	
	ISMF-430 Restaurant Management			5	
	*Liberal Arts	4	4	4	
	Elective	4		4	

¹ Changes in the dietetics program are subject to approval by the American Dietetics Association.
 **These courses offered ONLY in the quarters listed on the schedule.
 †Upon successful completion of the second year, the associate in applied science degree is awarded.
 ‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements

Yr.	General Dietetics (Coordinated Undergraduate Program)**	Quarter Credit Hours			
		FALL	WTR.	SPG.	SMR.
3	ISMJ-402 Dietetic Environment	4			
	ISMF-416 Product Development	4			
	ISMF-425 Purchasing (plus lab)	5			
	ISMF-331 Food Systems Management		5		
	ICIC-519 Educational Methods		4		
	ISMF-311 Design & Equipment Engr.		4		
	*Liberal Arts	4	4		
	ISMF-424 Food & Labor Cost Control			4	
4	ISMF-426 Personnel and Training			4	
	ISMJ-551 Food Systems Management II (Clinical Course) ..			8	
	ISMJ-560 Clinical Dietetic I	4			
	ISMJ-561 Clinical Dietetics II	4			
	Liberal Arts (Senior Seminar)	2			
	ISMJ-562 Clinical Dietetics III		4		
	ISMJ-563 Clinical Dietetics IV		6		
	ISMJ-554 Nutrition for Life Cycle		4		
ISMJ-550 Community Nutrition			4		
ISMF-430 Restaurant Management			5		
*Liberal Arts	4		4		

**Changes in the dietetics program are subject to approval by the American Dietetics Association.
 *See Pg. 97 for Liberal Arts requirements

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Department of Packaging Science

David L. Olsson, Director

Packaging Science, upper division baccalaureate program

The packaging Science program, leading to the bachelor of science degree, is broadly interdisciplinary providing educational opportunities for men and women seeking careers in the multi-faceted packaging industry.

Graduates are prepared for initial employment in such areas as packaging development, sales, purchasing, structural design, production, research, and marketing.

Packaging is a \$50 billion industry exhibiting dynamic growth and providing employment for many thousands of men and women with wide-ranging skills and expertise.

Since the end of World War II the development of a package for a given product has become increasingly complex involving input from many areas of business and from people with diverse backgrounds. This has resulted in the need for specially trained professionals able to work with concepts, individuals, materials, and machines. Qualified persons in this area are in demand and find themselves in a rapidly changing, challenging career. The RIT program trains people for this exciting profession.

The degree program in Packaging Science was developed because of a close and well-established relationship between the packaging industry and Rochester Institute of Technology over many years.

Packaging has become increasingly related to total marketing concepts; it has even greater dependence upon new developments in materials and processes. Therefore, the industry requires management personnel with strong backgrounds in business, engineering, science and the creative dimension.

All of these educational disciplines are found in the department curricula of RIT. This interdisciplinary program synthesizes these existing and recognized strengths with additional offerings recommended by representatives of the industry.

Yr. BS degree In Packaging Science—Technical option

Qtr. Credit Hours

Yr.	Course	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	IPKG-201 Principles of Packaging	4		
	IPKG-301 Engineering Design Graphics			3
	SMAM-204 Modern Algebra	4		
	SMAM-214, 215 Introduction to Calculus		3	3
	SCHG-208, 209 College Chemistry	4		4
	PPRT-200 Introduction to Printing		3	
	GLLC-501 Effective Speaking			4
	*Liberal Arts (Core)	4	8	4
	‡Physical Education	0	0	0
2	IPKG-310 Methods of Evaluation	2		
	IPKG-311, 312 Packaging Materials I, II	3	3	
	IPKG-315 Container Systems			4
	ICSP-205 Computer Techniques			3
	ITEF-424 Statistical Quality Control I			4
	SCHO-231, 232 Organic Chemistry	3	3	
	SCHO-235, 236 Organic Chemistry Lab	1	1	
	BBUB-320 Organizational Behavior	4		
	BBUM-463 Principles of Marketing		4	
	*Liberal Arts (Core)	4	4	4
‡Physical Education	0	0	0	
3	IPKG-401 Career Seminar			1
	IPKG-420 Technical Communication		3	
	IPKG-431 Packaging Production Systems	4		
	IPKG-432 Packaging for Distribution		4	
	IPKG-433 Packaging for Marketing			4
	SPSP-211, 212, 213 College Physics	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
	*Liberal Arts (Concentration)	4	4	4
Free Electives	4		4	
4	IPKG-520 Packaging Management	4		
	IPKG-524 Packaging Economics		3	
	IPKG-530 Packaging and the Environment			4
	IPKG-562 Packaging Regulations		3	
	IPKG-585 Shock and Vibration			4
	Liberal Arts Electives and Senior Seminar	6	4	4
Free Electives	4	7	4	

‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

Characteristics of the program

The program has these characteristics:

1. It is career oriented—the graduate is ready to enter directly into a position of responsibility.
2. It is interdisciplinary—the student becomes familiar with the many facets of packaging through courses in several RIT colleges.
3. It is flexible—the program offers two options: management and technical, with ample opportunity for electives according to interest.
4. It is representative of industry needs—the content developed with the assistance of the Rochester Area Packaging Association, consultants from the packaging industry, and educational specialists.
5. It is adaptable to a modified cooperative plan, used widely in other RIT programs.

Admission requirements

The four-year BS degree program considers for admission high school

graduates who meet the following requirements: English, 4 years; mathematics, elementary algebra and either plane geometry or intermediate algebra; science, one year. Candidates are evaluated in relation to career objectives, designated option, and other indications of potential success in the program.

Upper division (transfer)

Transferring into the program with advanced standing is particularly advantageous, since RIT has had many years of experience in assimilating graduates of two-year colleges into its programs and moving them from this point in their education directly into a chosen career field. Some candidates now in four-year colleges will find in the packaging science program a career opportunity with developing potential. Associate's degree holders (AA, AS, AAS) have courses arranged to meet the requirements of the program and to correct deficiencies resulting from

Yr.	Packaging Science—Management option	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	IPKG-201 Principles of Packaging	4		
	IPKG-301 Engineering Design Graphics			3
	ICSS-200 Survey of Computer Science			4
	SMAM-201, 202, 203 Algebra, Trigonometry, Analytical Geometry	3	3	3
	GSSE-301, 302 Principles of Economics I, II	4	4	
	BBUA-301 Financial Accounting			4
	*Liberal Arts (Core)	4	8	4
‡Physical Education	0	0	0	
2	IPKG-310 Methods of Evaluation	2		
	IPKG-311, 312 Packaging Materials I, II	3	3	
	IPKG-315 Container Systems			4
	ITEF-424 Statistical Quality Control I			4
	SCHG-201, 221 General Chemistry/Lab	4		
	SCHG-202, 222 Organic Chemistry/Lab		4	
	SPSP-289 Physics			4
	PPRT-200 Introduction to Printing	3		
	BBUB-320 Organizational Behavior		4	
	*Liberal Arts (Core)	4	4	4
‡Physical Education	0	0	0	
3	IPKG-401 Career Seminar			1
	IPKG-420 Technical Communication	3		
	IPKG-431 Packaging Production Systems	4		
	IPKG-432 Packaging for Distribution		4	
	IPKG-433 Packaging for Marketing			4
	BBUB-420 Principles of Management		4	
	BBUM-463 Principles of Marketing			4
	GLLC-501 Effective Speaking	4		
*Liberal Arts (Concentration)	4	4	4	
Management Elective			4	
Free Elective		4		
4	IPKG-520 Packaging Management	4		
	IPKG-524 Packaging Economics		3	
	IPKG-530 Packaging and the Environment			4
	IPKG-562 Packaging Regulations		3	
	Liberal Arts Electives and Senior Seminar	6	4	4
	Management Elective	4		
Free Electives	4	7	4	

‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

work taken at other institutions not offering the courses required for graduation. With a selective choice of electives by students in the two-year colleges, it is possible to complete the packaging science curriculum in two additional years at RIT.

Principal field of study

For students matriculated in the interdisciplinary Packaging Science Program, the principal field of study is defined to be all courses in the Packaging Science Department as well as the required courses in the College of Science for the Technical Option, and the required courses in the College of Business for the Management Option. Matriculated students not maintaining a 2.0 cumulative grade point average in their principal field of study are subject to academic probation or suspension according to Institute policy.

College of Business

Walter F. McCanna, Dean

The College of Business offers programs in accounting, management and retailing through the School of Business Administration and the School of Retailing. Majors are offered in accounting, finance, management, personnel and human resources, marketing, retail management and photographic marketing management. Within these majors, several options for further specialization are possible.

The environment which graduates of the College of Business will enter is both complex and rapidly changing. A well-educated and prepared manager must have a broad foundation of knowledge not only in business but also in the social sciences and humanities in order to understand and act intelligently in this business environment. In addition, specialization is necessary if one hopes to make immediate contributions to an organization following graduation.

Plan of education

To achieve the educational aims described above, the College of Business has prepared a program which has four components: the liberal arts, the business core, the major and the cooperative work experience.

The liberal arts component of the business student's program is found in 13 courses (nearly one third of the total program) in the humanities, social sciences and sciences. Within this component the student is expected to display writing proficiency and choose a humanities or social science concentration. The capstone course of the liberal arts program is a senior seminar in which a subject in the concentration is explored in depth.

The business core component, described later in the bulletin, is comprised of a variety of courses in economics, business, mathematics, statistics and computer science. These courses, required of every student regardless of major, provide the fundamental knowledge and analytical skills necessary for successful performance in the pursuit of advanced study in a major. They also provide the background and perspective for consideration of career alternatives.

The third component, the major, provides an opportunity for the student to concentrate study in a specific career field in business. Majors are offered by the departments and the School of Retailing as follows:

Accounting Major

Public Accounting Option
General Accounting Option

Finance Major

Financial Management Option
Security Analysis Option

Business Management Major

General Business Option
Small Business Option

Personnel and Human Resource Management Major

Marketing Major

Retail Management Major

Retail Merchandising Management Option
Retail Interior Design Management Option
Retail Operations Management Option

Photographic Marketing Management Major

By building on the liberal arts and science and the business core components, the major will provide mastery of marketable skills which are conceptually grounded in the knowledge of larger organizational and societal issues and perspectives.

The final component, cooperative work experience, gives the student a chance to apply and question what has been learned in the classroom. These "hands-on," paid work opportunities are planned for the student's last two years so that he or she will have sufficient educational background to contribute to the cooperative organization and so that advanced coursework taken between cooperative work terms will become more meaningful. A major impact of the cooperative experience is that it makes the student a more attractive candidate for employment following graduation.

The rigorous, challenging program described above is designed to provide unique level of competence as well as to lay the foundation for continuous intellectual and career growth.

The Cooperative Plan

Cooperative employment is an integral part of the program in the College of Business. Students obtain practical work experience in either an

area related to their chosen field of interest or an area they may wish to investigate further. This work experience is part of the student's career exploration and provides not only practical experience which can be related to coursework, but also an opportunity to observe and perform work directly related to the student's major. This experience should help the student develop a greater insight into his or her chosen field and provide a record of practical experience which may increase the student's opportunities for placement and more rapid career advancement upon graduation.

Cooperative education

All College of Business students are expected to complete two successful cooperative work experiences. These "work blocks" take place following the completion of the sophomore year. One or more of the cooperative education experiences may be waived at the discretion of the director of cooperative education based upon prior work experience in the student's field of study. While RIT and the College of Business cannot guarantee anyone cooperative employment, RIT's Center for Cooperative Education and Career Services is available to assist students in their job search efforts.

Transfer programs

The College of Business has, for years, integrated transfer students into its baccalaureate degree programs. Typically, students who have earned an associate degree in business prior to enrollment at RIT may normally expect to complete the requirements for the BS degree in two years, which includes six academic quarters and two required quarters of cooperative employment experience.

In every instance, however, it is the policy of the college to recognize as fully as possible the past academic accomplishments of each student.

A transfer student must (1) complete a minimum number of credit hours required for the specific transfer program with an earned minimum grade point average of 2.0 in the departmentally approved program, and (2) complete required quarters of approved cooperative education assignments.

Graduation requirements

The minimum academic requirements in the College of Business are:

AAS degree: The degree of associate in applied science is awarded

upon earning a minimum grade point average of 2.00 in the departmentally approved program.

BS degree: The bachelor of science degree is granted if the student has (1) earned a minimum grade point average of 2.0 in the departmentally approved program, and (2) completed the required number of supervised cooperative education blocks for the program.

Resources

The College of Business is housed in the Max Lowenthal Memorial Building. In addition to modern classrooms, facilities include time-sharing computer terminals on line with RIT's new computer system, extensive software support and up-to-date collection of business texts, periodicals, and reference services in the Wallace Memorial Library.

Professional affiliation

The public accounting curriculum of the School of Business Administration is registered with the New York State Education Department, and graduates meet the educational requirements for candidacy for the Certified Public Accountant examination.

Memberships in professional organizations contribute to the quality of the programs in the College of Business. The College of Business maintains membership in the American Assembly of Collegiate Schools of Business and the Middle Atlantic Association of Colleges of Business Administration. The School of Retailing is a member of the American Collegiate Retailing Association, which promotes the profession of retail management and maintains high standards of education for the retail profession.

Graduate programs

The College of Business offers master's degree programs in business administration, human services management, and accounting on a part-time and full-time basis.

The programs are professional in nature and prepare the student in all aspects of business management as well as offering a concentration in a field of specialization. Specific details are contained in the Graduate Bulletin, available from the Admissions Office.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description Catalog from the Admissions Office.

Admission at a Glance: College of Business Programs

General Information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

The College of Business offers programs of study through its School of Business Administration and School of Retailing. The programs are referred to as majors and often have options within. This allows a student to focus on a specific area of interest. A more detailed description of each major is provided in subsequent pages.

Accounting—Students majoring in accounting may choose the public accounting option or the general accounting option. Graduates of the public accounting option meet requirements for the C.P.A. examination. Students interested in the certification in management accounting (CMA) are encouraged to follow the general accounting option. The accounting major is designed to provide career opportunities in public accounting as well as in accounting departments in corporate organizations. Degrees Granted: AAS-two year, BS-four year.

Finance—Students majoring in finance may choose the financial management or security analysis option. The finance major will prepare students for entry level financial management positions in business organizations and entry level management positions in financial institutions. Degrees Granted: AAS-two years, BS-four year.

Management—Students majoring in management may choose the general business management or small business management option. Both areas have been developed to prepare students for positions in the field of management, consistent with their personal characteristics and career goals. Degrees granted: AAS-two year, BS-four year.

Personnel and Human Resource

Management—This highly specialized program provides the opportunity for students to concentrate in the field of personnel, developing skills necessary for a professional career. Degrees granted: AAS-two year, BS-four year.

Marketing—The marketing major is designed to enable students to develop a high degree of personal and marketing management competence as a foundation for a successful career. There are a great variety of employment opportunities for students majoring in marketing and the program is correspondingly flexible. Degrees Granted: AAS-two years, BS-four year.

Retail Management—The retail management major is an industry oriented field of study. It is designed to focus the managerial skills acquired in the College of Business core curriculum on specific managerial issues and problems facing the contemporary retail industry. Students will have the option of specializing in retail merchandising management, interior design management and retail operations management. Students interested in a managerial career in fashion and its many allied industries should consider the Rochester Institute of Technology/Fashion Institute of Technology Joint Degree Program. Degree Granted: AAS-two year, BS-four year.

Photographic Marketing Management—This program is designed to provide students with a thorough knowledge of the photographic process and a solid background in business administration. A combination of work in these two disciplines prepares the student for a multi-faceted management-level career in the photographic business. Degrees Granted: AAS-two years BS-four year.

Freshman Admission Requirements

Transfer Admission with junior standing

Program	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable Minimum GPA
Accounting	Elem. Algebra; Inter. Algebra; 1 year any Science	Additional mathematics and science	An earned associate degree in accounting.	2.40
Finance	Elem. Algebra; Inter. Algebra; 1 year any Science	Additional mathematics and science	An earned associate degree in accounting or business administration.	2.40
Management	Elem. Algebra; Inter. Algebra; 1 year any Science	Additional mathematics and science	An earned associate degree in business administration or marketing.	2.40
Marketing	Elem. Algebra; Inter. Algebra; 1 year any Science	Additional mathematics and science	An earned associate degree in business administration or marketing.	2.40
Retail Management	Elem. Algebra; Inter. Algebra; 1 year any Science	Additional mathematics and science	An earned associate degree in business administration, marketing or retailing, retail merchandising.	2.40
Photo Marketing Management	Elem. Algebra; Inter. Algebra; 1 year any Science	Additional mathematics and science	An earned associate degree in business administration or marketing.	2.40

One third of the courses in each program consists of electives in social science, literature, and humanities.
 *Four years of English are required in all programs, except where state requirements differ.

The College of Business Core Curriculum

All students in the College of Business are required to take the business core courses described below (and later displayed in the sample four-year programs). These courses provide the analytical economic and quantitative skills specific functional competencies in accounting, finance, marketing and production management, and the behavioral, social and organizational knowledge necessary for successful management performance and advanced study.

Business Core Courses

- Introduction to Business
- Career Seminar I & II
- College Algebra & Matrices
- Business Calculus
- Survey of Computer Science
- Economics I (Macro)
- Economics II (Micro)
- Financial Accounting
- Managerial Accounting
- Legal Environment
- Organizational Behavior
- Management Science
- Applied Statistics I
- Applied Statistics II
- Corporate Finance
- Principles of Marketing
- Principles of Management
- Operations Management
- Business Environment
- Integrated Business Analysis

Yr. Business Administration—Typical Schedule

Qtr. Credit Hours

Yr.	Business Administration—Typical Schedule	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	0102-202 Introduction to Business	4		
	0511-301, 302 Prin. of Economics I & II	4	4	
	1016-225 College Algebra with Matrices	4		
	1016-226 Business Calculus		4	
	*Liberal Arts (Core)	4	4	4
	Contemporary Science Electives		4	4
	0102-210 Career Seminar I		1	
	0603-200 Survey of Computer Science			4
0106-351 Applied Statistics I			4	
2	0106-352 Applied Statistics II	4		
	0101-301, 302 Financial and Managerial Accounting	4	4	
	0102-315 Legal Environment of Business	4		
	0102-320 Organizational Behavior		4	
	0106-334 Management Science		4	
	0105-463 Principles of Marketing			4
	0104-441 Corporate Finance			4
	0102-310 Career Seminar II			1
*Liberal Arts (Core)	4	4	8	
3	0102-420 Principles of Management	4		
	0106-460 Operations Management		4	
	*Liberal Arts (Concentration)	4	4	4
	College of Business Major Electives	8	8	8
	Liberal Arts Elective			4
4	0102-507 Business Environment	4		
	0102-551 Integrated Business Analysis			4
	Liberal Arts (Senior Seminar)	2		
	College of Business Major Electives	8		8
	*Liberal Arts Electives	4		4

Students in finance, marketing and personnel and human resource management will follow this typical course schedule.

*See Pg. 97 for Liberal Arts requirements.

School of Business Administration

The four academic departments of the College of Business—accounting and finance, decision sciences, management, and marketing—offer majors designed to provide understanding of the concepts and behaviors essential to competence in specific career fields in business. The required courses in each major and elective courses permit the student to gain in-depth knowledge that will provide a solid foundation for career development.

Department of Accounting and Finance

E. James Meddaugh, Chairman

The accounting major provides fundamental theory and practice of accounting in the accounting core courses which are required for all accounting majors. Beyond this core, students must choose an option which best fits their career interests.

Students wishing to become certified public accountants must choose the public accounting option and complete each course prescribed in this program. This program is registered by the New York State Board for Public Accountancy, which means that the prescribed coursework satisfies the state's CPA examination entrance requirements. Candidates must have earned at least a C grade in each accounting course to be admitted to the CPA exam.

The general accounting option allows more flexibility in choice of courses. This flexibility has been designed to permit students to tailor their programs to meet diversity of industrial, commercial and municipal opportunities for accounting graduates. Of particular interest to both students and employers in the current environment is the opportunity here to take advanced courses in the computer and information sciences. Students should consult with their advisor before choosing electives in this option.

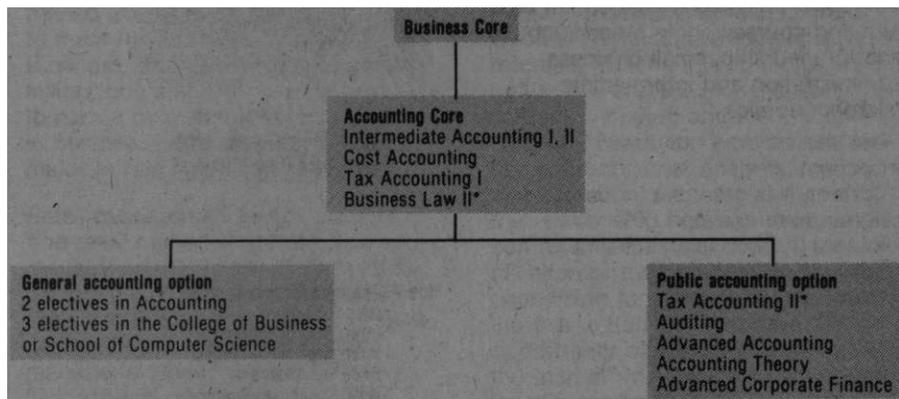
Yr. Accounting—Typical Schedule

Qtr. Credit Hours

		FALL	WTR.	SPG.
1	0102-202 Introduction to Business	4		
	0511-301, 302 Principles of Economics I & II	4	4	
	1016-225 College Algebra with Matrices	4		
	1016-226 Business Calculus		4	
	0102-210 Career Seminar I	1		
	Contemporary Science Electives		4	4
	0603-200 Survey of Computer Science			4
	*Liberal Arts (Core)	4	4	4
0106-351 Applied Statistics I			4	
2	0106-352 Applied Statistics II	4		
	0101-301, 302 Financial and Managerial Accounting		4	4
	0102-301, 302 Business Law I & II	4	4	
	0106-334 Management Science		4	
	0102-320 Organizational Behavior	4		
	0104-441 Corporate Finance			4
	0102-310 Career Seminar II		1	
	*Liberal Arts (Core)	4	4	8
3				SPG. SMR.
	0101-408, 409 Intermediate Accounting I & II	4	4	
	0101-431 Cost Accounting	4	4	
	0101-522 Tax Accounting I			
	0105-463 Principles of Marketing	4		
	Major Elective			8
	*Liberal Arts (Concentration)	4	4	4
	0102-420 Principles of Management		4	
0106-460 Operations Management			4	
4		FALL		SPG. SMR.
		WTR.		
	0102-507 Business Environment	4		4
	0102-551 Integrated Business Analysis			2
	Liberal Arts (Senior Seminar)			4
	Major Electives	8		8
Liberal Arts Electives	4		8	

Students will select courses for their major electives from those offered through the various departments in the College of Business.
 Students who wish to sit for the CPA exam upon graduation must take the following as their professional electives: 0101-523, Tax Accounting II; 0101-540, Advanced Accounting; 0101-530, Auditing; 0101-550, Accounting Theory; and 0104-445, Advanced Corporate Finance.
 *See Pg. 97 for Liberal Arts requirements.

Accounting Major Curriculum Chart



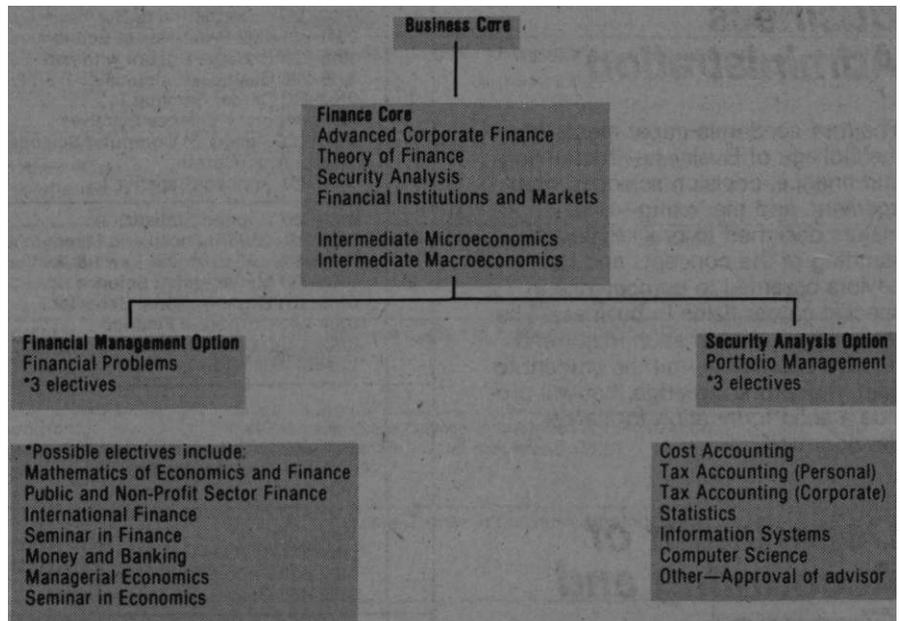
*These courses are required for New York State certification. If certification in another state is desired, the appropriate courses will be selected.

Finance major

The finance major will prepare students for financial management positions in financial, commercial, industrial, and governmental organizations. Students are taught the principles of financial decision making and given an understanding of the economic, legal, and financial environment in which they must operate.

All students majoring in finance are required to complete the Finance Major Core and choose one of two options: financial management or security analysis. Financial management graduates would pursue positions in commercial, industrial, or governmental organizations, while the security analysis graduate usually will find positions in asset and securities management with financial institutions such as banks, brokerage houses, insurance companies, and real estate firms.

Finance Major Curriculum Chart



Department of Management

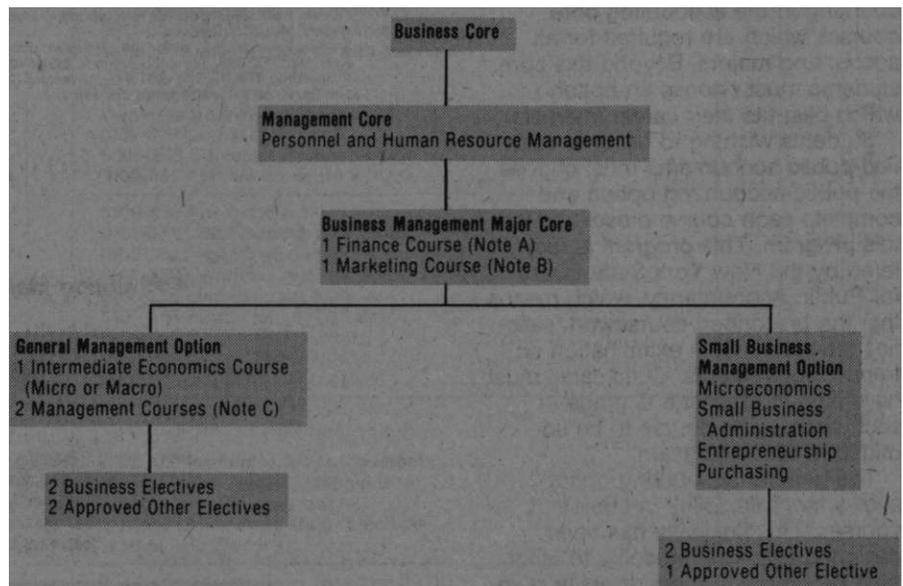
Andrew J. DuBrin, Chairman

Business management major

This major is designed for students who wish to occupy general management positions in a business organization. Career may develop in areas as diverse as sales or production, and while most students will work in middle management, many will rise to the executive level.

The two options in this major are **general business management** and **small business management**. Although the two options are quite similar, small business management has required coursework in areas such as entrepreneurship, small business administration and intermediate microeconomics.

Business Management Major Curriculum Chart



Note A: Approved Finance Courses: (choose one)
 Inter Microeconomics
 Inter. Macroeconomics
 Security Analysis
 Adv. Corporate Finance
 Theory of Finance
 Financial Institutions

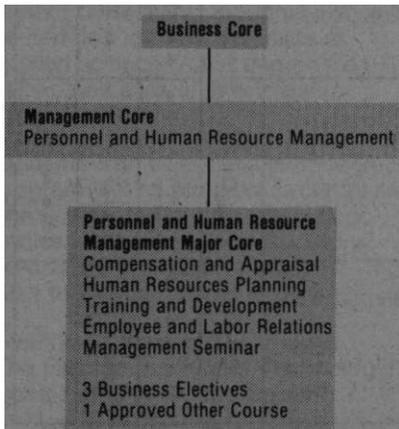
Note C: Approved General Management Courses: (choose two)
 Employee and Labor Relations
 Purchasing
 Organization Theory
 Small Business Administration
 Seminar in Management

Note B: Approved Marketing Courses: (choose one)
 Consumer Behavior
 Consumer Services Analysis
 Advertising
 Sales Management
 International Marketing
 Seminar in Marketing

Personnel and human resource management major

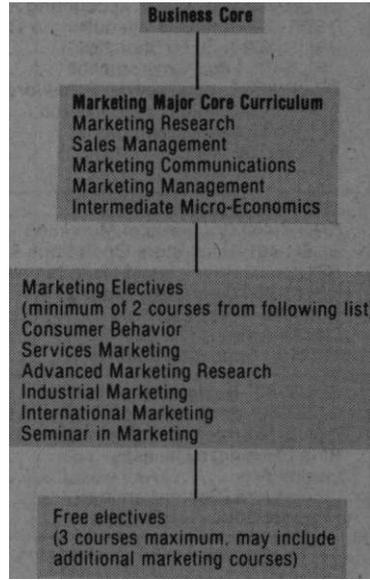
This major is designed to provide students with the knowledge and skills necessary to pursue a career in personnel administration. Coursework in labor relations, compensation, human resource planning, etc., will provide the academic background necessary for one to be effective in this rapidly changing profession.

Personnel and Human Resource Management Curriculum Chart



on customer understanding, the chief focus of any business. To develop this focus, the marketing curriculum provides an understanding of business and various marketing operations, with an emphasis on motivating customers and business colleagues.

Marketing Major Curriculum Chart



unique curriculum to prepare for a managerial career in any functional area of the industry.

Retail management core

- All students in the School of Retail Management are required to complete the retail management core, which consists of the following four courses:
- Introduction to the Retail Industry
 - Retail Buying and Merchandise Control
 - Retail Store Operations and Management
 - Senior Seminar in Retail Management

These courses will carry students through a designed growth and learning process. The first course, a broad-scale introduction to the contemporary retail industry, will focus on the distinctive characteristics of the industry, its current structure, and the nature of careers within the industry. The second course will focus on merchandising, the most important function of any retail operation. Topics will include the acquisition of goods, presentation, planning and control. The third course will reflect the operations function within the firms in the retail industry. It will be the foundation course for those students interested in careers in the non-merchandising areas of the industry. The final course will focus on current issues and strategic perspectives that are of concern to top-level retail managers. In addition to the four-course retail management core, students will be allowed to select six additional electives, which will prepare them in their area of specialization

Retail Merchandising Management Option.

The electives suggested in the retail merchandising management option will prepare students for careers in buying and merchandise control. This option emphasizes vendor and consumer analysis, merchandise selection, planning and control, the relationship between merchandise control and financial control, the application of the computer in the merchandising function. Students selecting this option will also have the opportunity of spending a week "in the market" in New York City in order to gain exposure to the activities of a buyer.

Department of Marketing

Eugene H. Fram, Chairman

Marketing major

The marketing major prepares students to develop qualifications for entry-level management positions and to acquire management knowledge of markets, marketing, and people necessary to advance professionally. Students accomplish this developmental objective through a combination of academic education and cooperative field education. This combination provides an understanding of marketing problems related to a number of areas; e.g., advertising, sales management, retailing, marketing research and product planning.

For the student interested in a business career whose objective is to explore, experience, and experiment, the marketing major is an ideal option. With a marketing background, the student will find a wide variety of employment opportunities centering

School of Retailing

John S. Zdanowicz, Director

The College of Business at RIT has long recognized the increasing demand by the retail industry for well-trained business graduates. In order to meet this demand, the College of Business, through its School of Retailing, offers students the opportunity to earn a bachelor of science degree in business administration with a major in retail management.

Retail management major

The retail management major is an industry-oriented field of study. It is designed to focus the managerial skills acquired in the College of Business core curriculum on specific managerial issues and problems facing the contemporary retail industry. The retail management major employs all the functional areas of business, such as accounting, finance, personnel, marketing and information systems management, but places them in a distinctive industry frame-work. Thus, the major—like the industry—is broad based, with the opportunity for students to design a

Interior Design Management Option.

The electives suggested in the interior design management option will prepare students for management careers in home furnishings departments in retail organizations as well as management positions in residential and commercial interior design organizations.

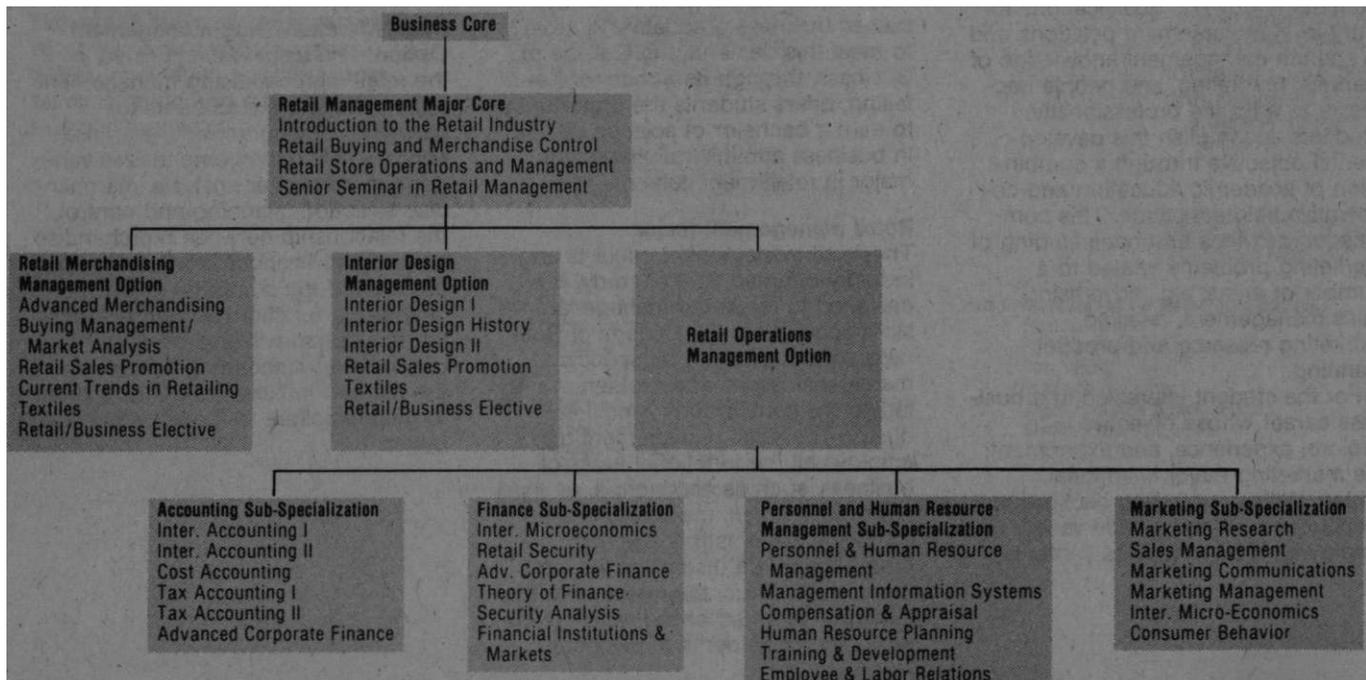
Retail Operations Management Options.

Students selecting this option will have the opportunity of selecting electives from the course offerings of other departments in the College of Business. This option will allow students to develop their skills for management careers in the various operations functions of the retail industry, such as accounting, finance, marketing, and personnel management. Students who choose this option should consult with their academic advisor in order to select electives which are compatible with their career objectives. The following are suggested electives for various sub-specializations in the retail operations management option. Students may elect to enroll in courses from more than one specialization.

Yr.	Retail Management: Typical Schedule	Quarter Credit Hours			
		FALL	WTR.	SPG.	SMR.
1	BBUB-202 Introduction to Business	4			
	SMAM-225 Algebra for Management Science	4			
	GSSE-301 Principles of Economics I	4			
	BRER-201 Introduction to the Retail Industry		4		
	SMAM-226 Calculus for Management Science		4		
	GSSE-302 Principles of Economics II		4		
	ICSS-200 Survey of Computer Science			4	
	BBUA-301 Financial Accounting			4	
	BBUB-210 Career Seminar I			1	
	*Liberal Arts	4	4	8	
‡Physical Education Electives	0	0	0		
2	BBUQ-351 Applied Statistics I	4			
	BBUA-302 Managerial Accounting	4			
	BRER-301 Retail Merchandising & Control	4			
	BBUQ-352 Applied Statistics II		4		
	BBUB-315 Legal Environment		4		
	BBUB-320 Organizational Behavior			4	
	BBUQ-334 Management Science			4	
	BBUB-310 Career Seminar II			1	
	Science Electives		4	4	
	*Liberal Arts	4	4	4	
3	BBUF-441 Corporate Finance		4		
	BBUM-463 Principles of Marketing		4		
	BRER-401 Retail Store Operations & Management		4		
	BBUB-420 Principles of Management			4	
	BBUQ-460 Operations Management			4	4
	Retail/Business Electives		4	4	4
	*Liberal Arts			8	8
	‡Physical Education Electives			0	0
4	BBUB-507 Business Environment		4		
	BRER-501 Senior Seminar in Retail Management		4		
	BBUB-551 Integrated Business Analysis		4		
	Retail/Business Electives		4		
	*Liberal Arts			8	8
	Liberal Arts (Senior Seminar)			2	
	‡Physical Education Electives			0	

‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

Retail Management Major Curriculum Chart



**Rochester Institute of Technology-
Fashion Institute of Technology
Joint Degree Program**

Students enrolled in the School of Retailing will have the option of selecting sub-specializations related to the fashion industry by attending the Fashion Institute of Technology (FIT) during their junior year. Students selecting the FIT option will enroll for specific classes during the fall and spring semesters at FIT and will return to RIT for their senior year. Upon completion of all requirements for their bachelor of science degree from the College of Business and the School of Retailing, students also will be certified for their associate in applied science (AAS) degree from FIT in their area of specialization.

Co-op

Students who select this joint degree program will be required to complete one quarter of full-time, paid, cooperative work experience. Additional co-ops are available for students who wish to gain additional experience.

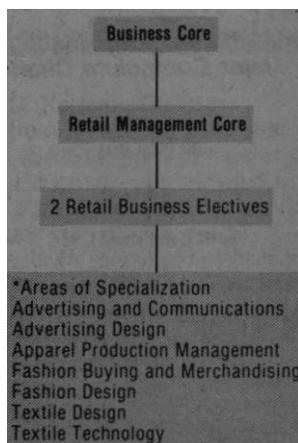
Fashion Institute of Technology

The Fashion Institute of Technology, located at 27th St. and Seventh Avenue in New York City, is a specialized college under the program of the State University Of New York. FIT is devoted exclusively to developing students for creative careers in the fashion and its many allied industries. FIT's location and curriculum will provide students with an academic year of concentrated study of the many different segments of the fashion industry. Students who select the RIT-FIT joint degree program will have the option of selecting one of the following five areas of specialization and will be required to complete the courses for their selected specialization during their junior year at the FIT campus.

Yr.	Retail Management—Fashion Institute of Technology option	Quarter Credit Hours			
		FALL	WTR.	SPG.	SMR.
1	BBUB-202 Introduction to Business	4			
	SMAM-225 College Algebra & Matrices	4			
	GSSE-301 Principles of Economics I	4			
	BRER-201 Introduction to the Retail Industry		4		
	SMAM-226 Business Calculus		4		
	GSSE-302 Principles of Economics II		4		
	ICSS-200 Survey of Computer Science			4	
	BBUA-301 Financial Accounting			1	
	BBUB-210 Career Seminar I			1	
	* Liberal Arts	4	4	8	
‡ Physical Education Electives	0	0	0		
2	BBUQ-351 Applied Statistics I	4			
	BBUA-302 Managerial Accounting	4			
	BRER-301 Retail Merchandising & Control	4			
	BBUQ-352 Applied Statistics II		4		
	BBUB-315 Legal Environment		4		
	BBUB-320 Organizational Behavior			4	
	BBUQ-334 Management Science			4	
	BBUB-310 Career Seminar II			1	
	Science Electives		4	4	
	* Liberal Arts	4	4	4	
3	BBUB-420 Principles of Management				4
	BBUQ-460 Operations Management				4
	* Liberal Arts				8
	‡ Physical Education Electives				0
4	BBUF-441 Corporate Finance		4		
	BBUM-463 Principles of Marketing		4		
	BRER-401 Retail Store Operations and Management		4		
	BBUB-507 Business Environment		4		
	BRER-501 Senior Seminar in Retail Management			4	
	BBUB-551 Integrated Business Analysis				4
	Retail/Business Electives			4	4
	* Liberal Arts			8	8
	Liberal Arts (Senior Seminar)				2
	‡ Physical Education Electives			0	0

‡ See Pg. 23 for Policy on Physical Education.
* See Pg. 97 for Liberal Arts requirements.

**RIT-FIT Joint Degree Program
Chart**



*The areas of specialization listed represent the seven majors in which students may receive an AAS degree upon completion of the RIT BS degree program in retail management. Details on each of these areas may be obtained from the School of Retail Management

Photographic marketing management major

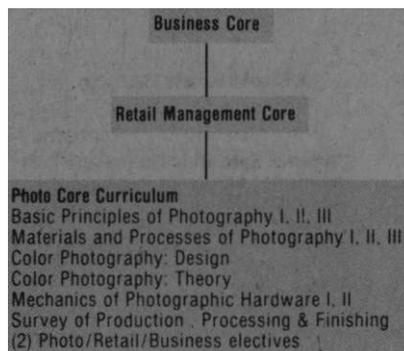
The photographic marketing management major is a joint degree program offered by the School of Retailing and the School of Photographic Arts and Sciences. This program is designed to provide students with a thorough knowledge of the photographic process and a solid background in business administration and retail management. The combination of course work in these two disciplines prepare students for management careers in the photographic industry. Opportunities for positions includes those in customer service aspects of photofinishing and professional color laboratories, and management positions with the photographic manufacturers and photographic retailers.

Cooperative work experience is optional for students majoring in photographic marketing management.

Yr.	Photographic Marketing Management	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	BBUB-202 Introduction to Business	4		
	SMAM-225 College Algebra & Matrices	4		
	GSSE-301 Principles of Economics I	4		
	BRER-201 Introduction to the Retail Industry		4	
	SMAM-226 Business Calculus		4	
	GSSE-302 Principles of Economics II		4	
	ICSS-200 Survey of Computer Science			4
	BBUA-301 Financial Accounting			4
	BBUB-210 Career Seminar I			1
	*Liberal Arts	4	4	8
‡Physical Education Electives	0	0	0	
2	PPHM-201, 202, 203 Principles of Photography I, II, III	4	4	4
	BRER-301 Retail Merchandising and Control	4		
	BBUQ-351 Applied Statistics I	4		
	BBUA-302 Managerial Accounting	4		
	BBUQ-352 Applied Statistics II		4	
	BBUB-320 Organizational Behavior		4	
	BBUQ-334 Management Science			4
	BBUB-310 Career Seminar II			1
*Liberal Arts		4	8	
3	PPHG-211, 212, 213 Materials & Processes of Photography	3	3	3
	BBUB-315 Legal Environment	4		
	BBUB-420 Principles of Management	4		
	BBUF-441 Corporate Finance		4	
	BBUM-463 Principles of Marketing		4	
	BRER-401 Retail Store Operations and Management			4
	BBUQ-460 Operations Management			4
	*Liberal Arts	4	4	4
‡Physical Education Electives	0	0	0	
4	BBUB-507 Business Environment	4		
	PPHT-311 Color Photography: Design	4		
	BRER-501 Senior Seminar in Retail Management		4	
	PPHT-312 Color Printing: Theory		4	
	PPHM-320 Mechanics of Photographic Hardware I		4	
	BBUB-551 Integrated Business Analysis			4
	PPHM-321 Mechanics of Photographic Hardware II			4
	PPHM-310 Survey of Production Processing & Finishing			4
	Photo/Retail/Business Electives	4		4
	*Liberal Arts	4	8	
Liberal Arts (Senior Seminar)		2		

Note: Second- and third-year students may co-op during summer vacation.
 ‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

Photographic Marketing Management Major Curriculum Chart



College of Continuing Education

Robert A. Clark, Dean

At Rochester Institute of Technology, the College of Continuing Education is your access to the future. With over 15 years experience in continuing education, we can help you meet your future goals of career and professional advancement and personal satisfaction. At the College of Continuing Education you have access to courses and programs designed to keep pace with rapid technological changes. You have access to faculty and staff who are experienced professionals in their fields and in working with adult students like you. You have access to academic advisors who will help you tailor a program to meet your needs. And, you have access to the services and facilities at Rochester Institute of Technology, long known as a forerunner in career education and development.

We know that time, now and in the future is often your biggest problem. We give you an alternative to full-time study through part-time study at night, on weekends, or during the day. Working closely with the other eight colleges of the Institute, we develop flexible educational opportunities for you. Class hours and course offerings are scheduled to meet specific needs of employers, employees and non-working people alike. As a result, many people attain educational goals not otherwise available.

Our Open Admission Policy allows you to take any course or to pursue any degree for which you have sufficient background. Academic advisors are available throughout the year to answer questions regarding your course or program choices.

If you choose to follow a specific program of study, you have numerous options in fields as diverse as management and photography, machine tool and general education. We also offer you diploma programs in 19 fields, as well as a certificate in management. If you are interested in earning your associate degree in applied science, we have 22 options from which to choose. An associate in arts degree is also available to you in general education.

In addition, you may earn your bachelor of science degree in 14 programs. Or, you may wish to enter one of our programs, designed primarily for transfer students with associate degrees, to earn your bachelor of technology degree in electrical or mechanical technology. If you're a graduate student, the master

of science degree is offered in applied and mathematical statistics.

The college also offers workshops, seminars and short courses to meet specific needs of community groups, professional organizations, agencies, industries, government and business. Non-credit programs include offerings as diverse as career exploration seminars, workshops in professional development for secretaries, breakfast seminars for managers and continuing education for health and field personnel.

We offer another alternative through the college Summer Session. Along with the opportunity for you to continue work in your chosen academic program, RIT's unique summer offerings also feature learning opportunities for students from other colleges and representatives from business and industry. Concentrated courses combining the resources of the entire Institute are offered in numerous subject areas and unusual formats.

If you want to be ready to meet the future's challenges through career growth updating skills, or just by keeping abreast with technological and societal changes, then let RIT's College of Continuing Education be your access to the future.

School of Applied Industrial Studies

James D. Forman, Director

The School of Applied Industrial Studies (SAIS) in the College of Continuing Education was initiated in the late 1970's to help meet the needs of Rochester industry for skilled workers. With renovated classrooms, laboratory and office facilities and an extensive range of up-to-date equipment, SAIS was established at RIT's City Center in downtown Rochester.

Programs

SAIS offers one-year (12-month) programs leading to a diploma of the Institute in the following fields: 1) drafting technology; 2) electromechanical technology; 3) machine tool technology; and 4) packaging machinery mechanics.

All programs are designed especially to prepare persons for entry-level positions in a wide range of industrial organizations.

Job placement

SAIS retains a full-time staff to assist with all activities related to job placement. The school has contacts with hundreds of employers who commonly hire the graduates, and every effort is made to provide graduates with as many opportunities as are available.

A continuous effort is made to develop new and wide-ranging job opportunities for SAIS graduates in all of the program fields.

Admissions requirements

The School of Applied Industrial Studies offers admission to high school graduates (or equivalent) who have an interest in and an aptitude for the specific technical field. Applicants are accepted on a continuous basis through the year for admission to any one of the three entry dates: fall (September), winter (December), and spring (March).

Those who wish to enroll in specific courses or who wish to pursue the program on a part-time basis must meet the general program requirements and (if appropriate) any course prerequisites.

Admission information and applications should be obtained directly from the School of Applied Industrial Studies, 33 N. Fitzhugh St., Rochester, N.Y., 14614 (telephone [716] 262-2736).

College of Engineering

Richard A. Kenyon, Dean

The programs offered by the College of Engineering are planned to prepare students to fit into present-day industrial and community life, and to lay a foundation for graduate work in specialized fields. This is accomplished by offering curricula which are strong in fundamentals, yet lead to specialization in the junior and senior years, and maintain a balance among humanistic-social subjects, the physical sciences, and professional courses.

Five-year programs

The college offers five five-year cooperative programs leading to the bachelor of science degree with majors in electrical, computer, industrial, mechanical and microelectronic engineering.

Resources

The Departments of Electrical, Industrial and Mechanical Engineering maintain extensive laboratory facilities in the Gleason Engineering Building to provide students with ample opportunities to work with up-to-date equipment in their respective fields. The laboratories are structured and outfitted to provide basic laboratory work as part of the engineering curricula, to offer students the opportunity for independent laboratory projects, and to provide facilities for fundamental research by students and faculty. The Computer Engineering Department utilizes its own growing facility plus those of the Electrical Engineering Department and the School of Computer Science and Technology. The new program in microelectronic engineering utilizes its own growing laboratory facility as well as existing laboratories in electrical engineering and photo science.

The cooperative plan

Students in the five-year cooperative programs attend classes during the Fall, Winter, and Spring Quarters of their first and second years. Prior to the beginning of the third year, students are assigned to A and B sections; in any given quarter, one section follows cooperative employment while the other attends classes. Employment arrangements are made by each student through the co-op coordinator in Central Placement. The chart illustrates the cooperative program as offered by the College of Engineering.

Cooperative Education plan

		Fall	Winter	Spring	Summer
1 st and 2nd yrs.		RIT	RIT	RIT	Vacation
3rd, 4th yrs.	A	RIT	Work	RIT	Work
	B	Work	RIT	Work	RIT
5th yr.	A	RIT	Work	RIT	
	B	Work	RIT	RIT	

Transfer programs

The College of Engineering at RIT has for many years admitted graduates from two year engineering science programs at community colleges and technical institutes. The rapid integration of these transfer students into the baccalaureate programs in significant numbers has provided an added dimension and a uniqueness to the College of Engineering.

In virtually all cases, accepted graduates of the two-year engineering science programs are able to enter the regular third year program in any of RIT's five engineering programs.

For those students who have completed programs in electrical or electronics technology with a high scholastic average, there is a three-year AAS Transfer program leading to a bachelor of science degree in electrical engineering. Two-year electrical technology graduates will, of course, wish also to consider the educational opportunities available to them through RIT's upper-division bachelor of technology programs in the School of Engineering Technology.

Orientation

The engineering programs are strongly oriented toward mathematics and the physical sciences. Emphasis is placed upon the study of these subjects in the first two years to provide a foundation for the applied sciences and for the engineering subjects which are scheduled later in the programs.

Careers

Graduates qualify for professional work in design and development of equipment and systems, research and experimental work, supervision of technical projects and managerial positions in industry. Increasing numbers of graduates continue their education for the master of science or the doctor of philosophy degrees.

Entrance requirements (BS)

Applicants for the engineering programs must be high school graduates, and must have completed elementary and intermediate algebra, plane geometry, trigonometry, and both physics and chemistry while in high school. Advanced algebra, solid geometry, and calculus, while not required, are highly desirable. The applicant's proficiency in the required entrance subjects should be high since these provide a good index of his or her ability to cope with the more advanced courses in the science programs.

All applicants are required to take entrance examinations as described in the general section of this bulletin.

Graduation requirements

The minimum requirements for the bachelor of science degree in the College of Engineering are:

1. Satisfactory completion of the program with no failing grades.
2. A minimum number of quality points equal to at least twice the number of quarter hours required.

Prospective students should consult the individual program descriptions for additional information.

Accreditation

The programs of study leading to the bachelor of science degree in electrical engineering, industrial engineering and mechanical engineering are accredited by the Accreditation Board for Engineering and Technology (ABET). The college is a member institution of the American Society for Engineering Education.

The programs in computer engineering and microelectronic engineering are "registered for professional purposes" with the State Education Department of the State of New York as a preparatory step to seeking ABET accreditation. All graduating seniors are eligible to sit for the Intern Engineer portion of the New York State professional Engineering Examination during their final quarter in school.

Part-time students

An increasing number of students desire to pursue their engineering degree on a part-time basis while maintaining full-time employment in industry. In response to the needs of such students the College of Engineering has expanded its scheduling of classes in the upper-division of the Mechanical and Electrical Engineering programs so that these courses may be taken during the late afternoon and early evening as well as during the day. Students wishing to pursue part-time studies must qualify for matriculation as regular third year engineering students through normal admission procedures. As with full-time students, part-time students are required to complete the equivalent of five quarters of approved cooperative work experience. Arrangements are made for part-time students to utilize approved portions of their regular employment to satisfy the co-op requirements. Persons wishing further information on part-time studies in either Electrical or Mechanical Engineering should contact the relevant department head.

Graduate degrees

Programs leading to the master of science degrees are offered in both the electrical engineering and mechanical engineering departments. The programs may be pursued on a part-time or full-time basis since the majority of courses are offered in the late afternoon and early evening.

In addition, the College of Engineering offers a post-baccalaureate professional program leading to the master of engineering degree. The degree is without discipline designation, and study may be pursued in such areas as electrical engineering, industrial engineering, mechanical engineering, environmental studies, engineering management, and systems engineering. The program is unique in that it extends the undergraduate cooperative concept to the graduate level in an industrial internship for which academic credit is granted.

Designed as a full-time program, the master of engineering degree may also be pursued on a part-time basis by engineers employed in local industry.

The College of Engineering offers jointly with the College of Science a program leading to the master of science degree in Materials Science and Engineering.

For further information on graduate programs, in the College of Engineering, request the Graduate Bulletin or contact the associate dean for Graduate Programs, College of Engineering.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description Catalog from the Admissions Office.

Admission at a Glance: College of Engineering Programs

General information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

Five-five year cooperative programs leading to the BS degree are offered. The four majors are: electrical, computer, industrial, mechanical and microelectrical engineering.

The programs prepare students for employment in the modern industrial world. There are extensive laboratory and experimental facilities available for student use. The programs in mechanical, industrial, and electrical engineering are accredited by the Accreditation Board for Engineering and Technology.

Electrical Engineering¹—Students first develop proficiency in mathematics, science, and engineering fundamentals. Fundamental electrical studies include: electromagnetics, energy conversion, circuit theory, and electronics. Degree granted: BS-5 year.

Computer Engineering¹—This program offers a blend of computer science and electrical engineering which is designed to enable the graduates to intelligently incorporate computers within engineering products. Degree granted: BS-5 year.

Industrial Engineering¹—Students learn design improvement and installation of integrated systems of people, materials, and equipment. Students also develop specialized knowledge in mathematics and physical science with methods of engineering and design. Degree granted: BS-5 year.

Mechanical Engineering¹—Students devote the first two years to the study of mathematics, physics, chemistry, and mechanics. There are two options in upper years—applied mechanics, and thermal fluid sciences. Degree granted: BS-5 year.

Microelectronic Engineering¹—Offered in conjunction with the College of Graphic Arts and Photography and the College of Science, the new five-year program will emphasize the photolithographic aspects of microelectronic processing. It will provide the broad interdisciplinary background in optics, chemistry, device physics, computers, electrical engineering, and statistics necessary for entry into the microelectronic industry.

Electrical Engineering AAS Transfer program—This is a specialized program that provides a clearly defined route to the bachelor of science degree in Electrical Engineering for holders of an AAS degree in electrical technology. Incoming students enroll in transfer adjustment courses the summer before entering as third-year students. Degree granted: BS-3 year, at RIT.

Freshman Admission Requirements

Transfer Admission with junior standing

Program	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs
Electrical Engineering	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics and Chemistry	additional mathematics	Engineering Science (liberal arts with math/science option considered on individual basis) or Electrical Technology (A.A.S. Degree)
Computer Engineering	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry Physics and Chemistry	additional mathematics	Engineering Science (liberal arts with math/science option considered on individual basis).
Industrial Engineering	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics and Chemistry	additional mathematics	Engineering Science (liberal arts with math/science option considered on individual basis).
Mechanical Engineering	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics and Chemistry	additional mathematics	Engineering Science (liberal arts with math/science option considered on individual basis).
Microelectronic Engineering	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry Physics and Chemistry	additional mathematics	Engineering Science (liberal arts with math/science option considered on individual basis).

*Four years of English are required in all programs, except where state requirements differ.
A substantial number of professional and free electives are also available.

Computer Engineering

Roy S. Czernikowski, Head

The computer engineering program is effectively an interdisciplinary program between electrical engineering and computer science which embellishes their offerings in this relatively new field of study. The program is designed to prepare the graduate both to design engineering products that closely incorporate or communicate with computers and also to undertake significant graduate study where sophisticated computer design can actually be addressed.

This program studies the electrical engineering aspects of the circuits and devices used in large scale digital systems and the mathematical theories of their description to permit the graduate to engage in the design and construction of these systems.

In addition, this program also investigates computer science topics in the areas of computer architecture, microprogramming, operating systems, and especially real time computation in order to intelligently integrate hardware and software in engineering products. The intensive laboratory requirements ensure the graduate of significant experience with various microcomputers in controlling engineering systems.

The cooperative education program of the final three years enables the student to apply the principles and techniques of computer engineering to real industrial problems and thereby provide a stronger framework on which to build in the academic courses. These co-op work periods alternate with academic quarters over the last three years of the program.

Principal field of study

For students matriculated in the interdisciplinary computer engineering, the principal field of study is defined to be all courses taken in the College of Engineering and the School of Computer Science and Technology, Matriculated students not maintaining a 2.00 cumulative grade point average in their principal field of study are subject to academic probation and suspension according to Institute policy.

Yr. BS degree in Computer Engineering

Qtr. Credit Hours

Yr.	Course	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	ICSP-241 Programming I Algorithmic Structures	4		
	ICSP-242 Programming II Data Structures		4	
	ICSP-243 Programming III Design & Implementation			4
	SCHG-208, 209 Chemistry I, II	4	4	
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SMAM-265 Foundations of Discrete Math			4
	SPSP-311, 312 University Physics I, II		4	4
	SPSP-375, 376 University Physics Lab I, II		1	1
	*Liberal Arts	4		
†Physical Education	0	0	0	
2	EECC-341 Intro to Digital Systems for Computer Engineers		4	
	EEEE-351 Circuit Analysis I			4
	EMEM-331, 332 Mechanics I, II	4		4
	ICSP-305 Assembly Language Programming	4		
	ICSP-325 Data Organization & Management		4	
	ICSP-319 Scientific Applications Programming			4
	SMAM-305 Calculus IV	4		
	SMAM-306 Differential Equation		4	
	SPSP-313 University Physics III	4		
	SPSP-377 University Physics Lab III	1		
	SPSP-314 Modern Physics		4	
*Liberal Arts			4	
†Physical Education	0	0	0	
3	EEEE-352 Circuit Analysis II	4		
	EEEE-353 Linear Systems I			4
	EEEE-441, 442 Electronics I, II	4		4
	SMAM-351 Probability			4
	SMAM-420 Complex Variables	4		
	*Liberal Arts	4		4
4	EECC-660 Interface Electronics & Logic			4
	EEEE-431 Linear Systems II	4		
	EEEE-531 Energy Conversion	4		
	EEEE-613 Introduction to Controls			4
	ICSS-440 Operating Systems	4		
	EECC-550 Computer Architecture I for Computer Engineers			4
*Liberal Arts	4		4	
5	EECC-655 Real Time Computation	4		
	EEEE-693 Digital Data Communications			4
	EECC-551 Computer Architecture II for Computer Engineers	4		
	Professional Elective	4		4
	*Liberal Arts	4		4
	*Liberal Arts			4
Liberal Arts (Senior Seminar)			2	

†See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Electrical Engineering

Harvey E. Rhody, Head

The cooperative five-year engineering program

The bachelor of science program in electrical engineering at RIT has been developed in direct response to the increasing diversity in talent and training required of engineers by society. While providing a sound engineering core, the program offers significant opportunity for personalized curriculum planning. Individualized study plans may range from intense specialization to broad general coverage with ample opportunity for interdisciplinary activity in all cases. An integrated co-op work program adds this flexibility to produce a mature graduate with well-developed academic and industrial perspectives.

The role of the engineer has been defined as "applying the laws of mathematics and the principles of science to the solution of practical problems." Within this definition, the content of the program and the sequence of courses are easily understood.

The first two years of the program are devoted to the mastery of those laws of mathematics and principles of science with an introduction to engineering fundamentals. After this basic groundwork has been covered, the third year begins the study of core electrical engineering subjects in circuit theory and electronics, along with some advanced mathematics. The fourth year continues this exposure to basic electrical engineering topics in electromagnetics, communications, controls, energy conversion, and advanced electronics.

The fifth and final year allows the student to specialize in areas suited to his or her professional interests. The professional electives may be taken, with the approval of the student's advisor, from courses offered by the Electrical Engineering Department, the College of Engineering and the College of Science. The free electives may be chosen from offerings anywhere in the Institute.

Yr. BS degree in Electrical Engineering—Class of 1988

Otr. Credit Hours

		FALL	WTR.	SPG.
1	EEEE-200 Elect. Eng. Graphics	1		
	EEEE-240 Intro. to Digital Systems	3		
	SCHG-208, 209 Gen. Chem. for Engineers	4		4
	SMAM-251, 252, 253 Engr. Calculus I, II, III	4	4	4
	SPSP-311, 312 University Physics I, II		4	4
	SPSP-375, 376 Univ. Phys. Lab. I, II		1	1
	ICSP-220 Fortran Prog. for Engineers		4	
	*Liberal Arts (Core)	4	4	4
†Physical Education Elective	0	0	0	
2	EEEE-351 Circuit Analysis I			4
	E MEM-331, 349 Mechanics I, II	4		3
	EEEE-365 Introduction to Microcomputers		4	
	SMAM-305 Calculus IV	4		
	SMAM-306 Differential Equations		4	
	SMAM-328 Engineering Mathematics			4
	SPSP-313 University Physics III	4		
	SPSP-377 University Phys. Lab. III	1		
	SPSP-314, 315 Modern Physics I, II		4	4
	EEEE-310 Numerical Modeling			2
*Liberal Arts (Core)	4	4		
†Physical Education Elective	0	0	0	
3		FALL		SPG.
		WTR.		SMR.
	EEEE-352 Circuit Analysis II	4		
	EEEE-453 Linear Systems I			4
	EEEE-441, 442 Electronics I, II	4		4
	EEEE-471 Electric and Magnetic Fields I			4
SMAM-351 Probability and Statistics			4	
SMAM-420 Complex Variables	4			
*Liberal Arts (Core)	4			
4	EEEE-554 Linear Systems II	4		
	EEEE-544 Physics of Electronic Devices	4		
	EEEE-531 Energy Conversion	4		
	EEEE-472 Electric and Magnetic Fields II	4		
	EEEE-513 Intro. to Classical Controls			4
	EEEE-534 Intro. to Communication Systems			4
	EEEE-545 Digital Electronics			4
*Liberal Arts (Concentration)			4	
5	E MEM-431 Thermodynamics	4		
	*Professional Elective	4		4
	Professional Elective	4		4
	Free Elective			4
	*Liberal Arts (Concentration)	4		4
	*Liberal Arts (Senior Seminar)			2

†See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

In today's world, engineering decisions are rarely taken in a vacuum but rather within an ethical and socio-economic framework. For this reason, spread throughout the curriculum are general studies courses which permit students to increase their understanding of this decision framework and to improve their ability to communicate effectively.

Professional Electives in Electrical Engineering	Quarter Credit Hours
EEEE-532 Electrical Machines	4
EEEE-535 Introduction to Power Electronics	4
EEEE-536 Motor Applications and Control	4
EEEE-614 Design of Controls System	4
EEEE-621 Transmission Propagation and Waves	4
EEEE-645 Special Semiconductor Devices	4
EEEE-650 Introduction to Logic and Switching	4
EEEE-665 Microcomputer Systems I	4
EEEE-666 Microcomputer Systems II	4
EEEE-670 Introduction to Microelectronics	4
EEEE-671 Hybrid Microelectronics	4
EEEE-672 Optical Devices and Systems	4
EEEE-674 Fiber Optics: Theory and Applications	4
EEEE-675 Analog/Hybrid Computation	4
EEEE-676 I.C. Processing Laboratory	4
EEEE-677 Digital Filters and Signal Processing	4
EEEE-679 Active and Passive Filters	4
EEEE-687 Power Systems Analysis	4
EEEE-693 Digital Data Communications	4
EEEE-695 Introduction to Audio Engineering	4
EEEE-696 Communication Circuit Design	4

Engineering Science transfer program

A powerful force in current engineering education is the emergence of the community college offering two-year programs in engineering science leading to the associate in science degree. In New York State these programs have resulted from the combined efforts of educators from both public and private institutions, and from both community colleges and major universities. Accordingly these programs represent and provide the general footing upon which engineering education must be based. The electrical engineering program at RIT is sufficiently related to these programs that transfer is possible and encouraged directly into the third year of the RIT curriculum, with a full two years' credit granted to the holders of an accredited AS degree in engineering science. Transfer students should see page 23 for policy on physical education.

AAS Transfer Program

Dr. Kenneth Hsu, Coordinator in addition to the transfer of students holding the AS degree in engineering science, the Electrical Engineering Department at RIT has a long and rewarding history of students transferring into electrical engineering from the successful completion of AAS programs in electrical technology at community colleges. A specialized program for these students is available in our AAS Transfer Program. This program is unique within the State of New York. It provides a clearly defined avenue to the bachelor of science degree for holders of the AAS degree in electrical technology.

Incoming students are brought to the campus in the summer (fourth) quarter immediately following their AAS program. On the basis of personal interviews with faculty members from mathematics, computer science, and electrical engineering, an individual program is designed for each AAS transfer student. The objective is to use this initial summer quarter to bring the students to the point where the remainder of their bachelor of science program can be constructed from existing, regularly scheduled Institute courses. Beyond this initial summer quarter, the AAS transfer student follows a co-op work plan leading to the bachelor of science degree at the end of his or her third academic year at RIT. Professional and free elective opportunities are also provided in this plan for the expression of individual student interests.

**Yr. BS degree in Electrical Engineering
AAS Transfer Program** **qt., Credit Hours**

Yr.	Course	qt., Credit Hours			
		FALL	WTR.	SPG.	SMR.
†	This is a typical curriculum for a student with an AAS degree, who transfers to RIT's Electrical Engineering Department with 1 year of engineering calculus.				
	EEEE-351 Circuit Analysis I				4
	ICSP-220 Fortran Prog. for Engr.				4
	SMAM-305 Calculus IV				4
	*Liberal Arts (Core)				4
3	EEEE-352 Circuit Analysis II		4		4
	EEEE-453 Linear Systems I		4		4
	EEEE-441, 442 Electronics I, II		4		4
	SMAM-306 Differential Equations		4		4
	SMAM-328 Engineering Mathematics		4		4
	SPSP-314 Modern Physics I		4		4
	*Liberal Arts (Core)				4
4	EEEE-554 Linear Systems II		4		4
	EEEE-544 Physics of Electronic Devices		4		4
	EMEM-331, 349 Mechanics I, II		4		3
	SMAM-420 Complex Variables		4		4
	EEEE-545 Digital Electronics				4
	EEEE-471 Electric and Magnetic Fields I				4
	*Liberal Arts (Concentration)				4
5	EMEM-431 Thermodynamics		4		4
	EEEE-472 Electric and Magnetic Fields II		4		4
	EEEE-531 Energy Conversion		4		4
	SMAM-351 Probability and Statistics				4
	Professional Electives				8
	*Liberal Arts (Concentration)				4
	*Liberal Arts (Senior Seminar)		4		2

All AAS transfer students will be required to take a minimum of 115 quarter credit hours at RIT minus applicable transfer credits.
 AAS transfer students have Co-op during Fall and Spring quarters.
 † Summer prior to third year.
 ‡ Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

**Yr. BS degree in Electrical Engineering
Engineering Science Transfer Program—Typical Program** **Quarter Credit Hours**

Yr.	Course	Quarter Credit Hours			
		FALL	WTR.	SPG.	SMR.
3	Transfer students will generally follow the upper-division of the BSME program (years III, IV, V). However, it may be necessary to take some additional courses or substitute a course for a free elective if there are deficiencies corresponding to courses in the lower-division portion of the BSEE program (years I and II).				
	EEEE-352 Circuit Analysis II	4			
	EEEE-453 Linear Systems I			4	
	EEEE-441, 442 Electronics I, II	4		4	
	EEEE-471 Electric and Magnetic Fields I		Co-op	4	Co-op
	SMAM-351 Probability and Statistics			4	
	SMAM-420 Complex Variables	4			
	EEEE-340 Intro. to Digital Systems	4			
	EEEE-310 Numerical Modeling			2	
	4	EEEE-554 Linear Systems II	4		
EEEE-544 Physics of Electronic Devices		4			
EEEE-365 Intro. to Microcomputers		4			
EEEE-472 Electric and Magnetic Fields II		4	Co-op		Co-op
EEEE-513 Intro. to Classical Controls				4	
EEEE-534 Intro. to Communication Systems				4	
EEEE-545 Digital Electronics				4	
	*Liberal Arts (Core)			4	
5	EMEM-431 Thermodynamics	4			
	EEEE-531 Energy Conversion	4			
	Professional Elective		Co-op	4	Co-op
	Professional Elective	4		4	
	*Liberal Arts (Concentration)			4	
	*Liberal Arts (Concentration)	4		4	
	*Liberal Arts (Senior Seminar)			2	

*See Pg. 97 for Liberal Arts requirements.

Industrial Engineering

Richard Reeve, Head

Industrial engineering differs from other branches of the engineering profession in at least two ways. First, industrial engineering education is relevant to most types of industry and commercial activity. Second, it is that major branch of engineering concerned not only with machines, but with people as well.

Specifically, industrial engineering is concerned with the design, improvement, and installation of integrated systems of people, materials, and equipment. It draws upon specialized knowledge and skill in the mathematical and physical sciences, together with the principles and methods of engineering analysis and design.

The industrial engineering curriculum covers the principal concepts of human performance, mathematical modeling, computer programming and applications, management systems, and manufacturing process.

The curriculum stresses the application of computers in solving the engineering problems of today. For example:

1. The undergraduate industrial engineer at RIT utilizes computer graphics in designing the layout of manufacturing plants and in the development of dynamic, animated computer simulation models.
2. The industrial engineer utilizes computers to control flexible manufacturing systems involving robots, machines, and conveyors.
3. Industrial engineers at RIT utilize the computer in conjunction with touch-sensitive devices, voice recognition systems, and robots in the analysis and design of man/machine systems.

Through the use of professional and free electives the I.E. student, in consultation with his/her advisor, is able to build a minor concentration of study in business, mechanical engineering, electrical engineering, computer science and related fields.

Careers

Some of the activities of industrial engineers include work measurement, operations research, applied statistics, human factors, plant layout, materials handling, production planning and control, manufacturing, and management consulting.

Balance rather than specialization has allowed our graduates to pursue varied paths. Examples of the diversity, along with the role that an

Yr.		BS degree in Industrial Engineering			Qtr. Credit Hours		
		FALL	WTR.	SPG.			
1	EIEI-201 Introduction to Industrial Engineering	4					
	EIEI-202 Computing for Industrial Engineers		4				
	SCHG-208, 209 General Chemistry for Engineers I, II	4		4			
	SMAM-251, 252, 253 Engineering Calculus I, II, III	4	4	4			
	SPSP-311, 312 University Physics I, II		4	4			
	SPSP-375, 376 University Physics Lab I, II			1	1		
	*Liberal Arts (Core)	4	4	4			
‡Physical Education Elective	0	0	0				
2	EMEM-331 Mechanics I (Statics)	4					
	EMEM-332 Mechanics II (Dynamics)			4			
	SMAM-305 Engineering Calculus IV	4					
	SMAM-306 Elementary Differential Equations		4				
	SMAM-308 Engineering Mathematics			4			
	SPSP-313 University Physics III	4					
	SPSP-377 University Physics Lab III	1					
	EMEM-343 Materials Processing		4				
	EMEM-344 Materials Science			4			
	Science Elective		4	4			
*Liberal Arts (Core)	4	4	4				
‡Physical Education Elective	0	0	0				
3	EIEI-420 Work Measurement & Analysis I	4					
	EIEI-520 Engineering Economy	4					
	EIEI-401 Introduction to Operations Research I	4					
	SMAM-351 Probability	4					
	SMAM-352 Applied Statistics			4			
	EIEI-415 Human Factors			4			
	EIEI-481 Management Theory & Practice			4			
EIEI-422 Systems & Facilities Planning			4				
4	EIEI-510, 511 Applied Statistics I, II	4		4			
	EIEI-402 Introduction to Operations Research II	4		4			
	EIEI-503 Simulation			4			
	EIEI-516 Human Factors II	4					
	**Professional Electives	4		4			
*Liberal Arts (Concentration)			4				
5	EIEI-530 Engineering Design	4					
	EIEI-560 Project Design			4			
	**Professional Elective	4		4			
	*Liberal Arts (Concentration)	4		4			
	Free Elective	4	4	4			
Liberal Arts (Senior Seminar)			2				

*At least one professional elective must be selected from the following courses: EMEM-431 Thermodynamics; EMEM-415 Fluid Mechanics I; EEEE-461, 462 Electrical Engineering I, II.
 †See Pg. 23 for Policy on Physical Education.
 ‡See Pg. 97 for Liberal Arts requirements.

industrial engineer might function within, are reflected through the following partial listing of recent industrial engineering co-op assignments.

1. Hospitals
 - a. improve efficiency of a patient therapy department
 - b. optimal patient scheduling for physicians
 - c. establishment of outpatient clinic staffing levels
2. Manufacturing industries
 - a. product life studies
 - b. layout of new and existing work areas
 - c. design and implementation of an information system
 - d. investigation of production processes involved in cleaning carbide dies
 - e. economic investigation-new versus repaired breakdown analysis
 - f. investigation of waiting lines in connection with a product line
 - g. investigation of delivery service which involved scheduling,

route modification and material handling

- h. assisted in setting up a production control monitoring board
- i. computer programming relating to pricing policies, blending problems, and truck scheduling
- j. downtime studies of various operations using time study and work sampling
- k. development and computerization of a forecasting model

Transfer programs

Transfer programs for industrial engineering students are arranged on an individual basis. This allows a student to build an industrial engineering program which best takes into account his or her previous education and work experience. Students completing an AAS in engineering science normally receive credit for the first two years and start their program at RIT with the third year class.

Mechanical Engineering

Bhalchandra V. Kariekar, Head

Mechanical engineering is perhaps the most comprehensive of the engineering disciplines, with the mechanical engineer's interests ranging from the design of missile systems to the design of energy efficient systems. The spectrum of professional activity for the mechanical engineering graduate runs from research through development and design to manufacturing and sales. Because of their comprehensive training and education in the areas of production and economics, mechanical engineers are often called upon to assume management positions.

The first two years of the undergraduate program are devoted to an intensive study of mathematics, physics, chemistry, and mechanics—the basic tool of the engineer—and to a thorough grounding in the humanities. The final three years of the program integrate the cooperative work experience with the professional subject matter of the mechanical engineering discipline.

In the fourth and fifth years, the mechanical engineering student gets considerable background in design. This is accomplished with two sets of courses—Group I and Group II. Each student takes at least three courses from Group I and at least two from Group II. Each Group I course has two of its credit hours devoted to design. Group II courses are entirely design—four credit hours each. In consultation with his or her academic advisor, each student also selects two elective courses. These may be other undergraduate or graduate courses in mechanical engineering or courses offered by other colleges within RIT. By appropriate selection of Group I courses, Group II courses, and Elective courses a student may tailor his or her program to a specific area of interest such as solid-body mechanics or thermal-fluid systems.

The Mechanical Engineering Department is staffed to offer professional courses in the areas of thermal systems, applied mechanics, manufacturing, environmental science, systems analysis, computer-aided design, and materials science. The laboratories of the department are equipped to provide extensive experimentation in these areas and students are encouraged to pursue independent research in addition to that required in their programs.

Yr. BS degree In Mechanical Engineering

Qtr. Credit Hours

		FALL	WTR.	SPG.
1	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SCHG-208, 209 General Chemistry for Engineers I, II	4		4
	EMEM-201 Intro. to Mechanical Engineering Graphics	4		
	SPSP-311, 312 University Physics I, II		4	4
	SPSP-375, 376 University Physics Lab I, II		1	1
	EMEM-343 Materials Processing		4	
	*Liberal Arts (Core)	4	4	4
‡Physical Education Elective	0	0	0	
2	EMEM-336 Statics	4		
	EMEM-337, 338 Strength of Materials I, II		4	4
	SPSP-313 University Physics III	4		
	SPSP-377 University Physics Lab III	1		
	SMAM-305 Calculus IV	4		
	SMAM-306 Differential Equations		4	
	EMEM-340, 341 Engineering Communications I & II		4	
	*Liberal Arts (Core)	4	4	
	EEEE-461 Electrical Engineering I			4
	SMAM-318 Intro. to Part. Dif. Eq.			4
EMEM-344 Materials Science			4	
‡Physical Education Elective	0	0	0	
3		FALL		SPG.
		WTR.		SMR.
	EMEM-413, 414 Thermodynamics I, II	4		4
	EEEE-462 Electrical Engineering II	4		
	EMEM-437 Introduction to Machine Design	4		
	*Liberal Arts (Core)	4		
	EMEM-415 Fluid Mechanics I			4
EMEM-439 Dynamics I			4	
EMEM-440 Numerical Modeling			4	
4	EMEM-514 Heat Transfer I	4		
	EMEM-543 Dynamics II	4		
	EMEM-516 Fluid Mechanics II	4		
	SPSP-314 Modern Physics	4		
	EMEM-501 Mechanical Engineering Laboratory			4
	EMEM-544 Dynamics of Phys. Systems I			4
	Group I course			4
*Liberal Arts (Concentration)			4	
5	Group I courses	4		4
	Group II courses	4		4
	*Liberal Arts (Concentration)	4		4
	Elective courses	4		4
	Liberal Arts (Senior Seminar)			2**

** This course can also be taken during Fall or Winter.

‡SeePg. 23 for Policy on Physical Education.

*SeePg. 97 for Liberal Arts requirements.

Transfer programs

The Mechanical Engineering Department at RIT has a long-standing tradition of admitting graduates from two-year community college programs in engineering science and in engineering technology. The addition of these transfer students in significant numbers to our regular undergraduate students has provided an added dimension and a uniqueness to the RIT engineering program.

The AS graduate in engineering science with above average scholastic achievement can generally anticipate entering the BS program in mechanical engineering as a regular third-year student. In a few cases it may be necessary to alter one or two courses in the program to accommodate differences in the programs of preparation in the first two years. However, these changes are generally minor.

The AAS graduate in mechanical technology who has demonstrated outstanding achievement should seriously consider transfer to a BS program in mechanical engineering as one alternative for continuing

formal education. Because the basic philosophies underlying the technology programs and the engineering programs are significantly different, the AAS graduate in technology requires a somewhat special program to adapt his or her previous educational experience to the BS program in engineering. Recognizing that no single program of study can effectively integrate all mechanical technology graduates into the engineering curriculum, each qualified transfer student is given a specific program of study that best meets his or her career goals, satisfies the basic requirements for the BS degree, provides a meaningful cooperative work experience, and permits the student to fulfill the degree requirements in a reasonable period of time.

Extended day schedule

The extended day schedule is offered in the late afternoon and early evening hours. The schedule is designed for those who already have an AS (Engineering Science) degree, are presently working, and who seek an

accredited BSME degree. The requirements under this schedule are exactly the same as the day schedule. Further details can be obtained by contacting the Mechanical Engineering office.

Combined five-year BS/MS degree program

In addition to the bachelor of science and master of science degree programs described under the section entitled "College of Engineering," a combined BS/MS degree program is also available for the mechanical engineering student. A student enrolled in this program is required to successfully complete a minimum of 227 quarter credit hours. After completing this requirement, the student is awarded the BS and MS degrees simultaneously. Admission into the program is based on the student's cumulative grade point average, which must be at least 3.0, letters of recommendation from the faculty, and a personal interview by a departmental committee. All students in the program are required to maintain a cumulative grade point average of at least 3.0. Further information regarding this program can be obtained from the Department of Mechanical Engineering.

A transfer student who has completed one quarter at RIT and who has achieved a cumulative grade point average of at least 3.0 may apply for admission into the five-year combined BS/MS degree program.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Group I Courses

E MEM-601 Alternative Energy Sources
E MEM-605 Applications in Fluid Mechanics
E MEM-635 Heat Transfer II
E MEM-652 Turbomachinery
E MEM-658 Engineering Vibrations
E MEM-660 Refrigeration and Air Conditioning
E MEM-672 Dynamics of Machinery
E MEM-694 Stress Analysis

Group II Courses

E MEM-620 Optimal Design
E MEM-625 Creative Design
E MEM-632 Advanced Mechanical Systems Design
E MEM-665 Thermal Fluid Design

Elective Courses

Advanced Strength of Materials
Advanced Thermodynamics
Engineering Economy
Gas Dynamics
Laser Engineering
Patent Law
Graduate courses
Courses from other colleges

Microelectronic Engineering

Lynn Fuller, Head

The College of Engineering is proud to introduce its undergraduate degree program in microelectronic engineering, believed to be the first in the nation. Offered in conjunction with the College of Graphic Arts and Photography and the College of Science, the new five-year program will emphasize the photolithographic aspects of microelectronic processing. It will provide the broad interdisciplinary background in optics, chemistry, device physics, computers, electrical engineering, and statistics necessary for entry into the microelectronic industry.

Students in the program will have hands-on experience in the processing of integrated circuits, the vital component in almost every advanced electronic product manufactured today. The nationwide shortage of microelectronic engineers grows by 400 a year and is expected to total 2,000 by 1985. RIT graduates in this program will be prepared to enter industry immediately after graduation or to go on to advanced work in graduate school.

Developed with the assistance of many national corporations, the microelectronic engineering degree curriculum strongly reflects RIT's philosophy of quality education for careers. The program offers an unparalleled opportunity to prepare for professional challenge and success in one of the leading technologies of our time.

Yr.	BS degree in Microelectronic Engineering	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SMAM-251, 252, 253 Calc. I, II, III	4	4	4
	SCHC-211, 212 Gen. Chem.	3	3	
	SCHO-230 Organic Chemistry			3
	SCHG-205, 206, 207 Chem. Lab. I, II, III	1	1	1
	EMCR-210 Intro. to Microelectronics	2		
	PPHS-205 Ph. Sci. for Eng. I	2		
	SPSP-311, 312 Univ. Phys. I, II		4	4
	SPSP-375, 376 Phy. Lab. I, II		1	1
	*Liberal Arts (Core)	4	4	4
	‡Phys. Ed.	0	0	0
	2	SMAM-305 Calc. IV	4	
SMAM-306 Diff. Equations			4	
SMAM-328 Eng. Math				4
SPSP-313 Univ. Phys. III		4		
SPSP-314 Mod. Phys.			4	
SPSP-315 Intro. Semi. Phys.				4
SPSP-377 Phys. Lab. III		1		
PPHS-433, 434 Statistics I, II		4	4	
ICSP-220 Fortran			4	
EMCR-340 I.C. Technology				2
PPHS-207 Ph. Sci. for Eng. II				2
EEEE-351 Circuit Anal. I			4	
*Liberal Arts (Core)	4			
‡Phys. Ed.	0	0	0	
3	EEEE-352 Circuit Analysis II	4		
	EEEE-441, 442 Electronics I, II	4		4
	EMCR-440 Linear Systems			4
	PPHS-541 Fundamentals of Optics	4		
	PPHS-543 Optical Engineering			4
	*Liberal Arts (Concentration)	4		4
4	EEEE-643 Dig. Elect.	4		
	EMCR-640 Microelectronic Eng.			4
	EMCR-530, 540 EM Fields I, II	4		4
	EMCR-560 Device Physics	4		
	PPHS-571, 573 Elect. Chem. I, II	4		4
*Liberal Arts (Concentration)			4	
5	EEEE-665 Microprocessors	4		
	PPHS-441 Adv. Lithography			4
	PPHS-575 Elect. Chemistry III	4		
	EMCR-650 I.C. Proc. Lab.	4		
	EMCR-630 Elect. Chemistry IV			4
	Sem./Res (EMCR-660 or PPHS-660)			4
	*Liberal Arts (Concentration)	4		4
Liberal Arts (Senior Seminar)			2	

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

College of Fine and Applied Arts

Robert H. Johnston, Dean

The College of Fine and Applied Arts offers programs in the arts and crafts through curricula in the School of Art and Design and the School for American Craftsmen. Concentrations, or majors, in the School of Art and Design are given in graphic design, industrial and interior design, painting, packaging design, printmaking and medical illustration. In the School for American Craftsmen concentrations are given in ceramics and ceramic jewelry, weaving and textile design, and woodworking and furniture design.

The studies in the two schools of the college express a common educational ideal: the conviction that technical competence provides the most satisfactory foundation for the expression of creative invention. However, the mastery of techniques is seen as a means, not an end; the end of education in the arts is the exercise of creative imagination.

Resources

The equipment and the studios of the School of Art and Design are superior. A comprehensive art library of source material and an outstanding collection of slides are available for reference; and instructional films and other visual aids are utilized. Exhibitions, held in the Bevier Gallery, feature the work of contemporary painters, designers, and graphic artists, as well as work by faculty and students. Exhibition space in the Bevier Gallery extends the classroom into the public arena. In this gallery the focus is to bring attention to excellence in ideas, concepts, and aesthetic endeavors through the arts, crafts, and design expressions. Openings are planned for students to meet the artists. The Student Honors Show hangs through the summer and the opening of classes in September. Professional designers, painters, photographers, and graphic arts personalities are invited to lecture and give demonstrations. Rochester industry and commerce often sponsor pilot programs which are carried on under faculty supervision.

An added resource is the community of Rochester itself, with its many opportunities for educational, cultural, and social enrichment. Exhibitions, programs in the performing arts, and lectures are available to provide extracurricular learning for the interested student.

The resources of the School for American Craftsmen available for the student are exceptional: excellent equipment and facilities and a unique and challenging program combining learning and doing.

The faculty in the College of Fine and Applied Arts are productive in the fields in which they teach, and the honors and prizes they have won are a reflection of the prestige they enjoy as artists, designers and craftspeople. They have been broadly educated in Europe and the United States, and are well acquainted with contemporary practice in their art design or craft. While the teaching staff is composed of professional artists and craftspeople, able to practice their art or craft with distinction, they are, as well, interested and sympathetic to teachers and counselors.

The Computer Center, available for student use, is equipped with Apple, Mergenthaler Tetronics and Genographics terminals. Photo darkrooms also support the assigned problems. The Craft Village provides additional support for blacksmithing, sculpture and ceramics firing needs.

The Wallace Memorial Library is particularly strong in the extensive list of contemporary periodicals in design, arts and crafts available for study and research.

The hearing-impaired student receives assistance through the educational support team within the college.

Accreditation

The programs of study offered in the College of Fine and Applied Arts are fully accredited: courses of study have been approved by the New York State Department of Education, the Middle States Association of Colleges and Secondary Schools, and the National Association of Schools of Art and Design. The college is a charter member institution of the National Association of Schools of Art and Design.

Plan of education

The programs in the College of Fine and Applied Arts are two and four years in length and lead to the associates in applied science and the bachelor of fine arts degrees. The packaging design program is four years and leads to the bachelor of science degree. Students attend school for three quarters, each eleven weeks in length, during the school year. Advanced study at the graduate level is offered which leads to the master of fine arts and the master of

science for teachers degrees. The former may be earned normally in two years, the latter in one. The MST may be earned in programs carried during the regular and summer studies, depending on admission and department offerings. Among the programs offered for the master of science for teachers degree is a concentration in art education designed for those holding the bachelor of fine arts degree (or a bachelor of arts degree with an art major) which leads to the graduate degree and permanent certification to teach in the public schools of the State of New York. This is a September start.

Those interested in graduate study should request a copy of the Graduate Bulletin, which describes the degrees offered, the programs of study, and the procedures governing admission.

Course descriptions

For a complete outline of courses offered at RIT, please request "the Course Description catalog from the Admissions Office.

Transfer program

The College of Fine and Applied Arts offers a summer transfer program for art and design majors. Successful completion of this program qualifies students for second year standing in the following options: graphic design, industrial and interior design, painting, printmaking or medical illustration. Designed especially, though not exclusively, for graduates of community colleges, this transfer program is open to students with:

1. good academic standing at another college
2. one or two years of college, with a heavy emphasis in studio art (minimum of 12 semester or 18 quarter credit hours).
3. presentation of an acceptable art portfolio demonstrating strength in one or more areas.

Summer session

The College of Fine and Applied Arts offers a program of summer study in both the School of Art and Design and the School for American Craftsmen that is arranged for designers, teachers, and craftspeople. Both basic and advanced workshops are given, as well as graduate courses. Those interested should write the director of the Summer Session for information.

Junior year abroad

The School for American Craftsmen, in cooperation with the Scandinavian Seminars, offers a junior year abroad in the field of the crafts. This permits certain well-qualified students to spend their third year of study in one of the Scandinavian countries, after which they return for a fourth year of study at RIT. Full credit for the year of satisfactory study overseas will be granted toward the BFA degree if arrangements are made prior to departure. Information on the junior year abroad program can be obtained by writing the dean, College of Fine and Applied Arts.

Policy regarding student work

The College of Fine and Applied Arts reserves the right to retain student work for educational use or exhibition for a period of time not to exceed one and one-half quarters beyond the year the object has been made. The college also reserves the right to select an example or examples for its permanent collection. In such cases, where work is selected for the permanent collection the material cost only will be paid by the college. It is an honor to have one's work in the permanent collection of the College of Fine and Applied Arts.

Attendance regulations

The programs of the college utilize the studios and shop experiences as an essential part of the educational program; therefore it is imperative that the student regularly attend all classes unless specifically excused for special projects or activities by the instructor. Failure to attend classes, and to complete assignments, will be taken into consideration in grading.

Professional approach

Educational programs in the College of Fine and Applied Arts are related to the kinds of art services which the society needs, and based on teaching projects which can be made realistic and meaningful to the student. The problems duplicate, as far as possible, those found in the working situation after graduation. The courses are full-time, instruction is largely on an individual basis, and full opportunity is given for personal development. Exhibitions, lectures, and field trips add breadth and variety to the formal programs of study.

A unique feature of the educational programs offered in the College of Fine and Applied Arts is its emphasis on the professional approach to the understanding and solution of problems. Instructional services provided by a professionally experienced and oriented faculty, plus the well-equipped shops and studios designed with the needs of professional artists, designers or craftspeople in mind, further emphasize the practical character of this program of instruction.

Students are asked to demonstrate a professional attitude and purpose: to apply themselves to the requirements of the program, to cooperate in the fulfillment of its goals, and to assume some responsibility for their educational development through independent work.

Relationship with other RIT schools

Educational facilities of a rare sort in the arts are available to the student in the School of Art and Design: the superior resources of the School of Photographic Arts and Sciences and the School of Printing. A program of instruction which emphasizes production, as well as design of the crafts, gives a unique character to the educational program in the School for American Craftsmen.

The School of Art and Design, in addition to its major concentrations, offers courses in drawing, design, and art electives required in the curriculum. Craft electives are taught by the School for American Craftsmen. Students may elect, with advising and as space is available, elective courses in the college; these complement their programs and interests.

Portfolio Guidelines for Undergraduate Applicants

The following guidelines are presented for all undergraduate students (including transfers) applying to the College of Fine and Applied Arts. Presentation of the portfolio is one of the requirements used in totally assessing the performance and academic capabilities of

the applicant. The selection of the work to be included is an important consideration in determining skills, concepts, craftsmanship and design sensitivity.

1. The portfolio must contain examples of at least 10 pieces of the applicant's best work—35mm slides are required, displayed in an 8½" x 11" vinyl slide protector page with identification.

For medical illustration applicants, six additional drawings of natural forms (shells, figures, animals) rendered in a single medium are required.

School for American Craftsmen applicants should submit samples of work in the area of their selected craft major.

2. All portfolio work must be submitted as slides for committee review. Original work is not accepted.

3. Slides will be returned by the College of Fine and Applied Arts only when return postage is enclosed.

4. While every precaution will be taken to ensure proper care and handling, the Institute assumes no responsibility for loss or damage to slides.

5. Identify slides by name and address.

6. Please send portfolio and all other application materials to:

**Rochester Institute of Technology
Office of Admissions
One Lomb Memorial Drive
Box 9887
Rochester, New York 14623
Telephone: (716) 475-6631**

Visits to the campus and College of Fine and Applied Arts are encouraged. Please contact the Admissions Office.

Admission at a Glance: College of Fine and Applied Arts

General information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

This college is composed of the School of Art and Design and the School for American Craftsmen, with approximately 750 students.

Students are urged to develop the highest technical abilities as well as personal creative expression. The faculty includes many of the nation's most outstanding and creative artists, designers and craftsmen. Students learn by working in the studios equipped with excellent facilities. Most graduates earn their living utilizing their RIT background.

Graphic Design—Graphic design has many facets. A visual problem-solver at the core, the graphic designer is concerned with achieving the highest level of information and aesthetic quality in the work. Graphic designers work for advertising, corporate design offices, government, magazines, industrial firms, printers, museums and other organizations.

Fine Arts—Students concentrate in printmaking, painting or medical illustration and take other art electives. They prepare as professional artists and through elective choices have exploratory potential for later careers in many of the visual arts fields or teaching. Performance levels are developed that enable graduate degree studies in studio concentrations. Medical illustrators enter research areas in hospitals and publishing and teaching institutions. Degrees granted: AAS-2* year; BFA-4 year.

Industrial and Interior Design—The program in industrial and interior design prepares students for careers in the expanding professions of industrial design and interior design. Artistic talent and analytical thought are applied to the design of products and interior spaces. Practical design projects develop aesthetic understanding, technical abilities, sensitivity to human needs and awareness of the social consequences of the designer's efforts. Degrees granted: AAS-2 year; BFA-4 year.

Packaging Design—Students study design applications for product packaging in an interdisciplinary program emphasizing design, management, packaging theory and techniques, and liberal arts. Practical application of design theory is an important component of this program. Graduates are prepared to enter corporate packaging and marketing departments and packaging consulting firms. Degree granted: BS-4 year.

Ceramics and Ceramic Sculpture—Graduates are self-employed as designer craftsmen, designers or technicians in industry, teachers, or administrators of craft programs. Professional competencies are developed in such areas as fabrication, chemistry and application of glazes, organization of ceramic shop for efficient production, ceramic raw materials, kiln types, fuels and construction. Degrees granted: AAS-2 year; BFA-4 year.

Glass—Graduates are self-employed designer craftsmen, designers or technicians in industry, teachers, or administrators of craft programs. Professional competencies are developed in organization and construction of the glass studio, functions and care of tools, analysis of glass as a material, glass fabrication, glass design, engraving, cold-working techniques, mixing of batch glass, color and fuming techniques. Degrees granted: AAS-2 year; BFA-4 year.

Metalcrafts and Jewelry—Graduates are self-employed designer craftsmen, designers or technicians in industry, teachers, or administrators of craft programs. Professional competencies are developed in use of equipment, metalcrafts, techniques and production in various metals, raising, forging, forming, planishing, enameling, design of jewelry, flatware, holloware. Degrees granted: AAS-2 year; BFA-4 year.

Weaving and Textile Design—Graduates are self-employed designer craftsmen, designers or technicians in industry, teachers, or administrators of craft programs. Professional competencies are developed in such areas as fabric design, analysis of equipment and problems, pattern drafting, analysis of fibers, use of eight to ten harness looms, techniques of weaving, design within price range and use. Degrees granted: AAS-2 year; BFA-4 year.

Woodworking and Furniture Design—Graduates are self-employed designer craftsmen, designers or technicians in industry, teachers, or administrators of craft programs. Professional competencies are developed in such areas as functions and care of woodworking tools, wood as a material, techniques of wood fabrication, design layout, construction analysis, veneering, and finishing, estimating, and production. Degrees granted: AAS-2 year; BFA-4 year.

Double Crafts Major—Requests for the double crafts major are reviewed after successful completion of two years of study in one major concentration. A portfolio is submitted, and if accepted into the second major, the student completes first and second year work in the second major during the junior and senior year.

Freshman Admission Requirements

Transfer Admission with junior standing

Program ¹	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable Minimum GPA
Graphic Design	1 year any mathematics; 1 year any science	Art courses; portfolio of original artwork required	Art, design or commercial art. Admission and class standing determined in part by evaluation of required portfolio. Where student lacks sufficient art credit, a summer transfer program is offered at RIT.	2.0
Fine Arts -painting -printmaking -medical illustration	1 year any mathematics; 1 year any science; 2 years science for medical illustration	Art courses; portfolio of original artwork required, examples of nature for medical illustration	Art or commercial art. Admission and class standing determined in part by evaluation of required portfolio. Where a student lacks sufficient art credit, a summer transfer program is offered at RIT. Space in medical illustration is limited at admission time, and a special portfolio is required.	2.0
Industrial and Interior Design	1 year any mathematics; 1 year any science	Art courses; portfolio of original artwork required	Art or commercial art. Admission and class standing determined in part by evaluation of required portfolio. Where student lacks sufficient art credit, a summer transfer program is offered at RIT.	2.0
Packaging Design	1 year science; 3 years mathematics	Art courses; chemistry, physics, algebra, geometry; portfolio of original artwork required	Art, design, or commercial art, and chemistry, algebra, physics, biology. Admission and class standing determined in part by evaluation of required portfolio. Where student lacks sufficient art credit, a summer transfer program is offered at RIT.	
Ceramics and Ceramic Sculpture	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio or original ceramics work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges, but with additional summer study, acceleration is possible.	2.0
Glass	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio or original glass or ceramic work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges.	2.0
Metalcrafts and Jewelry	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio of original metals work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges, but with additional summer study, acceleration is possible.	2.0
Weaving and Textile Design	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio of original textiles work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges, but with additional summer study, acceleration is possible.	2.0
Woodworking and Furniture Design	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio of original wood work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges, but with additional summer study, acceleration is possible.	2.0

¹About one-third of the courses in each program consist of electives in social science, literature and humanities.

*Four years of English are required in all programs (except where state requirements differ).

School of Art and Design

The objectives of the programs are to prepare students for a wide variety of positions in which art is related to commerce and industry. Students are prepared to accept major responsibility for the design and execution of projects in graphic, industrial and interior, and packaging design, painting, printmaking and medical illustration.

The educational objectives of the School of Art and Design are to encourage imagination, creative ability, and a sense of artistic discrimination; to develop the skills essential to professional competence; to relate the various arts and to assist students in finding the means to enjoy them; and to cooperate with the College of Liberal Arts in helping students grow culturally and socially,

and to inspire them to make their maximum contributions as creative artists and citizens. Aesthetic and applied concepts are brought together.

Programs

Major concentrations are offered in graphic design, industrial and interior design, packaging design and the fine arts (painting, printmaking, medical illustration). Electives may be pursued, beginning in the second year, in painting, printmaking, industrial and interior design, graphic design and the crafts. The first year forms the foundation preparation for the major concentration, with two courses required in drawing and two- and three-dimensional design. Graphic design is a program that deals with systematic thinking, strong visual fundamentals, aesthetic/informational requirements, problem-solving and methodology. New communications technologies such as computer graphics are utilized. The program in

Industrial and Interior Design prepares students for careers in the expanding professions of industrial design and interior design. Artistic talent and analytical thought are applied to the design of products and interior spaces. Practical design projects develop aesthetic understanding, technical abilities, sensitivity to human needs and awareness of the social consequence of the designer's efforts. Packaging design is an interdisciplinary program that emphasizes design, management, packaging theory and techniques. The practical application of design theory is also an important component of the program.

The fine arts serve the student who is interested in concentrated study in areas of painting, printmaking, or medical illustration, and electives of additional art choices. Students emerging from this program are prepared as professional artists and have exploratory potentialities for later

careers in teaching. An option within fine arts exists with concentration in medical illustration for a few further selected students, thus leading to work in health areas.

Medical illustration students will be taught Gross Anatomy through the University of Rochester during the Fall Quarter of the junior year. A tuition surcharge will be in effect that quarter.

The credit requirements for students admitted September 1981 in Fine Arts—Painting, Printmaking; Graphic Design; and Industrial and Interior Design programs are as follows:

	qtr.
	cr.
Required Major	84
Required Professional	
Electives	21
Open Electives	9
Liberal Arts	50
Art History	18
Creative Sources	6
	191

Freshman Kit for art and design students is approximately \$260. There is an additional cost for supplies.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Yr.	Graphic Design, Painting, Printmaking, Industrial and Interior Design Majors	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	FADF-231, 232, 233 Two-Dimensional Design	3	3	3
	FADF-241, 242, 243 Three-Dimensional Design	3	3	3
	FADF-205, 206, 207 Creative Sources	2	2	2
	FADF-210, 211, 212 Drawing	4	4	4
	*Liberal Arts	4	4	4
	‡Physical Education Elective	0	0	0
2†	FSCF-225, 226, 227 Art and Civilization	3	3	3
	*Liberal Arts	4	4	4
	‡Physical Education Elective	0	0	0
	**Electives (must have two studios each quarter—one which must be the core in which you are going to major)			
	***FADC-301, 302, 303 Graphic Design	8	8	8
	***FADD-301, 302, 303 Industrial and Interior Design			
3	***FADP-301, 302, 303 Painting			
	***FADR-301, 302, 303 Printmaking			
	See Note Below			
	FSCF-380 Contemporary Art (One quarter required; offered every quarter)	3		3
	φArt History Electives (select two)		3	3
	*Liberal Arts	4	4	4
4	Major (one)			
	FADR-401, 402, 403 Printmaking			
	FADC-401, 402, 403 Graphic Design			
	FADP-401, 402, 403 Painting	6	6	6
	FADD-401, 402, 403 Industrial and Interior Design			
	**Electives (one per quarter)	3	3	3
4	*Liberal Arts	4	4	6
	Major (one)			
	FADR-501, 502, 503 Printmaking			
	FADC-501, 502, 503 Graphic Design			
	FADP-501, 502, 503 Painting	9	9	9
	FADD-501, 502, 503 Industrial and Interior Design			
**Electives (one per quarter)	3	3	3	

†Upon completion of the second year, the associate in applied science degree is awarded.

**Additional intercollege studio courses are available by recommendation of the academic advisor and administrator. Electives are registered on a space available basis and subject to change without prior notice. Consult the advisor when planning programs.

***Core Electives—Introductory courses that are prerequisite to the respective third year major. FADC-301, 302, 303, required for entrance into Graphic Design major; FADD-301, 302, 303 for Industrial and Interior Design major; FADP-301, 302, 303, for Painting major and FADR-301, 302, 303 for Printmaking major.

However, all three Core Electives are available as elective choices.

φTotal of 18 quarter credits of Art History; Art and Civilization and Contemporary Art required.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements. Fine and applied arts students are required to take 20 qt. cr. of Liberal Arts core curriculum. They are advised to select from the nine courses other than fine arts.

note: Beginning September 1982 students in their second year of study will select only two art courses. One will be a core prerequisite and the second course may be a core or an art elective. Core courses will be four credits each and meet for nine clock hours. Recommended program is two art core courses.

Electives—
 FADC-411, 412, 413 Graphic Design
 FADC-511, 512, 513 Graphic Design
 FADC-520 Professional Design Business
 Practices
 FADD-320 Graphic Visualization
 FADD-311, 312, 313 Industrial and Interior Design
 FADP-320 Color
 FADP-321, 322, 323 Illustration
 FADP-411, 412, 413 Drawing and Painting
 FADP-511, 512, 513 Painting
 FADR-411, 412, 413 Printmaking
 FADR-511, 512, 513 Printmaking
 FADS-411, 412, 413 Sculpture
 FADP-450 Drawing Problems
 FSCC-251, 252, 253 Ceramics I
 FSCG-251, 252, 253 Glass I

FSCM-251, 252, 253 Metalcrafts I
 FSCT-251, 252, 253 Textiles I
 FSCW-251, 252, 253 Woodworking I
 PPHF-207, 208 Introduction to Filmmaking
 PPHF-209 Introduction to TV
 PPHG-207, 208, 209 Still Photography
 PPRT-201, 202, 203 Typographical Composition

Art History; select two courses—
 FSCF-300 History of Design
 FSCF-310 History of Crafts
 FSCF-320 History of Art Criticism
 FSCF-330 Philosophy in Art
 FSCF-340 Man and His Symbols
 FSCF-350 Asian Art
 FSCF-360 18th and 19th Century Art
 FSCF-370 20th Century Art
 FSCF-390 Selected Topics

Yr. Packaging Design

Qtr. Credit Hours

		FALL	WTR.	SPG.
1	IPKG-201 Principles of Packaging	4		
	FADF-230, 231, 232 Design 2-D	3	3	3
	FADF-240, 241, 242 Design 3-D	3	3	3
	SMAM-201 Algebra	3		
	* Liberal Arts		4	8
	SSEG-201 Biology		4	
	SSEG-202 Chemistry			4
	‡ Physical Education	0	0	0
2	ICSS-200 Survey of Computer Science			
	IPKG-311 Packaging Materials I	3		
	IPKG-312 Packaging Materials II		3	
	IPKG-315 Container Systems			4
	FADC-301, 302, 303 Introduction to Communication Design	3	3	3
	* Liberal Arts	4	4	4
3	‡ Physical Education	0	0	0
	IPKG-301 Engineering Design Graphics			
	IPKG-310 Methods of Evaluation	2		
	IPKG-401 Career Seminar			2
	IPKG-431 Packaging Production Systems	4		
	IPKG-432 Packaging for Distribution		4	
	IPKG-433 Packaging for Marketing			4
4	FADC-401, 402, 403 Packaging Design I, II, III	6	6	6
	SSEG-203 Physics	4		
	BBUM-263 Marketing Principles		4	
	* Liberal Arts			5
	Free Elective	2	4	
4	FADC-501, 502, 503 Packaging Design IV, V, VII	6	6	6
	IPKG-420 Technical Communications		3	
	PPRT-200 Introduction to Printing		3	
	PPRT-206 Reproduction Photography			3
	* Liberal Arts	5	5	5
	Free Elective	2		
	GLLC-501 Effective Speaking	5		

‡ See Pg. 23 for Policy on Physical Education.
* See Pg. 97 for Liberal Arts requirements.

Medical Illustration option

(CFAA portfolio and additional six drawings of natural forms, to be presented as slides, are required for admission.)

Yr.

Qtr. Credit Hours

		FALL	WTR.	SPG.
1	FADF-231, 232, 233 Two-Dimensional Design	3	3	3
	FADF-241, 242, 243 Three-Dimensional Design	3	3	3
	FADF-205, 206, 207 Creative Sources	2	2	2
	FADF-210, 211, 212 Drawing	4	4	4
	* Liberal Arts	4	4	4
	‡ Physical Education Elective	0	0	0
2†	FSCF-225, 226, 227 Art and Civilization	3	3	3
	* Liberal Arts	4	4	4
	‡ Physical Education Elective	0	0	0
	*** FADP-311, 312, 313 Medical Illustration	3	3	3
	SBIG-201 General Biology	4		
	SBIG-211, 212 Human Biology		4	4
	:: Photography (A&D) for three quarters: PPHG-207 Still Photography	3		
PPHF-207 Introduction to Filmmaking		3		
3	PPHF-209 Introduction to TV			3
	* Liberal Arts	4	4	4
	FADP-421, 422, 423 Medical Illustration Applications	5	8	8
	Gross Anatomy (U of R)†	7		
4	** Art Elective		3	3
	* Liberal Arts	4	4	4
	FADP-531, 532, 533 Advanced Medical Illustration	6	6	6
	Select One: FADE-411, 412, 413 Industrial and Interior Design			
	FADE-320 Graphic Visualization	3	3	3
	FADC-411, 412, 413 Graphic Design			
** Art Elective (one per quarter)	3	3	3	

** Art Electives listed on previous page.
*** Core courses that are prerequisite to the third year.
**** 3 quarters of Still Photography may be substituted,
† tuition surcharge will be applied in this quarter.
† Upon successful completion of the second year, the associate in applied science (fine arts—painting) degree is awarded.
‡ See Pg. 23 for Policy on Physical Education.
* See Pg. 97 for Liberal Arts requirements. Fine and Applied Arts students are required to study only 20 qt. cr. of Liberal Arts core curriculum. They are advised to select from nine courses other than fine arts.

School for American Craftsmen

The objectives of the programs of study of the School for American Craftsmen are to provide for creative growth, the development of professional competence, and intellectual and cultural enrichment. Students who complete the two-year program are prepared for work in the design studios and workshops of established craftspeople, or as technicians in industry. Those who complete the four-year course of study are prepared for careers as self-employed designer-craftspeople, as designers or technicians in industry, or as teachers or administrators of crafts programs.

In order to achieve the desired occupational goals, the educational objectives seek to stimulate creative imagination and technical invention, develop knowledge of process and command of skills, foster appreciation, not only of the crafts, but the related arts. The program strives to inspire the student to seek continual improvement through analysis and self-evaluation, and to cooperate with the College of Liberal Arts in assisting students to develop personally and socially.

Student responsibilities

Students are responsible for the care and cleanliness of their shops and for the care and maintenance of the tools and machines with which they work. No student may use any machine until instruction in its proper use has been given, and responsibility for observing safety precautions is assumed by each student upon entering the school. Some unique supplies are provided for convenience and choice, but financial obligations must be met for successful completion of courses. Fees for kiln firings, supplies, and furnace use are student responsibilities.

Programs of study

The School for American Craftsmen offers a full-time program of study with opportunity for concentration in one of five craft fields; ceramics and ceramic sculpture, metalcrafts and jewelry, weaving and textile design, woodworking and furniture design, and glass. After satisfactory completion of two years of study the associate in applied science degree is granted. Those with the aptitude and interest for further study may continue for two additional years. After successful completion of the four-year program the bachelor of fine arts is awarded. After two years of study

Yr.	Craft Majors	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	FADF-201, 202, 203 Design	3	3	3
	FADF-205, 206, 207 Creative Sources	2	2	2
	FADF-261, 262, 263 Drawing	3	3	3
	*Liberal Arts	4	4	4
	<i>Materials and Processes (one)</i>			
	FSCC-200 Ceramics			
	FSCG-200 Glass			
	FSCM-200 Metalcrafts	5	5	5
	F SCT-200 Textiles			
	FSCW-200 Woodworking			
‡Physical Education Elective	0	0	0	
2†	FSCF-225, 226, 227 Art and Civilization	3	3	3
	*Liberal Arts	4	4	4
	<i>Materials and Processes (one)</i>			
	FSCC-300 Ceramics			
	FSCG-300 Glass			
	FSCM-300 Metalcrafts	5	5	5
	F SCT-300 Textiles			
	FSCW-300 Woodworking			
	**Electives (one per quarter)	3	3	3
	‡Physical Education Elective	0	0	0
3	FSCF-380 Contemporary Art (one quarter required; offered every quarter)	3		
	φArt History Electives (select two)			3
	*Liberal Arts	4	4	4
	<i>Materials and Processes (one)</i>			
	FSCC-400 Ceramics			
	FSCG-400 Glass			
	FSCM-400 Metalcrafts	5	5	5
	F SCT-400 Textiles			
	FSCW-400 Woodworking			
	**Electives (one per quarter)	3	3	3
4	*Liberal Arts	4	4	6
	<i>Techniques and Thesis (one)</i>			
	FSCC-500 Ceramics			
	FSCG-500 Glass			
	FSCM-500 Metalcrafts	8	8	8
	F SCT-500 Textiles			
	FSCW-500 Woodworking			
**Electives (one per quarter)	3	3	3	

†Upon satisfactory completion of the second year, the associate in applied science degree is granted.

**Additional intercollege studio courses are available by recommendation of the academic advisor and administrator. Electives are registered on a space available basis and are subject to change without prior notice. Consult the advisor when planning programs.

Craft students elect in studio other than their major concentration.

φ Total of 18 quarter credits of Art History; Art and Civilization and Contemporary Art required.

‡See Pg. 23 for Policy on Physical Education.

**See Pg. 97 for Liberal Arts requirements. Fine and Applied Arts students are only required to study 20 qt. cr. of Liberal Arts core curriculum. They are advised to select from nine courses other than fine arts.

in one media field a student may present a portfolio and request admission to a second media concentration. If accepted, the student would complete first- and second-year work in the second media during the junior and senior year. A bachelor of fine arts is awarded after a total of four years study.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Electives—

FADC-411, 412, 413 Graphic Design
 FADC-511, 512, 513 Graphic Design
 FADC-520 Professional Design Business Practices (Spg. Qtr.)
 FADD-320 Graphic Visualization
 FADD-311, 312, 313 Industrial and Interior Design
 FADP-320 Color
 FADP-321, 322, 323 Illustration
 FADP-411, 412, 413 Drawing and Painting
 FADP-511, 512, 513 Drawing and Painting
 FADR-411, 412, 413 Printmaking
 FADR-511, 512, 513 Printmaking
 FADS-411, 412, 413 Sculpture

FSCC-251, 252, 253 Ceramics I
 FSCG-251, 252, 253 Glass I
 FSCM-251, 252, 253 Metalcrafts I
 F SCT-251, 252, 252 Textiles I
 FSCW-251, 252, 253 Woodworking I
 PPHG-207, 208, 209 Still Photography
 Art History; select two courses
 FSCF-300 History of Design
 FSCF-310 History of Crafts
 FSCF-320 History of Art Criticism
 FSCF-330 Philosophy in Art
 FSCF-340 Man and His Symbols
 FSCF-350 Asian Art
 FSCF-360 18th and 19th Century Art
 FSCF-370 20th Century Art
 FSCF-390 Selected Topics

The credit requirements are:

	qtr.
	cr.
Required Craft Major	87
Required Professional Electives	21
Open Electives	6
General Studies	50
Art History	18
Creative Sources	6
	<hr/> 188

College of Graphic Arts and Photography

Dr. Mark F. Guldin, Dean

The College of Graphic Arts and Photography encompasses the School of Photographic Arts and Sciences, the School of Printing, and the Technical and Education Center of the Graphic Arts.

The School of Photographic Arts and Sciences was established in 1930 with a two-year course for the training of technicians for the photographic industry. It now offers undergraduate programs leading to a BS degree in biomedical photographic communications, a BS degree in film and television, a BS degree in imaging and photographic science, a BS degree in technical photography and a BFA degree in professional photographic illustration with major options in contemporary/illustrative/commercial photography, narrative/documentary/editorial photography, or photography as a fine art. Two programs are offered jointly by the School of Photographic Arts and Sciences and the College of Business: a BS degree in photographic marketing management and a BS degree in photographic processing and finishing management. Graduate programs lead to an MS degree in imaging and photographic science and to an MFA degree in photography. More than 1000 students are enrolled from nearly every state and many foreign countries. The curriculum in imaging and photographic science is the only accredited program of its kind leading to the BS and MS degrees.

In 1937 the Institute absorbed the Empire State School of Printing with the object of establishing advanced technological education in printing and the graphic arts. The School of Printing offers programs leading to the bachelor of science degree in printing with 14 options for specialization. The BS program in newspaper production management provides graduates who can synthesize the new technologies into the newspaper technical departments and provide long-range management planning to this important segment of the printing industry. The program in Printing Systems Management combines printing and industrial engineering, and prepares graduates for optimizing operating conditions in the complex printing establishment. A new BS

degree in Printing and Applied Computer Science further expands the scope of the schools' offerings. It also offers programs leading to an MS degree in printing technology. Over 700 degree candidates are enrolled in the School of Printing. Students come from almost every state, and students from many foreign countries have registered in printing programs.

The Technical and Education Center, with its own full-time staff, renders service to various fields of the graphic arts. It also conducts short, highly specialized courses for men and women engaged professionally in the graphic arts.

Resources

The college is housed in a building that has been specifically designed for instruction in photography and printing. Its many specialized laboratories and wide range of equipment make it the most complete of any degree-granting institution in these fields.

The faculty has been carefully selected on the basis of their teaching effectiveness and ability to relate well with the students. They are also individuals who are educationally qualified and have had extensive professional experience and training in the graphic arts and photographic industries.

The establishment of four distinguished professorships highlights this qualification of the college's teaching staff. Establishment of the Paul and Louise Miller Distinguished Professorship in Newspaper Management in the School of Printing emphasizes the importance placed on education for persons entering the rapidly changing newspaper industry. The Melbert B. Cary, Jr., Professorship emphasizes the school's continued involvement in typography and design. The Richard S. Hunter Professorship in Color Science was established to meet academic and industry needs for more clearly defined color measurement and specification criteria from which further knowledge might be ascertained. The Munsell Color Laboratory, which will complement the professorship, will clearly support efforts to further define color measurement in all fields of academic and industry endeavor. Together they have established Rochester Institute of Technology as a unique center for color science, technology and appearance in the United States[^] The James

E. McGhee Professorship highlights the School of Photographic Arts and Sciences' interest in photographic processing and finishing, as well as in the photographic marketing and management areas.

Rochester is the world center of research and development in photography and a center of research in the graphic arts, as well as a city well-known for quality printing. It is an ideal environment for students in either photography or the graphic arts because they have access to a faculty which is close to progress in these fields, and through guest lectures, field visits, and meetings of scientific and professional organizations, they can personally meet many of these leaders in research and development.

The RIT library is rich in both photography and the graphic arts, and the cooperation of the George Eastman House of Photography and the library of the Kodak Research Laboratories makes available one of the largest collections of reference materials for these fields to be found anywhere.

Two special libraries are housed in the college, the Technical and Education Center Library and the Cary Library. The latter contains the Melbert B. Cary, Jr., Graphic Arts Collection, with more than 4,000 volumes of rare books illustrating the past and present of fine printing.

Plan of education

The college seeks to prepare men and women to be professionally competent in their chosen area and to have an appreciation and understanding of our cultural heritage and democratic institutions. Although the primary concern of the college itself is with science and technology, and the occupational aspects of life, it requires of every student courses in communication, the humanities, and the social and natural sciences. These form an integrated program of liberal education in the College of Liberal Arts and require from one-quarter to one-third of the student's time.

The college operates on the quarter plan, each quarter being 11 weeks in length. Many classes are available during the summer.

Some programs of the college include a senior thesis as a requirement for the bachelor's degree. This involves independent study and research on a subject chosen by the students and approved by their advisors. The thesis provides the

student the opportunity to make a detailed study of a subject of particular interest. It often requires extensive reading, thus making the student more conversant with the literature and, where laboratory research is involved, the student acquires experience in the design of experiments, the conduct of research, and the writing of technical reports. A number of these reports have been presented at meetings of scientific and professional societies and printed in appropriate journals.

The School of Printing offers a Senior Seminar which brings to campus each year some 15-20 industry people who discuss new developments and technologies in the graphic arts and how students can prepare to meet new challenges evolving from them.

Transfers

With the growth of community, junior, and two-year technical colleges throughout the country, many men and women have a better chance to identify their occupational and professional goals. The college recognizes the value of these programs and, for students who perceive such goals within the scope of the college's programs, every effort is made to accept the maximum amount of transfer credit from the two-year college curriculum. Some scholarships are available.

Degrees and requirements

Candidates for the BS and BFA degrees must complete the requirements of a major program.

Requirements for the MS degree in imaging and photographic science, printing technology, and printing education, for the MFA degree in photography and the MST degree in printing education are to be found in the Graduate Bulletin.

Except for the newspaper production, printing systems management and printing and applied computer science programs, the associate in applied science degree is awarded all students who successfully complete the requirements of the first two years of the BS or BFA programs.

Summer Session and special programs

During the Summer Session the School of Printing offers a wide range of technical and management courses which may be taken for credit.

Special, intensive summer courses are also available in graphic arts orientation, flexography, gravure and screen printing.

Additional specialized short-term summer programs can be designed by the School of Printing to meet the particular needs of paper, ink and equipment manufacturers and related segments of the graphic arts industry.

The School of Photographic Arts and Sciences offers several special courses each summer to meet professional or avocational needs not met by four-year programs. It also offers special transfer programs enabling qualified students to enter at the second- or third-year level.

Information on summer programs in either school can be obtained from the director of the Summer Session.

Technical and Education Center

The Technical and Education Center of the Graphic Arts serves the printing and graphic communications industry through product testing, continuing education, and the dissemination of information. It enjoys an international reputation as a source of the most current information and techniques in the graphic arts. The center acts as an interface between RIT's academic programs and industry.

The Technical and Education Center staff has been recruited from industry and research organizations. Staff members work to serve industry needs through four main departments: physical testing, information services, the seminar center, and the order department.

The Physical Testing Laboratory conducts industry-supported programs for testing paper, plates, blankets, inks and press chemicals. It has the only full-size, four-unit perfecting web offset press for testing in the world. The staff works with paper and ink companies, press manufacturers and printers as consultants and testing coordinators.

The Information Services Library houses an extensive international collection of graphic arts periodicals, technical reports and conference proceedings. These are used to compile a monthly publication, *Graphic Arts Literature Abstracts*, which offers subject-categorized, fully indexed informative abstracts of the literature. *GALA* represents an expanded effort into current awareness and retrospective retrieval capability. The library is open to RIT graduate printing students and Technical and Education Center staff for research.

The Technical and Education seminar programs cover all aspects of printing, especially color reproduction. Eighteen continuing titles repeat through the calendar year, and special tailor-made seminars are held for companies on request. Seminars on the RIT campus offer printers around the world a chance to encounter new ideas, work with quality control tools, and try procedures first-hand, including time to work on the web press. Traveling seminars bring current technical information to other cities across the country.

The Technical and Education Center Order Department fills domestic and international orders for such items as books, quality control tools, research reports, bibliographies, and periodicals like the *Graphic Arts Literature Abstracts*, the quarterly *Photographic Conversation*, and the *Technical and Education Center Newsletter*. Quality control tools available at the order department include color printing aids, tone reproduction aids, resolution test targets, graph papers, and calculator programs. Photocopies of articles abstracted in *GALA* make home research possible.

The Technical and Education Center has been able to respond to industry needs over the years with a flexibility that few other resource centers have. The center is expanding—offering more seminars, publishing more bibliographies and books, and filling more orders. Industry support is growing, enabling the center to prosper.

Admission at a Glance: College of Graphic Arts and Photography

General information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

The School of Photographic Arts and Sciences, the School of Printing and the Technical and Education Center of the Graphic Arts are included in this college.

The college is internationally known for its excellence and the contributions of its graduates to the world of communication. Faculty are experts in their fields and students work in laboratories with equipment of unsurpassed quality and variety. Students develop their creative abilities as well as technical competence.

Biomedical Photographic Communications — Prepares students for a career in media production working with allied health teams in hospitals, medical and dental research centers, and other health institutions. Students can qualify for employment at end of second year and have received the educational background necessary to apply for registration as a Biological Photographer. Degrees granted: AAS-2 year; BS-4 year.

Film and Television — The degree program in film and television features an introduction to both disciplines with advanced work in either film or video. The curriculum emphasizes production and short periods of outside professional experience are encouraged, usually during the summer. The program is intended to acquaint students with film and TV as creative media and to develop the skills of production. Degree granted: AAS-2 year; BS-4 year.

Imaging and Photographic Science — Students learn of the application of physics, chemistry, and mathematics to photography; of the application of photographic processes to science and technology. Course content is comparable to that of engineering programs—mathematics, physics, and chemistry of radiation-sensitive systems, optics and image formation. Degrees granted: AAS-2 year; BS-4 year.

Newspaper Production Management — Prepares students for careers in technical management for the newspaper industry by developing appreciation of tactics and strategies for evaluating and controlling production problems. Incorporates engineering approaches to problem solving. Degrees granted: BS-4 year.

Photographic Processing and Finishing Management — Students develop a thorough knowledge of photographic processing, production techniques and procedures, and business, including aspects of promotion and selling in a competitive market. Degrees granted: AAS-2 year; BS-4 year.

Printing — Prepares students for careers in printing management by developing an appreciation of aesthetic qualities of good printing and application of science and engineering in graphic arts. Theory and practice in management and communication skills are taught. Degrees granted: AAS-2 year; BS-4 year.

Printing and Applied Computer Science — Prepares students for entry positions in printing systems analysis, production control, engineering liaison, customer engineering, marketing support, process engineering, and production design. These lead to careers in production management, director of computer technology, and operations manager. Degree granted: BS-4 year.

Printing Systems Management — Prepares students for careers that emphasize measurement and control techniques, problem solving and optimization of operating conditions in the industrial technological environment in the printing industry. Degree granted: BS-4 year.

Professional Photographic Illustration — After two years of photography in the general BFA program at RIT, a student enters one of the following major options: contemporary, illustrative and commercial photography; narrative/documentary/editorial photography; or photography as a fine art. In these areas students learn photographic skills to solve visual communication problems. Students develop innovative and individualized responses to visual problems and are expected to become sensitive to contemporary graphic design. These lead to a broad range of career options that call for a background in esthetics, technical skills, and the ability to solve visual problems with imagination and originality. Degrees granted: AAS-2 year; BFA-4 year.

Technical Photography — Prepares students for entry into any of a variety of positions in the field of technical photography, as distinct from providing highly specialized training for a specific position. These include both picture-making positions (such as scientific photography, high-speed photography, technical illustration, audiovisual production, and photographic testing) and non-picture-making positions (such as technical writing, quality control, technical representative, sales, product development and testing, applied research, laboratory supervision, and management). AAS-2 year; BS-4 year.

Freshman Admission Requirements

Transfer Admission with junior standing

Program	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable Minimum GPA
Professional Photographic Illustration and Fine Art Photography	2 years any mathematics; 1 year any science	Art courses	Applicant must have completed an associate degree program, or the equivalent two years of college, with a major in photography (completion of a minimum of 30 quarter credits of photography) plus completion of studio art courses (minimum of 12 quarter credits); liberal arts (24 quarter credits); and art history (18 quarter credits). The student must also complete the 10-week intensive summer course PPHL-300, BFA Photography, with a C grade or better. The student must also make up two courses: Materials and Processes of Photography and History and Esthetics of Photography. Portfolio required.	2.2
Biomedical Photographic Communications	Elem. Algebra; Plane Geom. or Inter. Algebra; Trigonometry; Biology**	Chemistry; Physics	Associate's degree in biomedical photography or previous college work in audiovisual with strong emphasis in photography and biology.	2.2
Film and Television†	Elem. Algebra; Plane Geom. or Inter. Algebra 1 year any science	Physics or Chemistry; photography; additional mathematics	Total of 96 quarter credits including 24 credits in general studies, a college algebra course, a college design course, and 48 quarter credits equivalent to RIT's PPHG-200, 202, 203; PPHF-301, 302, 303; and PPHF-311, 312, 313. Remaining credit may be any combination of drawing, design, or photography. Opportunities for transfer are limited	2.2
Photographic Processing and Finishing Management	Elem. Algebra; Plane Geom. or Inter. Algebra; Chemistry or Physics	Additional mathematics and science	Because of a liberal selection of professional electives transferring at the end of two years is readily accomplished for business majors. Others should contact program faculty for ^valuation of credit.	2.2
Imaging and Photographic Science	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics or Chemistry	Chemistry or Physics; Additional mathematics	Total of 80 quarter credits, including 20 quarter credits in calculus or higher mathematics, one year of college chemistry, one year of college physics, and 24 quarter credit hours in liberal arts. "C" grade in RIT Summer PPHS-200 and PPHS-210 or equivalent course, or experience-students in engineering science or liberal arts with math/science option usually meet these requirements.	2.2
Technical Photography	Elem. Algebra; Plane Geom. or Inter. Algebra; 1 year any science	Additional mathematics and science	Total of 96 quarter credits, including 9 quarter credits in college mathematics, 24 quarter credits in liberal arts. 24 quarter credits in black-and-white and color photography, one year of college physics, and one year of college chemistry.	2.2
Printing	Elem. Algebra and Inter. Algebra; 1 year science	Printing courses or experience with school publication; chemistry; i physics; interest in printing; additional mathematics	Associate's degree in graphic arts including wide range of courses in liberal arts, a year of college mathematics, a year of college chemistry or physics, and courses in business, management, computers and others. Considered on an individual basis; Student should contact the department.	2.25
Newspaper Production Management	Elem. Algebra; Trigonometry, or Inter. Algebra; Physics or Chemistry	Additional mathematics, physics or chemistry	Associate's degree in graphic arts including a wide range of courses in liberal arts, a year of college mathematics, a year of college chemistry or physics, and courses in business, management, computers and others. Considered on an individual basis, student should contact the department.	2.25
Printing Systems Management	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics and Chemistry	Additional mathematics	Considered on an individual basis.	2.25
Printing and Applied Computer Science	Elem. Algebra; Inter. Algebra; Trigonometry; Plane Geometry; Physics or Chemistry	Additional mathematics and science	Considered on an individual basis.	2.25

*Four years of English are required in all programs, except where state requirements differ.

**A report is required from the applicant covering visits to photographic departments of at least two hospitals.

† All applicants for BS degree program are required to submit a portfolio, which might consist of a series of 8 x 10 black-and-white photographs, an 8 or 16 mm film, a video tape, or a written work that demonstrates creativity in the English language.

School of Photographic Arts and Sciences

Russell Kraus, Director

The program offerings of the School of Photographic Arts and Sciences are designed to prepare students for photographic career fields. The studies involve both technical and creative experiences for visual problem solving. Most chemicals and specialized equipment are supplied. Students are encouraged to purchase photographic equipment that will further their chosen careers. All first year BFA students in photography and students in Biomedical Photographic Communications and Technical Photography are required to have their Own hand-held small or medium format camera and a professional light meter.

Speakers and field trips broaden < the student's viewpoint. Participation in the field trips and summer study courses in Europe are encouraged.

Faculty

The School of Photographic Arts and Sciences faculty represent a rich cross-section of various photographic fields; science, technical, professional-illustrative and art.

Faculty members are highly active in professional societies, publications and exhibitions. Each one considers teaching to be his or her first and most important function. Several have received outstanding teaching awards and other professional recognition.

Department of Applied Photography: Thomas Iten, Chairman—BFA Degree in Professional Photographic Illustration.

Department of Fine Art Photography: Dr. Richard D. Zakia, Chairman—BFA Degree in Professional Photographic Illustration, Photography as a Fine Art option; MFA Degree in Photography.

Department of Film and Video: Dr. Russell Kraus, Acting Chairman and Program Coordinator—BS Degree in Film and Television.

Department of Photographic Technology: Dr. Leslie Stroebel, Chairman—BS Degree in Biomedical Photographic Communications, BS Degree in Photographic Processing and Finishing Management; BS Degree in Technical Photography.

Department of Imaging and Photographic Science: Dr. Ronald Francis, Chairman—BS Degree in Imaging and Photographic Science, MS

Degree in Imaging and Photographic Science.

Graduate programs

The School of Photographic Arts and Sciences offers two master's degree programs: MFA in photography and the MS in imaging and photographic science. These are described in a separate Graduate Bulletin, available through the Admissions Office.

Summer Session

The School of Photographic Arts and Sciences offers a wide selection of photographic courses in the Summer Session. These range from beginning photography courses to those requiring a substantial photographic background. For detailed information write the director of Summer Sessions for a Bulletin.

Memberships

The School of Photographic Arts and Sciences maintains memberships in a number of professional organizations: American Management Association, American Society of Training and Development, Association of Professional Color Laboratories, Master Photo Dealers and Finishers Association, National Microfilm Association, Professional Photographers of America, Society of Motion Picture and Television Engineers, Society of Photographic Scientists and Engineers, University Film Association.

Requirements for admission

All applicants for admission must meet their general requirements for admission to the Institute. The requirements for admission to the School of Photographic Arts and Sciences vary with the program.

It has been our experience that desirable applicants should rank within the top 25 percent of their high school class, score above a combined 1050 SAT score, or achieve an ACT composite of 23. The Institute prefers not to be an arbitrary in the establishment of admission criteria and therefore will look at all factors in combination, such as, College Board scores, high school records, records of achievement, letters of recommendation, and especially the student's written statement of educational objectives.

All applicants, except those transferring from other colleges and

universities, must take entrance examinations.

Degrees Offered

Professional Photographic Illustration

Applicants for photographic illustration must have had two years of mathematics and one year of science. Art courses are recommended.

Biomedical Photographic Communications

Applicants for this undergraduate program must have had elementary algebra, plane geometry or intermediate algebra, trigonometry and biology. Chemistry and/or physics is recommended. A report is required from the applicant covering visits to photographic departments of at least two hospitals. A personal interview may be required.

Film and Television

Applicants must have had two years of high school mathematics, including either intermediate algebra or plane geometry, and one year of science. A personal interview may be required.

Photographic Marketing Management

Offered jointly by the College of Business and the College of Graphic Arts and Photography, RIT's program in photographic marketing is the only one of its type in the country.

This rigorous program is designed to provide students with a thorough knowledge of the photographic process and a solid background in business administration with courses in economics, finance and marketing principles. The combination of work in these two disciplines prepares the student for a multi-faceted management-level career in the photographic business. Opportunities for positions include these in customer service aspects of photofinishing and professional color laboratories and management positions with photographic manufacturers and photographic retailers. For further information, including transfer requirements, contact the College of Business.

Photographic Processing and Finishing Management

Applicants for admission in this program must have had two years of high school mathematics, elementary algebra and either plane geometry or intermediate algebra, and chemistry. Additional science is recommended.

Photographic Science and Instrumentation

Applicants for admission to the undergraduate program in photographic science and instrumentation must have had three years of high

school mathematics through trigonometry and either physics or chemistry. Their high school record should indicate a capacity to undertake a science program with reasonable chance of success.

Technical Photography

Applicants for admission to the technical photography program must have had two years of high school mathematics and one year of science.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Transfer Admission

Transferring from Another College or University

A transfer student is a student with acceptable transfer credits who has been accepted into a degree program. He or she may be classified as a first, second, third or fourth year student. Transfer students should be aware that because of the credits carried with them to RIT, they may have a lighter than normal academic load. Normally a student may not carry more than two photographic lab courses.

Transfer credit and transfer programs

Transfer credit will be given for applicable courses completed at accredited institutions with a grade of "C" (average) or better. It is not possible for photography students to transfer into the common first year in professional photographic illustration, technical photography, or film and television from imaging and photographic science or photographic processing finishing management or other programs at RIT, without incurring loss in time or added expense. Regular transfer procedures apply.

Credit for photography courses will not be accepted without a substantiating portfolio. This work will be reviewed by the appropriate faculty. (Requirements for portfolio submission may be obtained by writing to the Office of Admissions.)

Transfer students should expect to have light schedules during part of their residence at RIT because of prerequisite requirements and scheduling problems.

Summer Transfer

The transfer credits necessary for entry into any photographic program must have been completed prior to submitting the application for admission to the June transfer program.

A summer transfer student is one who meets the qualifications of the transfer conditions as outlined above.

There are transfer programs into the second or third year of most of the majors offered by the school. These are for students who have transfer credits in science, art, business, and/or photography. Students in the transfer stream may find it necessary to attend classes during one or more summers.

The School of Photographic Arts and Sciences has several transfer programs for students who have completed background work in an accredited college or university. The preparatory work varies according to photography program.

Second-Year Entry (Transfer credit requirements):

Film and Television

A minimum of 30 quarter credits of which there are 6 credits in a studio art course, such as design; 12 credits of liberal arts; and 12 credits of photography or photography and studio art. The student must also complete the 10-week intensive summer courses PPHG-200 Photography I and PPHG-210 Materials and Processes of Photography with a "C" grade or better.

Professional Photographic Illustration

A minimum of 30 quarter credits of which there are 6 credits in a studio arts course, such as design; 12 credits of liberal arts, and 12 credits of photography or photography and studio art. The student must also complete the 10-week intensive summer courses PPHG-200 Photography I and PPHG-210 Materials and Processes of Photography with a "C" grade or better.

Imaging and Photographic Science

A minimum of 39 quarter credits of which there are 8 credits in a general chemistry course (including lab); 4 credits in an introductory organic chemistry course; 12 credits in differential and integral calculus; 12 credits in liberal arts; and 3 credits in additional math or science courses. The students must also complete the summer courses PPHS-200 Introduction to Photographic Science I with a "C" grade or better.

Technical Photography

A minimum of 34 credit hours of which there are 4 credits in a college

algebra course; 6 credits in introductory calculus or the mathematics of business and finance; 12 credits in liberal arts; and 12 credits of photography or a mix of photography and additional mathematics or science. The students must also complete the 10-week intensive summer courses PPHG-200 or Photography I and PPHG-210 Materials and Processes of Photography with a "C" grade or better.

Third-year entry (Transfer credit requirements):

Fine Art Photography

After successfully completing two years in RIT's BFA foundation program, or two years at an accredited college with an acceptable portfolio (RIT summer transfer course may be required), the student may major in fine art photography in the third and fourth years.

Professional Photographic Illustration (entry in the contemporary/illustrative/commercial photography option).

Applicant must have completed an associate degree or equivalent of two years of college with a major in photography (completion of a minimum of 30 quarter credits of photography) plus completion of studio art courses for a minimum 12 quarter credits, liberal arts for a total of 24 quarter credits, and art history courses for a total of 18 quarter credits. The student must also complete the 10-week intensive summer course PPHL-300 BFA Photography with a "C" grade or better. The student must make up the course Materials and Processes of Photography and History and Aesthetics of Photography. Portfolio required.

Entry into Professional Photographic Illustration via the submission of a portfolio to earn transfer credits for photographic courses.

If a student has completed two or more years of intensive study in photography at an accredited school and has earned a 3.0 (B) average, he may submit a portfolio for evaluation by the BFA faculty. A list of the requirements for submission of the portfolio may be obtained from Prof. David A. Engdahl, College of Graphic Arts and Photography, RIT, One Lomb Memorial Drive, Box 9887, Rochester, New York 14623.

imaging and Photographic Science

A minimum of 80 quarter credits of which 8 are credits in a general chemistry course (including lab); 4 credits in an introductory organic chemistry course; 12 credits in

differential and integral calculus; 8 credits in advanced mathematics including differential equations; 24 credits in liberal arts; 15 credits in university physics (including lab); 3 credits in a computer course; plus 6 additional credits in math or science. The student must also complete the 10-week intensive summer courses PPHS-200 and 210, Introduction to Photographic Science I and II, with a "C" grade or better.

Professional Photographic Illustration Program

Contemporary/Illustrative/Commercial Photography Option

Narrative/Documentary/Editorial Photography Option

The curriculum leading to a bachelor of fine arts degree in professional photographic illustration is planned to prepare the student for those areas of photography which require the solving of visual communication problems with a sound technical base. Students are encouraged to develop innovative and individualized responses to visual problems; they are expected to become sensitive to contemporary graphic design and to visual aspects of their society; they are asked to be perceptive and responsible citizens of an evolving society.

Career opportunities:

The photo students who elect the BFA program may produce advertising photography for magazines, direct mail pieces, posters, billboard, and packages. They may produce editorial photography magazine illustrations, picture essays, and book illustrations. They may illustrate brochures, annual reports, and other visual materials for business, government, and educational institutions. They are qualified to function as artists using photography as a principal means of expression. They may become scholars, photohistorians, or photojournalists.

Areas of concentration:

The bachelor of fine arts programs in professional photographic illustration is subdivided into areas of concentration, each of which is varied enough to provide the student with a broad-based photographic education. Each is also flexible enough in approach to provide the student who

Yr.	Professional Photographic Illustration Foundation Years	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPHL-201, 202, 203 Applied Photo I	7	7	7
	PPHL-205, 206 Creative Problems	3	3	
	PPHL-207 Intro to Color			3
	FADF-221, 222, 223 Design I	2	2	2
	*Liberal Arts (Core)	4	4	4
	‡Physical Education Elective	0	0	0
2†	PPHL-311, 312, 313 Applied Photo II	5	5	5
	PPHL-301, 302, 303 History & Aesthetics of Photography	3	3	3
	FADF-321, 322, 323 Design II	2	2	2
	PPHT-211, 212, 213 Materials & Processes of Photography	3	3	3
	*Liberal Arts (Core)	4	4	4
	PPHL-315 Colloquia		1	
‡Physical Education Elective	0	0	0	
Yr.	BFA in Professional Photographic Illustration with a Major in Photographic Fine Art	Qtr. Credit Hours		
3	FSCF-225, 226, 227 Art and Civilization	3	3	3
	Liberal Arts (Concentration)	4	8	4
	PPHL-401, 402, 403 Photo Fine Art I	4	4	4
	Photo Electives (selected from FA list)	6	2	4
	Art History Electives		3	3
4	FSCF-380 Contemporary Art	3	6	
	Liberal Arts (Electives)	4	6	4
	PPHL-501, 502, 503 Photo Fine Art II	4	4	4
	Photo Electives (selected from FA list)	4	4	4

†Upon successful completion of the second year, the associate in applied science degree is awarded.
‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

Yr.	Professional Photographic Illustration Foundation Years	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPHL-201, 202, 203 Applied Photo I	7	7	7
	PPHL-205, 206 Creative Problems	3	3	
	PPHL-207 Intro to Color			3
	FADF-221, 222, 223 Design I	2	2	2
	*Liberal Arts (Core)	4	4	4
	‡Physical Education Elective	0	0	0
2†	PPHL-311, 312, 313 Applied Photo II	5	5	5
	PPHL-301, 302, 303 History & Aesthetics of Photography	3	3	3
	FADF-321, 322, 323 Design II	2	2	2
	PPHT-211, 212, 213 Materials & Processes of Photography	3	3	3
	*Liberal Arts (Core)	4	4	4
	PPHL-315 Colloquia		1	
‡Physical Education Elective	0	0	0	
†Upon successful completion of the second year, the associate in applied science degree is awarded. ‡See Pg. 23 for Policy on Physical Education. *See Pg. 97 for Liberal Arts requirements.				
Yr.	Professional Photography Illustration with a Major in Contemporary, Illustrative and Commercial Photography OR Narrative/Documentary/Editorial Photography	Qtr. Credit Hours		
3	*PPHL-XXX Photo Major I	5	5	5
	Photo Electives	4	4	4
	FSCF—225, 226, 227 Art & Civilization	3	3	3
	Liberal Arts (Concentration)	4	4	4
4	**PPHL-XXX Photo Major II	5	5	5
	Photo Electives	3-4	3-4	3-4
	PPHL-505 History of Applied Photography	3		
	Liberal Arts Electives	4	4	4
	Liberal Arts (Senior Seminar)			2
	CBCE-223 Small Business Marketing & Planning		4	

*Student chooses Contemporary, Illustrative and Commercial Photo IPPHL-441, 442, 443 or Narrative/Documentary/Editorial Photo IPPHL-416, 417, 418.
**Student chooses Contemporary, Illustrative and Commercial Photo II PPHL-541, 542, 543 or Narrative/Documentary/Editorial Photo II PPHL-516, 517, 518.

so desires to select those courses which provide for and best suit his or her particular needs. The first year is common to photo journalism and photographic illustration programs. After the second year the student plans a program that will fulfill his or her objectives. With an advisor, a tentative two-year program is planned for

available courses that will meet the BFA degree requirements.

Professional Photographic illustration Photographic Electives

- PPHF-300 Conceptual Film Production, 4 cr. hrs.
- PPHF-302 Narrative Film Production, 4 cr. hrs.

PPHF-303 Fiction and Dramatic Short Film Prod., 4 cr. hrs.
 PPHF-407, 408, 409 Film History, 3 cr. hrs.
 PPHF-411 Visualization and Commercial Film Prod., 4 cr. hrs.
 PPHF-412 Film Planning and Studio Operations, 4 cr. hrs.
 PPHF-413 Film Project with Sound, 4 cr. hrs.
 PPHF-417 Portable Video Production, 4 cr. hrs.
 PPHF-418 Studio and Documentary Video, 4 cr. hrs.
 PPHF-419 Advanced Video Production, 4 cr. hrs.
 PPHF-421, 422 Writing for Film and Television, 3 cr. hrs.
 PPHF-424, 425, 426 Animation and Graphic Film Production, 4 cr. hrs.
 PPHF-520 Sound Recording, 2 cr. hrs.
 PPHF-541 Senior Production I, 4 cr. hrs.
 PPHF-551, 552, 553 Special Topics in Photography, Variable
 PPHL-401, 402, 403 Photography as a Fine Art I, 4 cr. hrs.
 PPHL-421, 422, 423 Nature Photography, 4 cr. hrs.
 PPHL-501, 502, 503 Photography as a Fine Art II, 4 cr. hrs.
 PPHL-521, 522, 523* Color Photography Workshop, 4 cr. hrs.
 PPHL-551, 552, 553 Special Topics in Photography, Variable
 PPHL-599 Independent Study, Variable
 PPHM-301, 302, 303 Production Processing and Finishing, 4 cr. hrs.
 PPHM-320, 321 Mechanics of Photographic Hardware, 4 cr. hrs.
 PPHM-401, 402, 403 Photographic Process Control, 4 cr. hrs.
 PPHM-410, 411, 412 Training and Supervision of Personnel, 4 cr. hrs.
 PPHM-501, 502, 503 Senior Seminar in Production Processing, 1 cr. hr.

PPHM-511, 512, 513 Advanced Production Processing/Finishing, 4 cr. hrs.
 PPHS-201, 202, 203 Photography for Scientists & Engineers, 4 cr. hrs.
 PPRT-591 Reproduction Photography, 3 cr. hrs.
 PPRT-592 Printing Plates, 3 cr. hrs.
 PPRT-593 Printing Process-Lithographic, 4 cr. hrs.
 ICIC-421, 422, 423 Producing Audiovisual Presentations, 4 cr. hrs.
 ICIC-489 Audio for AV Presentations, 3-4 cr. hrs.
 ICIC-490 Audio Techniques, 4 cr. hrs.
 ICIC-580, 581 Producing Multi-Image Presentations, 4 cr. hrs.
 ICIC-583 Advanced Multi-Image Project, 1-4 cr. hrs.
 ICIC-585 Producing Special Effects Slides, 3-4 cr. hrs.

Photography as a Fine Art Option

Through the gradual development of each individual's sensitivity and imaging skills, the student is prepared for a broad range of career options that require a solid background in esthetics, technical skills, craftsmanship, and the ability and confidence to solve visual problems with imagination and originality.

The program is designed to encourage each student's artistic development, individuality of style and uniqueness as a photographer. The program does not train photographic technicians or photographers for specific jobs. Rather, fine art photography is designed to enhance student prospects for a lifetime or work that is interesting, challenging, and that offers the potential for growth and change.

Electives

Photography as a Fine Art

PPHF-201 Structuring the Moving Image
 PPHF-202 Narrative Film Production
 PPHF-203 Fiction and Dramatic Short Film Production
 PPHF-204 Fiction Film and Aesthetics
 PPHF-205 Documentary Film History and Aesthetics
 PPHF-206 Experimental/Animated Film History and Aesthetics
 PPHF-321 Writing for Film and Video
 PPHF-322 Writing for Film and Video
 PPHL-411, 412, 413 Photojournalism I
 PPHL-421, 422, 423 Nature Photography
 PPHL-431, 432, 433 Illustration Photography I
 PPHL-437, 438, 439 Visual Communications Workshop
 PPHL-506, 507, 508 Photo Media Workshop
 PPHL-511, 512, 513 Photojournalism II
 PPHL-521, 522, 523 Color Photo Workshop
 PPHL-531, 532, 533 Illustration Photography II
 PPHL-437, 438, 439 Visual Communications Workshop
 PPHL-551 Semiotics and Photography
 PPHL-599 Independent Study
 PPRT-591, 592, 593 Reproduction Photography, Offset Platemaking/Offset Presswork
 Others to be selected in consultation with advisors and chairman.

Biomedical Photographic Communications

The biomedical photographic communications program is designed to prepare the student for a career in media production within the scientific community. The biomedical photographer can be part of the allied health team in hospitals, medical and dental research centers or in other health institutions.

The first year courses introduce basic theories and principles as well as practical experience with photographic equipment and photographic processing. The courses are integrated to prepare the student for a summer internship in a medical or scientific facility. The completion of the summer internship is required for the associate's degree in biomedical photography.

The second year rounds out the prerequisites for a beginning career in biomedical photography. Courses include photomacrography, photomicrography and other specific studies required for this career. The junior and senior years' curricula include electives in film making, television and advanced color printing, or others which can be selected in consultation with the advisor, evaluation prior to admission. A personal interview may be required of the candidate for this program. The student may be required to attend summer courses to satisfy prerequisite courses.

The Biological Photographic Association, the certifying and registering professional organization in the biomedical photography field, has cooperated in the preparation of criteria and in program development. Thus the RIT program can provide the educational background which will form the basis for qualifying to become a Registered Biological Photographer (RBP), after the student enters into his or her profession full-time.

Film and Television

The courses in film and television are designed for students who recognize the motion picture medium as an expressive force uniquely important to acquaint students with film and television as creative media and to develop the skills of production.

The degree program in Film and Television features an introduction to both disciplines with advanced work in either film or video. The curriculum emphasizes production and short periods of outside professional experience are encouraged; usually during the summer.

Courses are structured as lecture-laboratory courses, designed to develop individual skills in communication with moving images and the aesthetic principles governing the art. They also are offered to students in Professional Photographic Illustration or Biomedical Photographic Communications. Other Institute students with a basic knowledge of photography may enroll with the permission of the instructor.

Students typically produce several short films or programs, working through all phases of production: scripting, preproduction planning, budgeting, shooting, sound editing and working with a laboratory. Students combine their learning of visual and sound artistry through hands-on experience with camera and sound equipment. The film and video projects are often designed by the individual student. Thus a wide variety of styles and intentions are expressed in the work of the department.

Photographic Processing and Finishing" Management

The curriculum in photographic management is designed to prepare individuals to assume management positions in the photographic processing and finishing industry. The student pursuing this course of study will be involved with obtaining: (1) a thorough knowledge of the photographic process in order to obtain the highest possible quality from the process: (2) production techniques and procedures necessary to obtain quality in the shortest possible time: and (3) the business aspects of promoting and selling the economically-produced quality product in a competitive market.

Students in this program will spend a large portion of their time in our fully equipped color processing and finishing laboratory to gain hands-on experience in production, quality control, and management techniques.

This is a four-year baccalaureate program with the career objective of plant supervision and management; however, those choosing to terminate

Yr.	Biomedical Photographic Communications	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPHB-201, 202, 203 Biomedical Photography I	6	6	6
	PPHG-211, 212, 213 Materials and Processes of Photography	3	3	3
	PPHB-211 Survey of Biomedical Photography			1
	SBIG-201, 202, 203 General Biology	3	3	3
	SBIG-205, 206, 207 General Biology Lab	1	1	1
	* Liberal Arts (Core)	4	4	4
	‡ Physical Education Elective	0	0	0
Summer (4th Quarter) Internship for 10 weeks in a medical setting				
2†	PPHB-301, 302, 303 Biomedical Photography II	5	5	5
	PPHT-311 Color Photography/Design	4		
	PPHT-312 Color Photography/Printing Theory		4	
	PPHB-331, 332, 333 Preparation of Biomedical Visuals	3	3	3
	* Liberal Arts (Core)	4	4	8
‡ Physical Education Elective	0	0	0	
3	PPHB-413 Biomedical AV Design and Production	4		
	PPHB-401, 402 Advanced Photography in Biomedical Communications		4	4
	** Professional Electives	3-4	3-4	3-4
	*** Science Electives	3-4	3-4	3-4
	* Liberal Arts (Concentration)	4	4	4
Summer Internship (Optional)				
4	:: PPHB-501, 502, 503 Senior Thesis Project	4	4	4
	* Liberal Arts (Elective courses)	4	4	4
	Liberal Arts (Senior Seminar)		2	
	Business Electives	4	4	4
	** Professional Electives	3-4	3-4	3-4

†Associate's degree awarded upon successful completion of second year

**Possible recommended professional electives:

PPHP-401, 402, 403 Film Making I

PPRT-591, 592, 593 Reproduction Photography. Offset Plate Making. Offset Presswork

Electives will be made with the coordinator's permission

Other electives with advisor's consultation

***Options include:

Electron Microscopy

Medical Terminology

Computer courses

Advanced courses in the Biological Sciences

****Selected professional courses may be substituted for 4, 8, or 12 credits with written permission of advisor.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

after two years are awarded the AAS degree and should qualify for area supervisory positions in a finishing plant.

Professional electives

BBUA-331, 332 Accounting I, II (Cost)
 BBUB-301 Business Law
 BBUB-404 Management (Business Policy)
 BBUF-281 Money and Banking
 BBUF-441 Finance (Financial Management)
 GLLC-402 Conference Techniques
 GLLC-501 Effective Speaking
 PPHM-511, 512, 513 Advanced Machine Processing
 PPHM-599 Independent Study
 PPHM-411, 412, 413 Sensitometry
 PPHP-441, 442, 443, Advanced Color Printing
 SCHG-205, 206, 207 Chemical Principles
 Others to be selected in consultation with advisors.

Yr.	Film and Television	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	Liberal Arts (Core)	4	4	4
	English Composition			4
	*Acting and Stagecraft I	4		
	*Acting and Stagecraft II		4	
	PPHF-201 Structuring the Moving Image	5		
	PPHF-202 Narrative Film Production		5	
	PPHF-203 Fiction and Dramatic Short Film Production			5
	PPHF-204 Fiction Film and Aesthetics	3		
	PPHF-205 Documentary Film History and Aesthetics		3	
	PPHF-206 Experimental/Animated Film History & Aesthetics			3
*PPHT-210 Materials & Processes of the Moving Image I	2			
2	Liberal Arts (Core)	4	4	4
	Science	4	4	4
	PPHF-311 Portable Video Production	4		
	PPHF-312 Studio & Documentary Video		4	
	PPHF-313 Electronic Field Production			4
	*PPHF-310 Materials & Processes of the Moving Image II	2		
	PPHF-324 Introduction to Animation	4		
	<i>Elective Sequence (choose one)</i>			
	PPHF-325 Introduction to Animation II		4	
	PPHF-326 Animated Production			4
or				
PPHF-321 Writing for Film and Video		3		
PPHF-322 Writing for Film and Video			3	
3	Liberal Arts (Concentration)	4	4	4
	Non-Photo Elective	4	4	4
	PPHF-411 Visualization & Commercial Film Production	5		
	PPHF-412 Film Planning & Studio Operation		5	
	PPHF-413 Film Project with Sound			5
	*PPHF-410 Materials & Processes of the Moving Image 3	2		
	PPHF-405 Senior Project Seminar			1
	<i>Electives (choose one per quarter)</i>			
	PPHF-420 Sound Recording	3		
	PPHT-505 High Speed/Time Lapse Cinematography	3		
	PPHF-321 Writing for Film and Video		3	
	PPHF-325 Introduction to Animation II		4	
	*PPHF-434 Advanced Video		3	
PPHF-322 Writing for Film and Video			3	
PPHF-326 Animated Production			4	
PPHF-432 Directing			3	
**Non-Film/Video Photo School course	3	3/4	3/4	
4	Liberal Arts (Electives)	4	4	4
	Non-Photo Elective	4	4	4
	Liberal Arts (Seminar)			2
	PPHF-541 Senior Production I	6		
	PPHF-542 Senior Production II		6	
	PPHF-543 Senior Post-Production			4

*Proposed new courses.

**Students may elect any still photography course for which they have the required prerequisites and/or the permission of the instructor. Such courses might include: PPHP-395 Photo Electronic Workshop; PPHP-562, 565 Perceptual Principles for Photographers; PPHL-437, 438 Visual Communication Workshop; PRHL-440 News Writing & News Reporting; PPHL-301, 302, 303 History & Aesthetics of Photography.

Yr.	Photographic Processing and Finishing Management	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPHM-211, 212, 213 Introduction to Photofinishing Technology	4	4	4
	SMAM-204 College Algebra and Trigonometry	4		
	BBUB-201 Management			4
	PPHT-311, 312, 313 Color Photographic Systems	4	4	4
	PPGM-204 Orientation to Production Photo Processing & Finishing	1		
	*Liberal Arts (Core)	4	8	4
‡Physical Education Electives	0	0	0	
2	PPHM-301, 302, 303 Production Processing and Finishing	4	4	4
	ITEE-310, 311, 312 Electricity and Electronics	4	4	4
	GSSE-301, 302 Economics I and II	4	4	
	ICSS-200 Survey of Computer Science			4
	*Liberal Arts (Core)	4	4	4
	‡Physical Education Electives	0	0	0
3	PPHM-401, 402, 403 Photographic Process Control	4	4	4
	PPHM-410, 411, 412 Training and Supervision	4	4	4
	SMAM-319 Data Analysis		4	
	PPHS-413 Statistics of Quality Control			3
	BBUB-401 Behavioral Science	4		
	*Liberal Arts (Concentration)	4	4	4
PPHM-506 Theory of Corrective Color Printing			2	
Summer Internship				
4	BBUA-210, 211 Accounting	4	4	
	Finishing Lab Operations Management	4		
	BBUM-263 Marketing			4
	Professional Electives	4	4	4
	PPHM-520 Operation, Care & Maintenance of Photofinishing Equipment		1	
	PPHM-501, 502, 503 Senior Seminar	0	0	1
	*Liberal Arts Elective	4	4	4
Liberal Arts (Senior Seminar & Project)			2	

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Imaging and Photographic Science

Photographic science is concerned with the materials and processes of photography; photographic instrumentation with the application of photographic processes to science and technology. A primary objective of the photographic scientist is the improvement of existing materials and processes of photography and the development of new methods and materials. The instrumentation engineer is concerned with the planning of new applications of photography or the adaptation of existing methods to new or special requirements. Whereas chemists, physicists, and engineers of disciplines other than photography are employed in both of these activities, there is a need, on an increasing scale, for the specialist in imaging and photographic science.

A broad segment of American business is an employer of graduates of the Imaging and Photographic Science Department; aerospace, business machines, information handling, microelectronics, scientific instruments, graphic arts, industrial chemicals, and photographic materials and equipment. Aside from the industry, many graduates are employed by governmental agencies and laboratories. Graduates with an interest in marketing often move into positions as sales and technical representatives.

The Department of Imaging and Photographic Science offers three programs leading to both undergraduate and graduate degrees; a four-year program resulting in a bachelor of science degree, a five-year program resulting in simultaneous awarding of the bachelor of science and master of science degrees, and an MS degree program for students holding a bachelor of science degree in science or engineering.

In addition, it is possible for students with satisfactory credits in mathematics, chemistry, and physics to transfer into either the four-year or five-year program at the beginning of the second or third year by taking a transfer program during the summer quarter.

In recognition of the division's belief that much degree-relevant learning in photographic science and instrumentation can take place outside the Institute's classrooms, all undergraduates are encouraged to

Yr.	Imaging and Photographic Science	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPHS-201, 202, 203 Photography for Scientists & Engineers	4	4	4
	SCHC-211, 212 General Chemistry	3	3	
	SCHG-205, 206, 207 Chemical Principles Lab	1	1	1
	SCHO-230 Intro. to Organic Chemistry			3
	SMAM-251, 252, 253 Calculus	4	4	4
	*Liberal Arts (Core)	4	4	4
†Physical Education Elective	0	0	0	
2†	PPHS-311 Advanced Sensitometry, Black-and-White Photographic Materials		4	
	PPHS-312 Applied Processing	4		
	PPHS-313 Color Systems			4
	SMAM-305 Calculus	4		
	SMAM-306 Differential Equations I		4	
	ICSP-205 Computer Techniques			3
	SPSP-311, 312, 313 University Physics	4	4	4
	SPSP-371, 372, 373 University Physics Lab	1	1	1
*Liberal Arts (Core)	4	4	4	
†Physical Education Elective	0	0	0	
3	PPHS-401 Radiometry	5		
	PPHS-402 Image Microstructure		5	
	PPHS-404 Introduction to Scientific Research			2
	PPHS-411 Statistical Inference	3		
	PPHS-412 Statistical Design of Experiments		3	
	PPHS-413 Statistics of Quality Control			3
	Professional Electives (selected from undergraduate elective list)		Varies	
	PPHS-421, 422, 423 Photographic Chemistry (5 year BS/MS program—may also be taken in 4th year)	4	4	4
*Liberal Arts (Core and Concentration)	4	4	8	
4	PPHS-501, 502, 503 Research	2	4	4
	PPHS-521, 522, 523 Imaging Systems and Evaluation	4	2	2
	Professional Electives (selected from undergraduate elective list)	To bring undergraduate credit to 184		
	*Liberal Arts (Concentration)	4	6	4
4	*Liberal Arts (Concentration)	4	6	4
	PPHS-421, 422, 423 Photographic Chemistry (if not taken during 3rd year)	4	4	4
	PPHS-890 Research	2		
	Professional Electives (selected from undergraduate elective list)	To bring undergraduate quarter credits to 184		
5	PPHS-711, 712, 713 Theory of the Photographic Process	3	3	3
	PPHS-731, 732, 733 Instrumental and Photographic Optics	3	3	3
	PPHS-741, 742, 743 Analysis and Evaluation of Imaging Systems	3	4	3*
	PPHS-890 Research and Thesis Guidance			
	Professional Electives (selected from graduate elective list)	9 minimum To bring graduate quarter credit to 45		

Fourth Year BS program

Fourth Year BS/MS program

Fifth Year BS/MS Program

†Upon successful completion of the second year, the associate in applied science degree is awarded.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

acquire summer photoscience industrial experience during their program at RIT.

Four-year program: Bachelor of Science in Imaging and Photographic Science

The course content in this program is typical of science and engineering programs. The first two years contain fundamental courses in mathematics, chemistry, and physics. The student simultaneously applies these fundamentals to the study of photographic materials and instrumentation. The photographic science core program then continues with courses in radiometry, the structure of images, color and vision, and methods of engineering photographic systems. Third and fourth year students select elective courses in imaging and photographic

science, engineering, science, mathematics, and graphic arts to broaden their base of knowledge. An undergraduate thesis is required.

Opportunities also exist to perform thesis work under the direction of selected scientists and engineers in other RIT colleges as well as from local industry as adjunct faculty.

Five-year program: Bachelor of Science and Master of Science in Imaging and Photographic Science

Course content during the first three years is similar to the bachelor of science program and provides the student with a background in mathematics, chemistry, physics, and basic photographic science and instrumentation. The fourth year is spent taking advanced elective

courses in chemistry, physics, engineering and/or imaging and photographic science. The fifth year is devoted to graduate courses and a graduate thesis.

Admission into the five-year program is normally made at the end of the third year. Completed applications should be sent to the Admissions Office.

**Graduate program:
Master of Science in Imaging and
Photographic Science**

The graduate program is designed to prepare persons holding a bachelor of science degree in physics, chemistry, or engineering for positions in the field of photographic science and instrumentation. Applicants without acceptable understanding of photographic materials and processes are required to take a summer course before final admission to the graduate program. This full-time summer course, PPHS-600 (Principles of Photographic Science) begins in June and runs for 10 weeks.

Certain graduate courses are offered during the evening on a rotating basis for those desiring to obtain the master of science degree on a part-time basis. Information regarding which courses are offered in which years during the evening may be obtained from the department.

The graduate program is administered by the Council on Graduate Studies and is under the direction of the graduate coordinator (see Graduate Bulletin for particulars).

**Recommended undergraduate
electives**

EEEE-441 Electronics I
EEEE-461,462 Electrical
Engineering I, II
PPHS-421, 422, 423 Photographic
Chemistry
PPHS-511, 512, 513 Optical
Instrumentation
PPHS-531, 532, 533, Theory of the
Photographic Process
PPHS-571,572 Photomicroolithography
PHHS-599 Independent Study
PPRT-591 Reproduction
Photography
PPRT-592 Printing Plates
SCHA-311, 312 Analytical Chemistry
SCHA-313 Introduction to Physical
Chemistry
SCHO-431, 432, 433 Organic
Chemistry
SCHP-441, 442, 443 Physical
Chemistry
SMAM-307 Differential Equations
SMAM-308 Engineering Mathematics
SMAM-420 Complex Variables
SMAM-501, 502 Advanced
Differential Equations
SPSP-314, 315 Modern Physics
SPSP-411, 412 Electricity and
Magnetism
SPS-455 Optical Physics
Others to be selected in consultation
with advisors and chairman.

Recommended graduate electives

CASM-731, 741, 871 Statistics
CASM-761 Reliability
CASM-811, 812 Probability Theory
and Application
CASM-821, 822, 823 Theory of
Statistics

CASM-841, 842 Regression Analysis
CASM-851 Nonparametric Statistics
EEEE-702 Introduction to Random
Variable and Signals
EEEE-734 Communication
Techniques
EEEE-735 Digital Data Transmissions
PPHS-751, 752, 753 Special Topics
in Photographic Science
PPHS-761, 762, 763 Principles of
Remote Sensing and
Image Analysis
PPRM-702 Computers in Management
PPRT-702 Graphic Reproduction
Theory
SCHA-711 Instrumental Analysis
SMAM-711, 712 Advanced
Engineering Mathematics
Others to be selected in consultation
and with the approval of graduate
coordinator. Undergraduates with
proper prerequisites may take
graduate electives for undergraduate
credit upon approval of advisors and
chairman.

Technical Photography

The technical photography curriculum has been designed to prepare students for entry into any of a variety of positions in the broad field of technical photography, as distinct from providing highly specialized training for a specific position. These include both picture-making and non-picture-making positions.

Picture-making courses are included in all four years of the program, with a transition from a comprehensive foundation course in black-and-white photography through color photography and color printing, motion-picture and television production, to more specialized courses in audiovisual production, high-magnification photography, high-speed photography, and non-conventional imaging systems. These picture making courses are balanced with courses in technical photographic subjects, mathematics, science, business, and liberal arts. Students are given some options and electives, including the opportunity of serving a summer internship following the third year in place of the research project in the fourth year.

Employment statistics maintained by RIT's Office of Central Placement Services, as well as results of an industry questionnaire done by the School of Photographic Arts and Sciences, indicate that there is demand for graduates with technical backgrounds for such positions as technical and sales representatives, technical writers, quality control personnel, product development and testing, applied research, laboratory supervision, scientific photography, technical illustration, audiovisual production, photographic testing, and management.

Yr. Technical Photography

Qtr. Credit Hours

		FALL	WTR.	SPG.
1	PPHT-201, 202, 203 Photography I	7	7	7
	PPHT-211, 212, 213 Materials & Processes of Photography	3	3	3
	†SMAM-204 College Algebra	4		
	SMAM-214, 215 Introductory Calculus, OR		3	3
	SMAM-216, 217 Mathematics of Business & Finance		3	3
	* Liberal Arts (Core)	4	4	4
‡Physical Education	0	0	0	
2	PPHT-301 Photographic Sensitometry	3		
	PPHT-302 Technical Photographic Chemistry		3	
	PPHT-303 Photographic Optics			3
	PPHT-311 Color Photography/Design	4		
	PPHT-312 Color Printing/Theory		4	
	PPHT-313 Color Measurement			4
	SPSP-211, 212, 213 College Physics	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
* Liberal Arts (Core)	4	4	4	
‡Physical Education	0	0	0	
3	PPHT-411 Preparation of Visuals	3		
	ICIC-421 Producing Audiovisual Presentations I		4	
	PPHT-412 High-Magnification Photography			3
	PPHF-301 Structuring the Moving Image & Conceptual Prod.	4		
	PPRT-701 Research Methods in Graphic Arts		4	
	PPRM-201 Introduction to Technical Writing			3
	ITEE-300 Electricity	4		
	SMAM-309 Statistics		4	
ICSS-200 Survey of Computer Science			4	
* Liberal Arts (Core and Concentration)	4	4	8	
4	PPHT-501 High-Speed/Time Lapse	3		
	PPHT-502 Introduction to Research	1		
	PPHT-503 Research Project, OR		3	
	PPHT-511, 512 Internship	1	3	
	PPHT-504 Nonconventional Imaging Systems			3
	Statistics, Computer or Electronics Elective	4		
	PPHF-209 Basic Television Production		4	
	Professional Elective			3-4
	BBUB-401 Behavioral Science	4		
	BBUA-210 Accounting		4	
BBUB-201 Management			4	
* Liberal Arts (Electives)	4	4	4	
Liberal Arts (Senior Seminar)			2	

† Waiver by examination permits substitution of an elective course.
 ‡ See Pg 23 for Policy on Physical Education.
 * See Pg 97 for Liberal Arts requirements.

Photographic Marketing Management

Offered jointly by the College of Business and the College of Graphic Arts and Photography, RIT's program in photographic marketing is the only one of its type in the country.

This rigorous program is designed to provide students with a thorough knowledge of the photographic process and a solid background in business administration with courses in economics, finance and marketing principles. The combination of work in these two disciplines prepares the student for a multifaceted management-level career in the photographic business. Opportunities for positions include these in customer service aspects of photofinishing and professional color laboratories and management positions with photographic manufacturers and photographic retailers. For further information, including transfer requirements, ¹ contact the College of Business.

School of Printing

William Pakan, Director

The School of Printing at Rochester Institute of Technology is the world's largest and best equipped school for developing printing managers. It enjoys a position of leadership because of its extensive laboratory facilities, its up-to-date programs of study, its competent faculty, and its successful graduates. More than 700 students are enrolled in its bachelor's and master's degree programs.

The school has 25 laboratories with more than \$25 million in up-to-date printing equipment, occupying 125,000 square feet of space. Most equipment is upgraded or replaced by manufacturers as they advance the state of the art. The school offers more than the 70 courses in printing technology and management from which students take about half their coursework. Other courses—including engineering, computer science, business, science and liberal arts—are taken in other RIT colleges.

The primary objective of the School of Printing is to prepare students—both men and women—for successful careers in printing, publishing and allied industries. While students get considerable hands-on experience with the latest equipment in many technological areas, the emphasis is on learning "why" rather than "how

Yr.	Photographic Marketing Management	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	BBUB-202 Introduction to Business	4		
	SMAM-225 College Algebra & Matrices	4		
	GSSE-301 Principles of Economics I	4		
	BRER-201 Introduction to the Retail Industry		4	
	SMAM-226 Business Calculus		4	
	GSSE-302 Principles of Economics II		4	
	ICSS-200 Survey of Computer Science			4
	BBUA-301 Financial Accounting			4
	BBUB-210 Career Seminar I			1
	*Liberal Arts	4	4	8
†Physical Education Electives	0	0	0	
2	PPHM-201, 202, 203 Principles of Photography I, II, III	4	4	4
	BRER-301 Retail Merchandising and Control	4		
	BBUQ-351 Applied Statistics I	4		
	BBUA-302 Managerial Accounting	4		
	BBUQ-352 Applied Statistics II		4	
	BBUB-320 Organizational Behavior		4	
	BBUQ-334 Management Science			4
	BBUB-310 Career Seminar II			1
*Liberal Arts		4	8	
3	PPHG-211, 212, 213 Materials & Processes of Photography	3	3	3
	BBUB-315 Legal Environment	4		
	BBUB-420 Principles of Management	4		
	BBUF-441 Corporate Finance		4	
	BBUM-463 Principles of Marketing		4	
	BRER-401 Retail Store Operations and Management			4
	BBUQ-460 Operations Management			4
	*Liberal Arts	4	4	4
†Physical Education Electives	0	0	0	
4	BBUB-507 Business Environment	4		
	PPHT-311 Color Photography: Design	4		
	BRER-501 Senior Seminar in Retail Management			4
	PPHT-312 Color Printing: Theory		4	
	PPHM-320 Mechanics of Photographic Hardware I		4	
	BBUB-551 Integrated Business Analysis			4
	PPHM-321 Mechanics of Photographic Hardware II			4
	PPHM-310 Survey of Production Processing & Finishing			2
	Photo/Retail/Business Electives	4		4
	*Liberal Arts	4	8	
Liberal Arts (Senior Seminar)		2		

NOTE: Second- and third-year students may co-op during summer vacation
 †See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

to." Printing school graduates have successful careers at all levels of graphic arts management: in selling, supervision, design, and research, among other positions.

All of the school's programs require study in a broad range of courses but allow study in depth in particular areas of interests. All programs require students to take courses to help develop understanding and appreciation on the following areas— aesthetic qualities of good printing, procedures involved in the major important processes, principles of management, applications of science and engineering in the graphic arts and liberal arts courses as a means of developing personally as well-rounded individual and responsible citizen. To facilitate curriculum development, the faculty of the School of Printing is divided administratively into three sections: design-composition, photography-plate-press, and management. All of the school's programs share the same faculty.

The School of Printing offers four bachelor of science degree programs and a master of science degree program. The bachelor's degree programs are described here. The master's program was developed for students who already have a bachelor's degree (not necessarily in printing) and is described in the RIT Graduate Bulletin. Some college graduates with bachelor's degrees choose to pursue a BS in printing rather than MS in printing technology degree because of its greater flexibility in program of studies. Upon admission, such students usually are given the equivalent of about two years of credit, allowing them to earn the BS in printing degree in two years of concentrated effort.

Scholarship and Financial Aid

Competitive scholarships are offered through the National Scholarship Trust Fund of the Education Council of the Graphic Arts Industry. Anyone interested in applying for one of these scholarships should do so early in the

senior year in high school, since the application must be filed in advance of the date set for competitive examinations. If information is not available in the local high school, the candidate should write to:

Education Council of the Graphic Arts Industry
4615 Forbes Avenue
Pittsburgh, PA 15213

More than 55 scholarships are available to School of Printing students through RIT's Financial Aid Office. They range in size from \$100 to full tuition. Some of these awards may be continued beyond one year depending upon the students' scholastic records. See the section on financial aid located near the front of this catalog.

The School of Printing also administers some scholarships directly. These usually are awarded to upperclassmen on the basis of previous performance at the school.

Cooperative program

The cooperative program in printing is flexible and voluntary. It is available to printing students who have successfully completed the first two years of the printing program and to qualified transfer students accepted at the third-year level. The intent of the cooperative program in printing is to afford students the opportunity of enlarging and improving their college education by combining formal, classroom learning with practical work experiences. Printing students following the cooperative program have a wide variety of graphic arts work experiences available to them. Students in the co-op program may take up to five years to complete BS degree requirements.

Internships

A number of firms offer summer employment in selected areas to third-year students who are chosen competitively. These positions provide significant educational experience.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description Catalog from the Admissions Office.

Yr.	Printing Degree Program	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPRT-201 Typography	3		
	PPRT-202 Composition Technology	3		
	PPRT-203 Layout & Print Design I	3		
	PPRT-204 Flexography		3	
	PPRT-205 Gravure		3	
	PPRT-206 Reproduction Photography			3
	PPRT-207 Printing Plates			3
	PPRT-208 Lithographic Press			3
	PPRT-209 Screen Printing I		3	
	Mathematics Option	3-4	3	3
	*Liberal Arts (English Composition)	4		
*Liberal Arts (Core)		4	4	
‡Physical Education Electives	0	0	0	
2	PPRM-201 Intro to Technical Writing		3	
	PPRM-210 Financial Controls I		3	
	PPRM-302 Personnel Relations I			3
	PPRT-302 Composition Systems	3		
	PPRT-311 Planning & Finishing	3		
	PPRT-312 Image Assembly	3		
	PPRT-402 Appl. of Electronics to G.A.			3
	Science Option (either Chemistry or Physics)	4	4	4
	*Liberal Arts (Core)	4	8	4
	‡Physical Education Electives	0	0	0
3	PPRM-301 Appl. of Computers in G.A.	3		
	PPRM-401 Estimating I		4	
	PPRM-403 Printing Production Management I			3
	PPRT-410 Introduction to Paper			3
	Professional Electives	3	3	3
	Science Option	4	4	4
*Liberal Arts (Concentration)	4	4	4	
4	PPRM-590 Senior Seminar	2		
	SMAM-319 Data Analysis		4	
	Professional Electives	10	8	10
	*Liberal Arts Electives	4	4	4
	Liberal Arts (Senior Seminar & Project)			2

‡See Pg. 23 for Policy on Physical Education.
*SeePg. 97 for Liberal Arts requirements.

Printing Degree Program

Prior to September 1979 the printing program was the only bachelor of science degree program available at the School of Printing, and the school's international reputation is built on it. From its inception the program has drawn students from nearly every state in the union and from numerous Central and South American, African, Asian, and European countries.

Although the school has recently introduced special programs to meet important and specific industry needs (described on the succeeding pages of this catalog), 80 percent or more of the students in the school continue to enroll in the printing program. It offers the greatest amount of flexibility in allowing students to customize their programs for the careers they seek.

This program is based on a sound foundation in the technologies important to the printing industry and also requires courses in important management areas. It allows numerous electives from which students may choose management or

technical courses according to their career goals.

The printing program's list of required courses is indicated in a boxed tabulation at the end of this section.

While each student is expected to use initiative in selecting elective courses, the three faculty divisions administer optional program sequences to guide students toward specific career objectives.

Design Composition Division

Emery E. Schneider, Staff Chairman

Most people in the graphic arts need to have an appreciation for good design and typography because much of their time is spent evaluating printing from the standpoint of design and production. Many printing firms have organized their own design and composition facilities in order to offer a complete service to their customers and need well-qualified people in these areas. In addition, the needs of in-plant and corporate advertising departments for educated people in the creative fields and for printing buyers are extensive. For these reasons, the Design-Composition

Division not only offers introductory creative course for those students who will pursue other areas of endeavor, but also offers sequences in the design field in which the student may specialize. These sequence include:

Book design and book production. A sequence designed to prepare students to fill a variety of positions in the book publishing and book manufacturing industries. This flexible program can be altered to fit the specific needs of others interested in the wide range of opportunities in the publishing industry.

Design and typography. A sequence for Students with a basic interest in the aesthetics of printing. It includes a broad range of courses—calligraphy to typography, design to copy preparation—that are important in the creative fields of the printing industry.

Composing room procedure. A sequence giving students an overview of typesetting techniques and management. The diversity and challenges in this field are reflected in a series of courses ranging from electronics in computerized typesetting through estimating and other management areas related to the composition room.

Photography-Plate-Press Division

Walter G. Home, Staff Chairman

The production segment of the industry is the core area of most printing facilities. All managers in the industry, from design through delivery and in nonproduction areas, need a firm grasp of this core area if their decisions are to be valuable. This is the home area for the production manager in plants producing books, newspapers, forms or commercial printing. For these reasons, the Photography-Plate-Press Division offers courses in all the majoring printing processes, encompassing camera work, image assembly, platemaking, presswork, inks, substrates, binding, finishing, and distribution.

This division administers sequences in various production areas such as:

Lithography technology. This sequence gives students in-depth knowledge of lithographic management. The student is prepared for positions such as technical service representative, production scheduling, quality control analysis, and technical sales.

Package printing. This sequence, offered in conjunction with the Department of Packaging Science, emphasizes the problems

encounters in printing on many different kinds of materials and in packaging many different kinds of products. This program prepares students for positions in production and sales with the packaging printer, an expanding segment of the graphic arts.

Reproduction photography. A sequence for students who wish to specialize in the photomechanical processes in printing. The student is prepared for management positions with the camera service departments within printing firms and with color separation service companies.

Flexographic technology. A sequence for students who wish to enter the flexographic industry. It allows the student to use elective credits to emphasize appropriate technical course work and take advantage of many management electives.

Management Division

W. Frederick Craig, Staff Chairman

To facilitate a high level decision-making process, management personnel in the graphic arts needs to have a clear understanding of the interrelationships that exists among the marketing, financial, personnel, and production segments of the industry. To this end, the Management Division offers course work in these various areas. In collaboration with other divisions, the Management Division provides the topping for shaping future managers in the graphic arts. The division offers these sequences:

Estimating. Estimating is at the heart of the successful economic well-being of the printing industry. Accurate job costing and analysis can mean the difference between success and failure for any printing concern. This sequence prepare students for positions found in every segment of the industry from commercial printing through packaging and specialized forms manufacturing.

Computer applications. Computers are of increasing importance to the printer as they can perform the usual business data-processing tasks as well as more specialized applications ranging from typesetting to process control. This sequence is designed to provide students with a basic understanding of computers and their potential in production management.

Newspaper Production Management. A sequence for students who wish to specialize in newspaper management. This sequence emphasizes production,

labor, finance, and marketing in relation to the newspaper industry. New technological changes in the industry are also emphasized.

Financial management. This sequence utilizes courses in both the School of Printing and the College of Business. Students prepare themselves for the financial aspects of managing a graphic arts business.

Personnel management. Drawing heavily on courses in the College of Liberal Arts, the sequence prepares students for positions in personnel management, labor relations, and other positions where the ability to work closely with individuals is of prime importance.

Production management. Students in this sequence are prepared to enter all phases of printing dealing with production problems in the commercial printing industry as well as in the newspaper, book, and magazine publishing industries. Management positions evolving from this sequence are that of scheduler, assistant production manager, and production manager.

Sales-marketing. This sequence prepares students for positions in printing sales and marketing and printing equipment or supply sales as well as positions as technical representatives for graphic arts supply firms and as printing buyers and brokers.

Career opportunities. The graduate with a BS degree in printing has available a wide variety of technical and management positions in printing and related industries. Among these are positions in administration and general management, production management, production and quality control, sales, estimating, cost and financial control, process and plant development, graphic design, newspaper production management, and graphic arts research. A variety of positions in commercial printing, packaging, and service industries and in the book, newspaper, and magazine publishing industries are available to graduates.

The two-year portion of the program is for those who wish to enter employment after two years of college study. Graduates of this program obtain employment as assistants in such classifications as estimating, production control, specification writing, purchasing, copy preparation, typography and layout, and sales.

Special Requirements for Admission

Overall requirements for admission are given in the general information

section of this bulletin. In addition, it is important that an applicant have an interest in printing courses, which may be shown by success in high school printing courses, by extracurricular activities in connection with a school newspaper or yearbook, by employment in a printing establishment, or by gaining an idea of the activities and opportunities of the field through investigation or personal associations. While high school graduation is stated as a basic requirement for admission, with intermediate algebra and one year of science as specific prerequisites, it is highly recommended that students take as much mathematics and science as possible in high school.

Math/science sequences

Each student must take 13 or 14 credits of college mathematics as required by the School of Printing. Nine or 10 of these mathematics credits are earned in the freshman year, and placement will be determined through testing and a review of the student's academic background. Preparatory math courses will be available if the need for them exists.

The second-year science sequence must be Chemistry for Printers (SCHG-281, 282, 283) or College Physics (SPSP-211, 212, 213). However, with departmental approval students can substitute certain other college chemistry or physics sequences. The third-year science sequence can be chemistry or physics, advanced chemistry, advanced physics, calculus, computer courses, or Photography for Scientists and Engineers (PPHS-201, 202, 203).

Electives

Liberal arts electives

In general, the program requires that the student take at least one course per quarter from this area, which includes such subjects as economics, psychology, logic, ethics, language, communications, literature, and fine art appreciation.

Professional electives

These are usually selected from the printing management and technology electives listed below, but may also include courses from the College of Business or Engineering or other colleges in the Institute if the subject matter is approved as relevant to the student's needs.

The following electives supplement required courses. Students elect courses to suit their individual interests and objectives and to meet the credit requirements of the printing

program. Selection is subject to prerequisite requirements and availability of courses.

Printing electives

Printing management

- PPRM-320 Intro to Magazine Publishing & Management (Cr-3)
- PPRM-402 Estimating II (Cr-4)
- PPRM-404 Printing Production Management II (Cr-4)
- PPRM-502 Financial Controls II (Cr-4)
- PPRM-506 Business Law (Cr-3)
- PPRM-507 Computer Estimating Workshop (Cr-4)
- PPRM-509 Economics of Production Management (Cr-4)
- PPRM-510 Personnel Relations II (Cr-4)
- PPRM-511 Labor Relations in Graphic Arts (Cr-4)
- PPRM-512 Collective Bargaining in the Graphic Arts (Cr-3)
- PPRM-513 Sales in the Graphic Arts (Cr-4)
- PPRM-514 Newspaper Management (Cr-4)
- PPRM-515 Legal Problems of Publishing (Cr-4)
- PPRM-516 Marketing in Graphic Arts (Cr-4)
- PPRM-518 Purchasing in the Graphic Arts (Cr-3)
- PPRM-599 Independent Study (Cr-arranged)

Printing technology

- PPRT-210 Newspaper Presses
- PPRT-213 Principles of Copy Preparation (Cr-3)
- PPRT-301 Typography II (Cr-4)
- PPRT-303 Layout and Printing Design (Cr-4)
- PPRT-306 Tone Reproduction Photography (Cr-3)
- PPRT-308 Litho Press Problems (Cr-4)
- PPRT-309 Advanced Screen Printing (Cr-3)
- PPRT-310 Advanced Image Carriers (Cr-3)
- PPRT-313 Copy Preparation (Cr-4)
- PPRT-314 Advanced Flexography (Cr-3)
- PPRT-315 Ink and Color (Cr-4)
- PPRT-317 Calligraphic Forms (Cr-3)
- PPRT-319 Newspaper Design (Cr-3)
- PPRT-320 Newspaper Production (Cr-3)
- PPRT-321 Web Offset (Cr-3)
- PPRT-322 Circulation and Mailrooms (Cr-3)
- PPRT-324 Newspaper Composition (Cr-3)
- PPRT-329 Introduction to Book Design (Cr-3)
- PPRT-330 Newspaper Production II (Cr-3)
- PPRT-333 Introduction to Book Production (Cr-3)

- PPRT-335 The Printed Book in America (Cr-3)
 - PPRT-401 Typographic Workshop (Cr 4)
 - PPRT-403 Layout and Printing Design (Cr-4)
 - PPRT-406 Color Separation Photography (Cr-3)
 - PPRT-500 Quality Control in the Graphic Arts (Cr-3)
 - PPRT-501 Development of Printing Types (Cr-3)
 - PPRT-506 Advanced Color Reproduction (Cr-3)
- Other electives to be selected in consultation with advisors.

U.S. Industrial Outlook says, "The stability and growth that has existed in the commercial printing industry for more than a decade is expected to continue into the 1980's." This program is designed to complement the industry's growth by stressing management, engineering, and the sciences, along with computer and printing technology.

This program's admission standards appeal to students with interests in advanced mathematics, engineering, and printing. The program emphasizes a variety of engineering courses that prepare graduates for engineer-type positions in the printing industry. At the same time, this preparation enhances the graduate for a variety of production management positions.

Career opportunities

The graduate with a BS degree in printing systems management has many career choices within the printing industry. Many find beginning positions as production assistants, assistant production managers, assistant plant engineers, computer engineering specialists, and systems analysts. These can lead to positions as production manager, director of computer technology, plant engineer, and operations manager.

Requirements for admission

General requirements for admission are given in the general information section of this bulletin. In addition, it is highly desirable that the applicant have a great interest in both printing and industrial engineering, which can be shown by success in working on a school newspaper or yearbook, by working summers in the printing plant, or by general interest in graphic communications and engineering. High school graduation is a requirement along with the coursework in elementary algebra, plane geometry, intermediate algebra, trigonometry, physics and chemistry. Preference is given to those who have

additional work in mathematics, physics, and chemistry. Students admitted to this program must meet the full entrance requirements of the RIT College of Engineering on mathematics, physics, chemistry, and SAT scores.

Program of study

The School of Printing offers a four-year course of study leading to a bachelor of science degree in printing systems management. The program includes a total of 196 quarter credits. Of these there are 35 credits in printing technology, 29 credits in printing management, 40 credits in industrial engineering, 32 credits in math/science, 54 credits in general studies, and six elective credits. The first-year curriculum of this program and that of the Printing and Applied Computer Science program are practically the same. Therefore, a student may transfer between the program at that time with no loss of credit.

Electives

Students may elect professional courses in printing or industrial engineering to complete their course requirements.

Liberal arts electives

In general, the program requires that the student take at least one course per quarter from this area, which includes subjects such as economics, psychology, logic, ethics, language communications, literature, and fine arts appreciation.

Newspaper Production Management

Robert G. Hacker, coordinator

The printing and publishing industries are undergoing dynamic changes in technology. Within the newspaper field changes are particularly drastic, completely altering how things are accomplished. In addition, advances in technology and market penetration of related information-handling result in greater competition in the areas of reader interest and advertising appeal. These advances have made it imperative to alter not only the way in which a newspaper is printed and distributed, but also the very method by which the information is prepared and processed—perhaps even what shall be produced. The earlier distinctions between editorial, advertising and production blur as production becomes a function of advertising and editorial preparation, a direction enveloping previously distinct functions as well. These trends will

Yr.	Newspaper Production Management Program	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	EIEI-201 Intro. to Engineering	4		
	PPRM-302 Personnel Relations I			3
	PPRM-310 Industrial Organization & Management			3
	PPRT-202 Composition Technology	3		
	PPRT-206 Reproduction Photography	3		
	PPRT-207 Printing Plates		3	
	PPRT-208 Lithographic Press		3	
	PPRT-302 Composition Systems		3	
	PPRT-319 Newspaper Design			3
	Mathematics Option	3-4	3	3
	* Liberal Arts (English Composition)	4		
* Liberal Arts (Core)		6	6	
‡ Physical Education Electives	0	0	0	
2	EIEI-420 Work Measurement & Analysis	4		
	PPRM-201 Intro. to Technical Writing		3	
	PPRM-301 Appl. of Computers in G.A.	3		
	PPRT-210 Newspaper Presses		3	
	PPRT-320 Newspaper Production I			3
	PPRT-322 Circulation & Mailroom			3
	PPRT-402 Appl. of Electronics to G.A.		3	
	SCHG-281, 282, 283 Chemistry for Printers	4	4	4
	Professional Elective			3
	* Liberal Arts (Core)	4	4	4
	‡ Physical Education Electives	0	0	0
3	EIEI-422 Systems & Facilities Planning	4		
	PPRM-210 Financial Controls I		3	
	PPRM-514 Newspaper Management		4	
	PPRM-518 Purchasing in the G.A.	3		
	PPRT-330 Newspaper Production II			3
	Professional Elective			3
	Science Option	4	4	4
* Liberal Arts (Concentration)	4	4	4	
4	PPRM-509 Economics of Production Management			4
	PPRM-511 Labor Relations in G.A.	4		
	PPRM-515 Legal Problems in Publishing			4
	SMAM-319 Data Analysis		4	
	Professional Electives	8	8	2
	* Liberal Arts Electives	4	4	4
Liberal Arts (Senior Seminar & Project)			2	

‡ See Pg. 23 for Policy on Physical Education.
* See Pg. 97 for Liberal Arts requirements.

result in the integration of these departments into a single entity utilizing a computer system to handle, transmit, and process information and then to control production and delivery.

This new approach requires new abilities and expertise of the people who would steer this changing industry. Graduates of the newspaper production management program will have to compete with the existing pools of talent and expertise as the functions of production merge with those of other departments.

They must be prepared in both the new technology and in the ability to steer existing manpower and management systems through potentially stormy change to a useful and profitable position in the marketplace. The revolution in this field points to the need for a new person to deal with the technological and managerial problems of such change. This program is intended to fulfill the developing industry need for such people. As its name implies, the program concentrates on those courses that have been most helpful to graduates particularly interested in

careers in newspaper production management.

Career opportunities

The graduate with a BS degree in newspaper production management has numerous career choices within the newspaper industry. Many young people find entry positions as production assistants, assistant production managers, assistant business managers, technical specialists with suppliers and computer specialists. These can lead to positions of production director, director of data processing, operations director, business manager and publisher. All these positions present a distinct challenge in an industry undergoing a vast technological change.

Requirements for admission

General requirements for admission are given in the general information section of this bulletin. In addition, it is highly desirable that an applicant have a deep interest in newspaper management, which can be shown by success in working on a school newspaper, working for a daily or

weekly newspaper or by a general interest in the mass media.

High school graduation is a requirement for admission along with course work in elementary algebra, trigonometry, intermediate algebra, physics, or chemistry. Preference is given to those applicants who have had additional work in mathematics, physics or chemistry. The entrance requirements and general program scope are similar to those in the printing program. It requires coursework aimed at the newspaper industry, rather than the printing industry, in general.

Program of study

The School of Printing offers a four-year course of study leading to a bachelor of science degree in newspaper production management. The newspaper industry is large: 383,000 people in 8,200 establishments producing more than 1,700 dailies and 7,400 weeklies. The *U.S. Industrial Outlook* says of the newspaper industry, "The continuing development and the implementation of new technologies, successful research efforts and educational programs will support a growth rate ranging between 7 and 8 percent per year to the mid-80's.

The program stresses management, engineering, sciences, computer printing technology, along with liberal studies.

Math/science sequences

Each student must take 13 or 14 credits of college mathematics as required by the School of Printing. Nine or ten of these mathematics credits are earned in the freshman year, and placement will be determined through testing and a review of the student's academic background. Preparatory math courses will be available if need for them exists.

The second-year science sequence must be Chemistry for Printers (SCHG-281, 282, 293). However, with departmental approval students can substitute certain other college chemistry sequences. The third-year recommended science sequence—to be chosen after consulting with the coordinator of the program—is a series of computer courses.

Electives

Liberal arts electives

In general, the program requires that the student take at least one course per quarter from this area, which includes subjects such as economics, psychology, logic, ethics, language

Yr.	Printing Systems Program	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	A program combining coursework in Industrial Engineering and printing			
	PPRM-210 Financial Controls I	3		3
	PPRM-301 Appl. of Computers in G.A.			3
	PPRM-403 Printing Production Management I		3	
	PPRT-201 Typography			
	PPRT-204, -205 or -209 Flexography or Gravure or Screen Printing I	3		
	PPRT-206 Reproduction Photography			3
	PPRT-207 Printing Plates		3	
	PPRT-208 Lithographic Press		3	
	PPRT-213 Principles of Copy Preparation	3		
	SMAM-251, 252, 253 Calculus	4	4	4
	*Liberal Arts (English Composition)	4		
*Liberal Arts (Core)		4	4	
‡Physical Education Electives	0	0	0	
2	EIEI-202 Intro. To Industrial Engineering	4		
	EIEI-202 Computing for Industrial Engineers		4	
	PPRM-201 Intro. to Technical Writing			3
	PPRT-302 Composition Systems	3		
	PPRT-311 Planning & Finishing	3		
	SMAM-305 Calculus	4		
	SMAM-351, 352 Probability & Appl. Stat. I		4	4
	SMAM-205, 206 Physics		4	4
	*Liberal Arts (Core)	4	6	6
	‡Physical Education Electives	0	0	0
3	EIEI-401 Operations Research I			4
	EIEI-415 Human Factors I		4	
	EIEI-420 Work Measurement & Analysis	4		
	EIEI-422 Systems & Facilities Planning	4		
	EIEI-511 Applied Statistics II		4	
	PPRM-401 Estimating I		4	
	PPRM-511 Labor Relations in G.A.			4
	PPRT-308 Lithographic Press Problems			4
	PPRT-315 Ink and Color	4		
	*Liberal Arts (Concentration)	4	4	4
4	EIEI-482 Production Control		4	
	EIEI-503 Simulation	4		
	EIEI-550 Safety Engineering	4		
	PPRM-502 Financial Controls II			4
	PPRM-590 Senior Seminar	2		
	PPRT-406 Color Separation Photography	3		
	PPRT-500 Quality Control in G.A.		3	
	Professional Electives		3	3
	*Liberal Arts Electives	4	4	4
	Liberal Arts (Senior Seminar & Project)			2

‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

communications, literature, and fine arts appreciation.

Professional electives

These are usually selected from the electives listed below, but may also include any other School of Printing course. Students elect courses to suit their individual interests and objectives and to meet the credit¹ requirements of the newspaper program. Selection is subject to prerequisite requirements and availability of courses.

Recommended professional electives:

- PPRM-516 Marketing in the Graphic Arts
- ICSP-215 Programming Language—FORTRAN
- PPRT-323 Newspaper Color
- PPRT-324 Newspaper Composition
- PPRM-702 Computers in Management

Printing Systems—a program combining course work in Industrial Engineering and Printing

Walter A. Cambell, Coordinator

The printing industry needs people who have competency in both printing and industrial engineering. They must be able to collect data on plant operation, interpret the data, and make appropriate operational adjustments in line with those data. At the same time, they must be up-to-date with technical changes and new developments in the printing industry.

Working with computers, methods analysis, electronics, mechanics, and many different kinds of people are daily occurrences. The program in printing systems management integrates coursework in printing technology, printing management, industrial engineering, math/science, and general education to prepare

managers for the printing industry who are excellent problem solvers when analyzing printing plant operations. Most engineering courses in this program are based on computer applications.

Employing about 1.1 million people, the commercial printing industry has about 45,000 plants. Although many of these plants are quite small, about 9,000 of them would be of sufficient size to require the services of at least one graduate of the printing systems management program, and many of these firms have stressed the need for people educated in both printing and industrial engineering.

Printing and Applied Computer Science

William H. Birkett, Coordinator

In recent years computers have become widely used in most areas of the graphic arts industry. From typesetting to management information and from inking systems to automated bindery operations, computers in the graphic arts have created a need for personnel with an in-depth knowledge of both printing and computer science. Recognizing this need, RIT's School of Printing, in cooperation with the School of Computer Science and Technology, established the printing and applied computer science program for students who want to combine both fields.

Career opportunities

Graduates with a BS degree in printing and applied computer science have many career possibilities open to them. These include systems analysis, production control, engineering liaison, custom engineering, custom training, marketing support, purchasing, process engineering and production design, as well as general staff positions. These positions can lead to management responsibilities as production manager, director of computer technology and operations manager. These are all stepping stones to higher management positions.

Requirements for admission

Requirements for admission are given in the general information section of this bulletin. In addition, it is highly desirable that the applicant have a great interest in printing and computers, which can be shown by success in working on a school newspaper or yearbook, by working summers in a printing plant, or by general interest in graphic communications as well as in computers and their applications. High school graduation and coursework in

Yr.	Printing and Applied Computer Science Program	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	PPRM-210 Financial Controls I	3		
	PPRM-301 Appl. Computers in G.A.			3
	PPRT-201 Typography		3	
	PPRT-204 or -205 or -209 Flexography or Gravure or Screen Printing I		3	
	PPRT-206 Reproduction Photography		3	
	PPRT-207 Printing Plates			3
	PPRT-208 Lithographic Press	3		
	PPRT-213 Principles of Copy Preparation	3		
	PPRT-302 Composition Systems			3
	SMAM-251, 252, 253 Calculus	4	4	4
	*Liberal Arts (English Composition)	4		
*Liberal Arts (Core)		4	4	
†Physical Education Electives	0	0	0	
2	ICSP-241 Programming I—Algorithmic Structures	4		
	ICSP-242 Programming II Data Structures		4	
	ICSP-243 Programming III Design and Implementation			4
	PPRM-201 Intro. to Technical Writing	3		
	PPRM-403 Printing Production Management I		3	
	PPRT-311 Planning and Finishing			3
	SMAM-305 Calculus	4		
	SPSP-205, 206 Physics		4	4
*Liberal Arts (Core)	6	6	4	
†Physical Education Electives	0	0	0	
3	ICSS-305 Assembly Language & Programming	4		
	ICSS-315 Digital Computer Organization		4	
	ICSS-325 Data Organization & Management		4	
	ICSS-420 Data Communication Systems			4
	PPRM-302 Personnel Relations			3
	PPRT-315 Ink and Color			4
	PPRT-500 Quality Control in G.A.	3		
SMAM-351, 352 Probability & Applied Stat. I	4	4		
*Liberal Arts (Concentration)	4	4	4	
4	†ICSS-521 Microprocessors and Microcomputers	4		
	†ICSS-565 Computer Systems Selection		4	
	†ICSS-570 Intro. to Computer Graphics			4
	PPRM-401 Estimating I	4		
	PPRM-590 Senior Seminar	2		
	†PPRT-308 Lithographic Press Problems		4	
	†PPRT-406 Color Separation Photography	3		
	*Professional Electives		4	8
*Liberal Arts Electives	4	4	4	
Liberal Arts (Senior Seminar & Project)			2	

†Other approved upper level courses may be substituted giving depth rather than breadth, to meet individual needs, with approval of the program curriculum management team.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

elementary algebra, plane geometry, intermediate algebra, trigonometry, physics, and chemistry is required. Preference is given to those who have had additional work in physics, calculus, and computer usage.

Program of study

The School of Printing offers a four-year course leading to a bachelor of science degree in printing and applied computer science.

Approximately 20 percent of the coursework is in computer science, 30 percent in printing technology and management, 25 percent in math/science, and 25 percent in general studies.

A survey of employers in the graphic arts industry indicates the strong need for trained printing/computer specialists. As more and more graphic arts firms adopt computer technology, the need will grow for personnel who can develop and utilize equipment, interpret the graphic arts industry to the computer industry, apply computers to printing processes, manage computer systems, and work with vendors.

The cooperative plan of study is available in the School of Printing for students choosing this program. Graduates of two-year colleges are encouraged to transfer into the four-year program. Transfer students find that many of their two-year college credits are applicable toward the four-year degree. The first-year curriculum of this program and that of the Printing Systems Management programs are practically the same. Therefore, a student may transfer between the programs at that time with no loss of credit.

Professional electives

Students may elect professional courses in printing or computer science and technology to complete their elective course requirement.

Liberal arts electives

In general, the program requires that the student take at least one course each quarter from this area, which includes such subjects as economics, psychology, logic, ethics, language, communications, literature, and the fine arts appreciation.

College of Liberal Arts

Liberal Education In the Humanities And Social Sciences

Dr. Mary C. Sullivan, R.S.M., Dean

The College of Liberal Arts provides each student with a program of liberal education which develops his or her potential as an intellectually aware and responsible human being. It is, therefore, the foundation for the student's entire educational experience. As part of that broader experience which may be called the student's general education, this program of liberal education is distinguishable from the student's professional education in that its purpose is to nurture not specifically professional knowledge or skill, but each student's capabilities as a thinking, creating, and responsible person. Thereby enriched, RIT students will be all the better prepared for their professions and their lives, for they will be able to understand and interpret the problems, as well as the personal and social illuminations, found in the study of the many varied fields of human endeavor.

The program of the College of Liberal Arts, in which all RIT students participate, aims to accomplish the following goals with and on behalf of each RIT student:

- To develop the student's ability to think rationally, to read critically, to speak and write cogently and clearly;
- To develop the student's ability to analyze issues, to question assumptions, to investigate problems, and to seek solutions;
- To develop the student's understanding of their aesthetic values and their relevance to life;
- To expand the student's intellectual horizons by acquaintance with the western heritage;
- To develop the student's awareness of how the past invariably affects the present and the future;
- To promote the student's understanding of our society and how it interrelates with and is indebted to other cultures, thereby liberating the student from a narrow provincialism;
- To acquaint the student with knowledge of the basic principles

and dynamics of individual and group behavior in the many areas of human interaction;

- To develop the student's understanding of the nature of ethical values;
- To develop the student's awareness of the social, ecological, and ethical consequences of technology, and to foster a sense of responsibility to self and society;
- To develop the student's ability to bring together varied insights and methods of analysis for the purpose of better understanding complex human and social problems.

These goals are fostered throughout a student's education at RIT by the Liberal Arts curriculum which offers each student the opportunity to acquire these abilities and understandings through courses in the humanities and social sciences. In addition to regular courses a student may engage in independent study. These are planned by both student and instructor and provide an opportunity for the student to develop initiative and imagination in a flexible program of study.

Included in the college are degree programs in criminal justice and social work, which are described later in this bulletin. The close involvement of these with the humanistic studies of the other Liberal Arts divisions is an example of what the college is endeavoring to do throughout its curriculum, that is, to demonstrate the interrelation of all fields of learning.

The New Liberal Arts Curriculum

The new curriculum of study in the humanities and social sciences which all RIT students will pursue in the College of Liberal Arts may be understood by examining the following chart. Students in the various RIT associate and baccalaureate degree programs will complete this entire Liberal Arts curriculum or a modification of it, as applicable to their particular degree programs. Faculty academic advisors in the College of Liberal Arts and in other colleges of the Institute will assist students in interpreting the Liberal Arts curriculum as it applies to their particular degree program. The new Liberal Arts curriculum as outlined

here was approved in March 1981 and was implemented for all RIT students beginning in September 1982. The curriculum consists of fourteen courses (54 quarter credits) arranged in five groups:

1. English Composition
2. The core curriculum of six foundation courses in the humanities and social sciences (200-300 course numbers);
3. A disciplinary or interdisciplinary concentration of three advanced courses (400 course numbers);
4. Three advanced electives (400 & 500 course numbers);
5. The Liberal Arts Senior Seminar and Project.

Visually, the curriculum may be represented as follows:

In addition to **English Composition**, the specific **Core Courses** are:

Literature: required

Fine Arts: one required

Fine Arts: Visual Arts

Fine Arts: Musical Arts

Fine Arts: Film Arts

History: one required

History: Modern American

History: Modern European

Philosophy; or Science, Technology and Values: one required

Philosophy: Ethics

Philosophy: Critical Thinking

Philosophy: Selected Issues

Science, Technology, and Values

Social Sciences: two required

Introduction to Economics

American Politics, or

Ideology and the Political Process

Introduction to Psychology

General Sociology, or

Cultural Anthropology

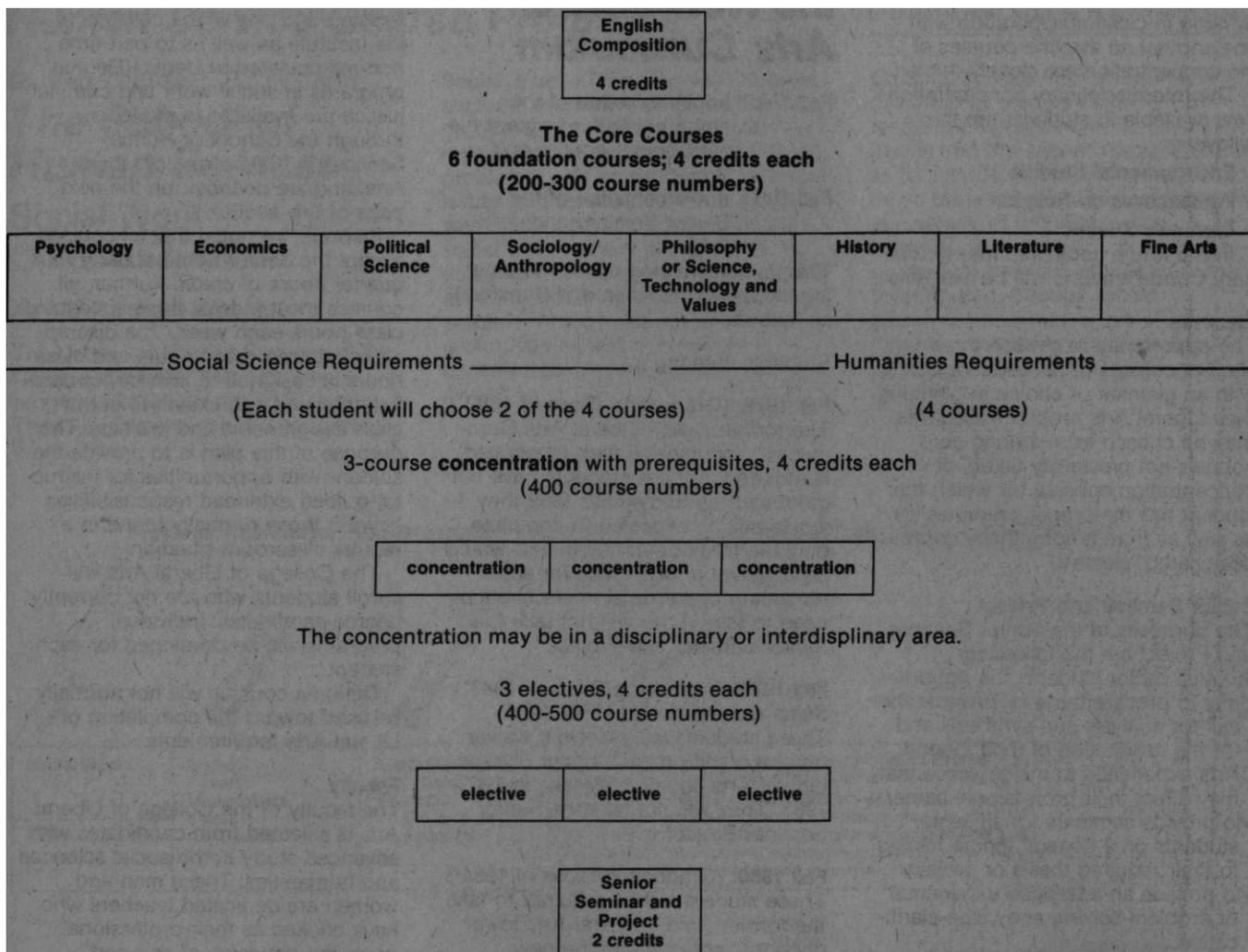
Concentrations

A concentration is a group of closely related advanced courses from which the students choose three. The students' liberal education is enhanced by such a concentration in the following ways:

1. Students achieve greater depth in learning because they have, where necessary, taken the prerequisites for these courses and because they benefit from the accumulated depth of the three-course concentration itself.

2. They achieve a kind of "minor" in an area of liberal education.

The Liberal Arts Curriculum



3. They are able to see cohesion among at least three of their advanced courses.

4. They are able to build on and to link new learning to their core courses.

5. They can develop more judgment and understanding in an area of the RIT or college goals.

A concentration is pursued in the third, fourth or fifth year of the baccalaureate programs and can take *either* of the following forms:

1. Disciplinary Concentration: three related courses in a single discipline leading to an in-depth knowledge of the methods, problems and achievements of that mode of inquiry.

2. Interdisciplinary Concentrations:

- three interdisciplinary courses on a single broad theme or topic;
- three related courses from different disciplines each one of which speaks to some aspect of a common area, subject, or topic;

c. a mixture of a. and b.

A concentration is composed of three courses chosen from the four to six courses that make up the concentration. The limited number of courses qualifying for the concentration increases the frequency with which they will be offered and the flexibility students will have in scheduling and registration.

The Liberal Arts concentrations available to RIT baccalaureate students will be the following:

Disciplinary Concentrations: Prerequisites and the specific courses qualifying for each of the following disciplinary concentrations will be determined by the Liberal Arts academic committees responsible for these areas of study. In each case, the student will choose three of the four to six courses that qualify for the concentration.

The Disciplinary Concentrations available to students are the following:

Language Communications
Economics
American Artistic Experience
History
The Social Impacts of Science and Technology
International Relations
Literature
Philosophy
American Politics
Psychology: Human Growth and Development
Sociology: American Society in Transition

Interdisciplinary Concentrations:

A number of interdisciplinary concentrations are clustered around the goals of the Institute and the college. These concentrations involve in-depth study of a topic or an area believed to represent an important realm of interdisciplinary learning for educated persons. Each of these interdisciplinary concentrations will consist of four to six courses from which a student

will choose three. The specific courses composing each concentration will be formulated by faculty working in close collaboration with one another so that the courses of the concentration are closely related.

The Interdisciplinary concentrations now available to students are the following:

- Environmental Studies**
- Perspectives on Religion**
- Women's Studies**

In the future additional Interdisciplinary Concentrations will be available.

Electives

The opportunity to choose three elective courses provides students with an element of choice in planning their Liberal Arts program. Electives may be chosen from among core courses not previously taken, or concentration courses for which the student has the proper prerequisites, as well as from among those courses designated "elective."

Senior Seminar and Project

The purposes of the Senior Seminar and Project are the following:

- to give senior students the opportunity to prepare these or projects that call for analysis and synthesis and for the application of their Liberal Arts experience to major issues that may affect their professional careers;
- to provide seminars for all senior students on a general theme related to their required thesis or project;
- to provide an advanced experience of problem-solving and value-clarification.

The Senior Seminar will be designed and implemented on an annual basis by a Seminar Committee of faculty selected a year in advance by the dean and the staff chairpersons. The main focus of the Senior Seminar will be the formulation and direction of the senior theses or projects. In support of this Seminar Committee may plan in advance a general theme for each academic year, and may choose related common texts to be read by the students in the Seminar; major lectures on topics related to the theme may also be scheduled.

The course will last one quarter and can be taken anytime in the senior year.

Selected faculty of the various colleges of the Institute may be invited to participate as consultants in the seminars.

Implementation of the New Liberal Arts Curriculum

Fall 1982: Implementation of the entire curriculum except the Senior Seminar and Project.

Fall 1983: Implementation of the Senior Seminar and Project

This implementation applies to entering students (freshmen and transfers) as follows:

Students entering in:

Fail 1978: (Graduating Class of 1982*) The former ("old") Liberal Arts Curriculum" (courses as then prescribed) is required. If these students have not graduated by September 1982 they would still be expected to complete only the former curriculum and would have waiver of *one* credit for each remaining upper division elective they need to take. They will not take the Senior Seminar and Project.

Fall 1979: (Graduating Class of 1983*) *Same requirements as Fall 1978.* These students will receive a waiver on one credit on each upper division Liberal Arts course they take in 1982-1983. They will not take the Senior Seminar Project.

Fall 1980: (Graduating Class of 1984*) These student will be required to take the former ("old") Liberal Arts lower division** courses and the new advanced Liberal Arts curriculum as it applies to their degree program:
3 concentration courses
3 electives
Senior Seminar and Project

Fall 1981: (Graduating Class of 1985*) *Same requirements as Fall 1980.* These students are of course free and encouraged to choose Liberal Arts lower division courses in the light of the new curriculum as applicable to their degree programs and as needed for the concentration of advanced courses they may later wish to pursue.

Fall 1982 and Fall 1983: (Graduating Class of 1986 and 1987*) The entire new Liberal Arts curriculum will apply to these students, as this curriculum is applicable to their degree programs.

Registration

The courses of the College of Liberal Arts are available to students registered in one of the colleges of the Institute as well as to part-time non-matriculated students. (Degree programs in social work and criminal justice are available to students through the School of Human Services in the College of Liberal Arts, and are described on the next page of this section.)

It should be noted that all courses except the Senior Seminar carry *four quarter hours of credit*. Further, all courses meet at least three scheduled class hours each week. The discrepancy between credit hours and class hours is designed to provide for carefully planned and extensive out-of-class assignments and projects. The purpose of this plan is to provide the student with opportunities for instructor-guided extended responsibilities beyond those normally found in a regular classroom situation.

The College of Liberal Arts will enroll students who are not currently degree candidates. Individual * programs will be developed for each student.

Diploma courses will not normally be used toward the completion of Liberal Arts requirements.

Faculty

The faculty of the College of Liberal Arts is selected from candidates with advanced study in the social sciences and humanities. These men and women are dedicated teachers who have chosen as their professional goals the provision of rich and meaningful learning experiences for the student and continuing growth in their scholarly fields.

Summer Session

Under the auspices of the Institute Summer Session, the College of Liberal Arts offers a number of courses each summer in Language and Literature, Science and Humanities, and Social Science.

Information concerning summer courses to be offered can be obtained by contacting the director, Summer Session, or by requesting the Summer Session Bulletin from the College of Continuing Education or **RIT Office of Admissions
One Lomb Memorial Drive
P.O. Box 9887
Rochester, New York 14623**

College of Liberal Arts: Human Service Degree Programs

Dr. Mary C. Sullivan, R.S.M., Dean

The School of Human Services

Social Work
Criminal Justice

Arnold J. Berman, Director

The School of Human Services in the College of Liberal Arts offers two programs leading to the B.S. degree. They are Criminal Justice and Social Work.

Social Work—This program prepares students to assist individuals, families, groups, and communities in the identification and solution of problems, with an awareness of social issues and services. A full-time, 20-week field instruction placement in a social work agency provides the students with an opportunity to relate academic learning to professional practice through relevant individual, group, family, and community experiences. Degree granted: BS 4-year.

General information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

Criminal Justice—The program is designed to prepare students for responsible positions in criminal justice and the security sector, as well as to provide continuing education for those professionals already employed in a variety of criminal justice agencies. The generic nature of the curriculum provides individual career tailoring and, through a field placement program, offers unique opportunities for practical on-the-job learning experiences. Degree granted: BS 4-year.

Freshman Admission Requirements			Transfer Admission with Junior Standing	
Program	Required High School Subjects	Desirable Elective Subjects	Two-Year College Programs	Desirable minimum G.P.A.
Social Work	English 4 years Mathematics 1 year	Social Sciences Humanities, e.g. History Government Economics	Junior standing is offered for an associate's degree in human services, criminal justice or in another appropriate major. Holders of liberal arts or other two-year degrees are also admitted to the programs and transfer credit is given to the fullest extent possible. Transfer students can be given credit for professional courses required in the first two years if they have had comparable coursework elsewhere.	2.0
Criminal Justice	Any Science 1 year			

Criminal Justice Program and Career Opportunities

The bachelor of science degree program in criminal justice is designed to prepare students for entrance into the many careers within the criminal justice system and the public and private security sectors, as well as to provide continuing education for men and women already pursuing professional criminal justice or security careers.

The curriculum is structured in such a way as to provide the student with the basic skills of all facets of the criminal justice system. Areas of study include law, law enforcement, courts, corrections, as well as the examination of the issues of crime prevention and resocialization. Through the required professional courses, the opportunity for a

thorough understanding of the broad field of criminal justice will be provided for the student. Through the professional electives, the student will have the opportunity in a particular area within the criminal justice field or the security area, as well as to acquire advanced auxiliary skills now needed in these professional areas.

It should be emphasized that in both the professional courses and the liberal education courses, students will be stimulated to develop their capacities for sound judgment and their decision-making skills. Through careful academic guidance, they will be encouraged to design a well-balanced program of study leading to professional competencies as well as to breadth in personal development.

A particularly important aspect of the program is the supervised field education placement, a supervised internship in the criminal justice system.

These specific goals are undergirded by a program that pursues the following objectives:

1. To broaden the social, cultural and political perspectives of students.
2. To develop an interdisciplinary and cross-cultural perspective of the area of criminal justice, with special emphasis upon the humanistic perspective.
3. To prepare personnel in terms of broad educational experience in a work setting as well as to develop specific skills through the field work experience.
4. To inquire into the specific areas of juvenile delinquency, white collar crime, political crime, discretionary arrest, loss prevention security, corporate crime, the problem of a dual system of justice, crime without victims, new and innovative programs of rehabilitation and crime control, and majority-minority relations.

Career Opportunities

Career opportunities in the field of criminal justice are many. The *Occupational Outlook Handbook* prepared by the Bureau of Labor Statistics indicates a projected need

for substantial numbers of new employees in the criminal justice system. Criminal justice is a rapidly changing and expanding field. Students who graduate from the program will find career opportunities in police work, courts, prisons, probations departments, parole, halfway houses, community treatment centers, customs, narcotics control, drug treatment, data processing, youth service programs, counseling, crime control planning and research.

Further, the program offers a concentration in security. The *Task Force Report on Private Security* of the National Advisory Commission on Criminal Justice Standards and Goals projects nearly two million private security positions in the United States and a growth rate of over 100 thousand new positions a year.

Curriculum

The curriculum is designed to prepare students for entrance into both the criminal justice system and the security sector, and to provide continuing education for those already pursuing careers in these areas. If a student hopes to enter graduate school in the future, this program also serves as an excellent foundation for further study in criminal justice, security, law, public administration, human services, criminology and sociology.

Through required professional courses, students gain a thorough understanding of the criminal justice field. Elective courses will enable them to specialize in particular areas within the field. Concentrations in the form of courses in business, social work, photography and computer science, also are available as part of the program. Students receive careful academic guidance in designing a well-balanced program of study leading to professional competence and breadth in personal development.

Field Placement

During the senior year, students spend 10 weeks working in one of a variety of agencies in criminal justice or security. This internship gives them the chance to witness and participate in the activities of an established agency. This field experience allows students to experience directly the realities of working within the system. Some of the traditional agencies in which students are placed during the internship include state and local law enforcement, probation and parole offices, state and local correctional institutions, halfway houses, adult and juvenile counseling programs, public defender's or district attorney's

offices, and retail and corporate security agencies.

Faculty

The criminal justice faculty are highly qualified individuals with advanced degrees and extensive practical experience in criminal justice or related areas. Among the full-time faculty are experts in law enforcement, institutional corrections, probation and parole, criminal law, civil law, security, and research. Thus, the criminal justice faculty are a source of guidance as well as instruction. They assist students in their specific interest in criminal justice and provide advice on career planning.

The criminal justice program allows students the chance to participate in independent study for academic credit, if they are doing well in their regular studies. Such independent study helps build confidence and develop initiative. Projects may vary from one quarter credit hour to 8 quarter credit hours. This credit may be used to replace criminal justice upper electives.

Student body

The criminal justice student body is composed of men and women from the several regions of New York State and from a number of areas in the northeast, midwest, and central atlantic states. Approximately 160 students are matriculated in the program.

Principal field of study

For students matriculated in the Criminal Justice Program, the principal field of study includes all courses offered by the Criminal Justice Program and/or the equivalent CCE courses. Matriculated students not maintaining a 2.0 cumulative grade point average in their principal field of study are subject to academic probation or suspension according to Institute policy.

Professional elective options

The following list of professional electives is illustrative of those offered periodically within the Criminal Justice Program. These courses are grouped under only one general heading, even though many are appropriate for students with diverse career objectives.

A student selects professional elective courses with the advice of his/her faculty advisor.

One of the strengths of the criminal justice program is that students may elect to take up to fifty percent of their professional electives from other

designated colleges in the Institute, thus enabling them to develop an additional concentration in a related professional area applicable to their career goal.

Professional Elective Options: Criminal Justice

Corrections

Constitutional Law
Legal Rights of Convicted Offenders
Correctional Administration
Social Control of Deviant Behavior
Counseling in the Criminal Justice System
Alternatives to Incarceration
Sentencing Process

Criminology

Organized Crime
Social Control of Deviant Behavior
White Collar Crime
Victimless Crime
Women and Crime

Law

Introduction to Para Legals
Constitutional Law
Legal Rights of Convicted Offenders
Social Control of Deviant Behavior
Evidence
Court Administration
Comparative Criminal Law
Sentencing Process
Victimless Crime
Advanced Criminal Law
Legal Aspects of Security

Law Enforcement

Administrative Concepts of Law
Enforcement
Organized Crime
Investigative Techniques
Constitutional Law
Civil Disobedience and Criminal Justice
White Collar Crime •
Evidence
Police Community Relations
Victimless Crime

Security

Organized Crime
Investigative Techniques
White Collar Crime
Institutional Security
Physical Security and Safety
Retail Security
Emergency and Disaster Planning
Security Management
Legal Aspects of Security
Seminar in Security

Professional Elective Options: Related Professional Areas

With the approval of the faculty advisor, a student may select an additional professional elective concentration from career-relevant courses offered in the following colleges:

College of Business

College of Graphic Arts and Photography

College of Liberal Arts-Social Work

College of Applied Science and Technology—School of Computer Science and Technology

Therefore, students in the Criminal Justice program may develop special concentrations in:

Accounting

Computer Science

Management

Photography

Social Work or its related concentrations

Social Work Program Offered in Response to Community Need

Since its inception in 1829, Rochester Institute of Technology has had a long tradition of community service. Its program in social work is a response to the needs of communities and is viewed as a continuing step in RIT's community commitment.

The Social Work Program is conceived as a broad generic major to prepare baccalaureate-level social workers and is designed to respond to the trend in the profession toward a wider variety of social work to practice roles. This trend has received wide support among social work employers, and the National Association of Social Workers and the Council on Social Work Education have officially supported the development of baccalaureate professional curricula. The bachelor of science degree program is the initial entry into the field of social work, and may also prepare students who wish to continue their professional education on the graduate level.

Yr.	Bachelor of Science in Criminal Justice	Quarter Credit Hours		
		FALL	WTR.	SPG.
1	GCJC-201 Fundamentals of the Criminal Justice System	4		
	3 Liberal Arts courses	12		
	GCJC-203 Criminology		4	
	3 Liberal Arts courses		12	
	GCJC-303 Law Enforcement in Society			4
	GCJC-301 Fundamental Concepts of Criminal Law			4
	1 Mathematics course (e.g. College Algebra)			4
1 Liberal Arts course			4	
2	GCJC-304 Judicial Process	4		
	GCJC-207 Corrections	4		
	*1 Computer Science course (ICSS-200 or ICSS-202)	4		
	1 Science/Math/Computer Science course	4		
	GCJC-309 Juvenile Justice		4	
	1 Liberal Arts course		4	
	*1 Liberal Arts/Math/Science/Computer Science course		4	
**1 Professional Elective		4		
GCJC-204 Introduction to Public Administration			4	
1 Liberal Arts course			4	
1 Open Elective			4	
**1 Professional Elective			4	
3	GCJC-526 Seminar in Law Enforcement	4		
	GCJC-528 Etiology of Crime	4		
	2 Liberal Arts courses	8		
	GCJC-207 Seminar in Corrections		4	
	2 Liberal Arts courses		8	
	**1 Professional Elective		4	
	GCJC-401 Scientific Methodology			4
1 Liberal Arts course			4	
**2 Professional Electives			8	
4	GCJC-403, 404 Field Experience and Seminar	8		
	GCJC-541 Field Research	4		
	1 Liberal Arts course		4	
	Liberal Arts: Senior Seminar		2	
	*1 Liberal Arts/Math/Science/Computer Science course		4	
	**2 Professional Electives		8	
	GCJC-514 Planning & Change			4
*1 Liberal Arts/Math/Science/Computer Science course			4	
1 Open Elective			4	
**1 Professional Elective			4	

*Selection from Liberal Arts, Natural Science, Mathematics, or Computer Science.

**Selection for a cognate concentration may be made for 50% of the Professional Electives in the areas of Liberal Arts, College of Business, College of Graphic Arts and Photography, Social Work, Computer Science.

Accreditation

The bachelor of science degree program in social work is accredited by the Council on Social Work Education.

Career Opportunities

Because the curriculum leading to the BS in social work contains a variety of social science offerings, the student will be able to choose a broad spectrum of career goals in addition to the possibility of a variety of graduate programs related to the helping services.

Graduates of the RIT social work program are employed in agencies providing the services to the following types of clientele: alcohol and drug abusers, delinquents, single parents, those on probation and parole, those in family court situations, people with emotional problems, mentally retarded people, hearing impaired and other disabled persons, children and their families, and aging people.

Employment is also available in agencies that provide such special

services as community planning and intervention, metropolitan planning, rural social services, hospital social services, corrections, school social work, day care, legal services, and human service education.

Principal field of study

For students matriculated in the Social Work program, the principal field of study is defined to be: (1) required social work courses (including field placement); (2) professional electives; and (3) required service courses offered through the College of Liberal Arts, College of Business, College of Science, and College of Applied Science and Technology.

Matriculated students not maintaining a 2.0 cumulative grade point average in their principal field of study are subject to academic probation or suspension according to Institute policy.

Curriculum

The curriculum leading to the baccalaureate degree in social work rests

on the following general areas of content. Most students entering RIT with two years of previous undergraduate study can complete the Social Work program in seven academic quarters (two academic years).

1. Foundation Courses

Taken within first two years, foundation courses define the role of the professional social worker, explore the history of the social welfare system, basic theory and knowledge about families, groups and communities, and examine the structure and the functions of the system of social services.

2. Skills Courses

These include a series of three Methods courses offered before and concurrently with field instruction designed to provide students with basic generic interventive techniques and strategies fundamental to professional practice with individuals, groups, families and the community. Emphasis is placed in the development of interventive skills and on the differential use of common principles in a diversity of situations requiring social work intervention.

3. Field observation, volunteer opportunities, and field instruction

A continuous range of experiential learning opportunities is provided throughout the curriculum.

Observation and volunteer work in a social, governmental, or educational institution is encouraged in the first and second years.

A unique feature of RIT's social work program is its 600 hours of full-time agency field instruction, which usually occurs in the third year. Students must meet specific knowledge, attitudinal and skill criteria as set forth in the Field Placement Policy before advancing to a field placement (see the Social Work Program Student Handbook for a full statement of this policy).

Further "hands-on" opportunities for field experience may be available in the fourth year in connection with the Senior Research course. The Independent Study option also may be used to extend experience in the field. All work in this area will be under supervision of RIT faculty.

4. Minority Content

Course content on minority populations is an essential and required part of the social work curriculum. The content is provided in a sequence of three courses that address the history of social discrimination, black culture, and hispanic culture, and is also

Yr.	Bachelor of Science in Social Work	Quarter Credit Hours		
		FALL	WTR.	SPG.
1	GSWS-210 The Professional Social Work Role	4		
	GSWS-302 Social Welfare: History		4	
	GSWS-211 Social Welfare: Structure & Function			4
	GSWS-215 The Family from a Social Work Perspective			4
	GS Sociology Requirement		4	
	GSSP-203 Psychology of Childhood & Adolescence		4	
	Economics Requirement		4	
	GSHH-547 History of Social Discrimination			4
	Four Liberal Arts Core Courses	12		4
	Physical Education	0		
2	GSSS-527 Black Culture	4		
	GSSS-526 Hispanic Culture		4	
	GSWS-315 Assessing Community Needs	4		
	GSWS-411 Interviewing and the Helping Relationship (Methods I)			4
	GSWS-356 Group Theory in Social Work			4
	Two Professional Electives		4	4
	Biology Requirement		4	
	SMAM-204 College Algebra (or Statistics)			4
	Three Liberal Arts Core Courses	8	4	
	Physical Education	0		
3	#GSWS-421 Field Placement I	5		
	#GSWS-422 Field Placement II		5	
	GSWS-433 The Supervisory Process (Seminar)	4		
	GSWS-434 Managing Community Services (Seminar)		4	
	GSWS-412 Assessment and Problem Solving (Methods II) ..	4		
	GSWS-413 Intervention Strategies (Methods III)		4	
	GSWS-533 Social Welfare Policy and Planning			4
	One Professional Elective			4
	ICSS-200 Survey of Computer Science (or ICSS-202)			4
	One Liberal Arts Elective			4
4	GSWS-312 Research Methods	4		
	GSWS-535 Senior Research		4	
	GSWS-532 Professional Issues			4
	Three Professional Electives	4	4	4
	***Management Elective			4
	†Five Liberal Arts Electives	8	8	4
	Liberal Arts Senior Seminar	2		

#Full-time field instruction in social work agency.
 ***Elective course taken in the College of Business.
 †Includes Liberal Arts "concentration" of three courses.
 Note: Transfer credit may be given, when appropriate, for any courses with the exception of the methods sequence (GSWS-411, 412, 413). Field Instruction I and II (GSWS-421, 422), field seminars (GSWS-433,434), Social Welfare Policy and Planning (GSWS-S33), Professional Issues (GSWS-S32), and Senior Research (GSWS-S35).

integrated into all other social work courses. In addition, Spanish language courses, manual language courses and a course in sexism are available.

5. Social policy and the profession of social work

This area includes material on social welfare, sources of social conflict, the involvement of government in social welfare, voluntary social welfare services, decision making economic factors affecting poverty, employment levels, guaranteed annual income, personal social services, and the democratic-humanitarian values of our society as these may emerge in social welfare practice.

In addition, content on the characteristics and attributes of social work as a profession will be closely examined. The varying roles of the social worker including his or her relationship to clients and agencies will be studied, as well as the various philosophical and ethical bases of action, the motivation required for

effective delivery of service, career opportunities, organizational settings, group identification and such issues as bureaucracy versus individualism.

6. Human behavior and the social environment

A broad spectrum of courses is offered in the social sciences and humanities.

Liberal education opportunities assist students in their intellectual, aesthetic, and social development, stimulate their curiosity, and sharpen their ability to engage in independent inquiry. Course work in human behavior is designed to help students become aware of alternate approaches to human problems, and to see their role in a wider philosophical and historical perspective.

These courses promote a greater awareness of psychological, social, political, and economic issues so that the student's professional training in social work is supported by a solid foundation of knowledge and theory.

In addition, these academic opportunities will help students to develop those techniques indispensable to good written and oral communication and to a vigorous intellectual independence.

7. Management-related courses

Within the profession of social work, issues of agency and service management have consistently and increasingly been emphasized. Management knowledge and skill have become essential ingredients of professional competence. This special emphasis in the curriculum assures social work students of proficiencies directly pertinent to the needs of modern agencies and, consequently, to employment possibilities.

8. Research

The Research sequence in the curriculum provides students with an understanding of basic research methods, an optional course in statistics (recommended for students planning on graduate study), an introduction to computer science, and "hands-on" experience in designing and carrying out a research project.

9. Professional electives and Concentrations

Professional electives are courses of choice based on the student's announced career goals, and therefore are different for each student. The Social Work Program and other programs at RIT offer a wide variety of course opportunities for the student to explore and develop social work skills in such specific social issue areas as:

- poverty
- effects of technology on human social life;
- management of human services to address specific human needs;
- working with the disabled, especially hearing impaired people;
- application of the computer to meeting human needs;
- the unique, continuing and disturbing issues of Black and Hispanic minority people in our society;
- the puzzling and value-charged issues of alcohol and drug abuse;
- the increasing interrelationship of human social needs and the legal system
- the growing focus on the roles of the family and how it effects changes in childhood, and therefore, adulthood;

Yr. BS degree in Social Work
Transfer Curriculum for Students with an Associate Degree Quarter Credit Hours

		FALL	WTR.	SPG.	SMR.
3	GSWS-210 The Professional Social Work Role	4			
	GSWS-215 The Family From a Social Work Perspective ...	4			
	GSWS-302 Social Welfare: History	4			
	GSWS-315 Assessing Community Needs		4		
	GSWS-356 Group Theory in Social Work		4		
	GSWS-411 Interviewing and the Helping Relationship			4	
	GWSW-211 Social Welfare: Structure and Function			4	
	GSWS-412 Assessment and Problem Solving (Methods II)				4
	##GSWS-421 Field Instruction I				5
	GSWS-433 The Supervisory Process (Seminar)				4
	Two Professional Electives		4	4	
	*Two Liberal Arts Electives	4	4		
*Liberal Arts (Concentration)			4		
‡Physical Education	0	0	0		
4	GSWS-413 Intervention Strategies (Methods III)	4			
	GSWS-422 Field Instruction II	5			
	GSWS-434 Managing Community Services (Seminar)	4			
	GSWS-534 Research Methods		4		
	GSWS-533 Social Welfare: Policy and Planning		4		
	GSWS-535 Senior Research			4	
	GSWS-532 Professional Issues			4	
	Two Professional Electives		4	4	
	*One Liberal Arts Elective	4			
	*Liberal Arts (Concentration)		4	4	
*Liberal Arts (Senior Seminar)				2	

* Transfer students holding an appropriate two year degree (e.g., an Associate Degree in Human Services) will be admitted to the Transfer Curriculum. It is recommended that such students prepare themselves by successfully completing equivalent courses in the following areas during their first two years of college: Introduction to Psychology, Introduction to Sociology, Introduction to Economics, English Composition, Developmental Psychology, Science, Math, Minority Cultures or Spanish language.
##Full-time Held placement in social work agency.
‡See Pg. 23 for Policy on Physical Education.
*See Pg. 97 for Liberal Arts requirements.

Note: Transfer for credit may be given, when appropriate, for any courses with the exception of the methods sequence (GSWS-411, 412, 413), Field Instruction I and II (GSWS-421, 422), field seminars (GSWS-433, 434), Social Welfare: Policy and Planning (GSWS-533), Professional Issues (GSWS-532- and Senior Research (GSWS-535)

- the delivery of social services to rural areas;
- self-awareness and personal growth;
- sexism and sexual identity issues in our society;
- working with aging people;
- advocacy with clients in dealing with social institutions;
- and mental health services

Students desiring to focus their professional electives in a specific area of study may develop a professional concentration. Basically, a concentration is a sequence of at least three professional elective courses, offered within the Social Work Program or in other programs focused on a single unified field of

service. Professional concentrations include:

- Deafness
- Alcoholism and Substance Abuse
- Families and Children
- The legal System (Criminal Justice)
- Management
- Computer Science
- Advanced Field Placement

Course Descriptions

For a description of course content and sequencing, please request the Courses catalog from the Admissions Office.

College of Science

Dr. John D. Paliouras, Dean

The undergraduate in the College of Science at RIT gets a different kind of education than at any other school in New York State.

Our program combines work-study with the potential for undergraduate research and a strong faculty-student interaction brought about by the smallness of the various departments and the resulting classes. Our main interest is high quality teaching at the undergraduate level.

The industrial work-study program, which pays a salary, enables students to obtain this high quality education at a cost comparable to a public education. In addition, it allows students to see what industry is all about early in their undergraduate training rather than waiting until after graduation.

Our stress is on the practice of science in the real world, not just classroom lecturing. We're career-oriented and train students for where the jobs are.

In addition to the educational work-study experience, the science student at RIT is exposed to research by having the opportunity to work with a faculty member on a project. A number of these projects have resulted in publication in scientific literature.

We seek faculty members with a proper blend of interests in both teaching and research. Research permits the faculty member to practice his profession and stay up-to-date and provides projects for our students.

The modern trend in undergraduate education is to expose the student to the methods of undertaking a research project. This is as important to a science education as many of the lecture-type courses students are required to take as part of their major programs.

The College of Science has an ideal size to provide quality undergraduate education. It has 80 faculty members in the sciences and mathematics, most of whom hold the Ph.D. degree. This size provides faculty with a variety of expertise in sciences and mathematics, so a student can find a faculty member with whom to interact regarding a particular interest.

When the college moved into the new science building in 1968, it was very fortunate that RIT received about a million dollars in federal funds to permit the purchase of a wide variety of scientific instrumentation. Each year, new funds are expended in

replacing and updating our equipment. As a result, we are as well-equipped as some universities that stress graduate education, but in our case this equipment is used by the undergraduates.

Our faculty realizes its responsibility to maintain up-to-date curricula so that our graduates will fit into the current needs of industry as well as meet the requirements of graduate schools. This challenge includes not only modern trends in science, but such things as the use of computers and sophisticated, modern lab equipment.

Many high school students don't know which of the sciences they wish to major in. We encourage such students to come to RIT as undeclared science majors. Programs can be designed which will enable them to postpone a definite commitment to a particular major in science without any loss of time toward a degree. This option has been attractive to quite a few high school students.

The best way to evaluate college programs is the success of the graduates. Our graduates have been very successful in both industry and graduate schools. We have found, for example, that they are doing exceedingly well in passing Ph.D. qualifying exams early in their graduate programs. In terms of industrial success, employers report that our graduates not only have good training for industry, but because of their work experience, immediately fit into the industrial way of life with a high degree of initiative and seriousness of purpose.

During the 20 years of its history as an integral academic unit of RIT, the College of Science has developed into a first rate educational center which not only services and supports nearly all of RIT's programs but offers a great variety of its own major programs.

In addition to the four basic programs leading to a bachelor's degree in biology, chemistry, applied mathematics and physics, the college has developed an associate's degree program in chemical technology, six bachelor's degree programs in biomedical computing, computational mathematics, medical technology, nuclear medicine technology, ultrasound technology and biotechnology, and three master's programs in chemistry, clinical chemistry and materials science and engineering.

A student who is interested in medicine, dentistry, optometry, podiatry, osteopathy, veterinary science, or any other professional career can select any major in the College of Science. We don't have a formal "pre-med" program for these careers because we believe it's wiser for a student to have a strong education and a degree in a specialized field to fall back on if he or she decides not to go on to medical or professional school. Our Pre-Professional Advisory Committee advises and assists students who choose to go on to a professional school, and we're proud of our success in placing qualified graduates in some of the most prestigious medical and professional schools in the country.

The programs

The College of Science has undergraduate programs in biology, biotechnology, chemistry, applied mathematics, computational mathematics, physics, chemical technology, medical technology, nuclear medicine technology, ultrasound technology, and biomedical computing. As a major in any of these programs, a student may prepare for a professional school through the advice and counsel of the College's Pre-Professional Advisory Committee.

Choice of majors

A student may enroll in the College of Science as a science major without designating a specific major. In program will be designed to meet the student's individual needs and goals. The program can be flexible and cover a number of introductory college level courses in science.

Prior to the end of the first year, the student should decide upon a specific major and may then enroll as a candidate for a degree in one of the departments: biology, chemistry, mathematics, physics or clinical sciences.

Declared major

The student who has definitely decided upon a specific major field will indicate a choice when applying, and may therefore be enrolled as a candidate for a degree in that department upon admittance by the Institute. A program will be designed to prepare the student for competency in his or her chosen profession.

The programs in the College of Science are sufficiently flexible to

allow the student to obtain an in-depth background in a discipline other than the chosen major. A wide selection of elective courses in such areas as business, chemistry, photography, computer science, physics, mathematics, and biology, make it possible to take a series of courses which could result in an elective concentration (i.e., minor) in an area related to, but not required for, the major.

To illustrate, the following is a typical distribution of courses for the first year as an undeclared science major.

Each of the departments has majors programs operating on a five-year cooperative work/study plan, and the Chemistry Department has a three-year cooperative program in chemical technology.

Graduates of the five-year programs in the College of Science receive a bachelor of science degree. These graduates qualify for professional work in processing and laboratory operations, research and experimental work, or supervision of technical projects, as well as for graduate education leading to the master of science or doctor of philosophy degrees.

The transfer plan

Students with associate's degrees in a comparable program from other educational institutions normally can expect to transfer at the junior year level. Transfer credit is granted for those studies which parallel Institute courses in the curriculum for which admission is sought.

Transfer students applying for a program at RIT, similar to their previous college study, are expected to present an accumulative average of "C" or above. Students making significant program changes will be evaluated on the probability of their success in the new program, with the grades earned in previous study only a part of the criteria.

It is also RIT policy to grant credit by examination in lieu of course credits, for subjects that parallel the objectives and content of courses for which advanced credit is being sought. Contact the director of admissions for policy and procedures.

The cooperative plan

The school year is divided into four 11-week quarters, Fall, Winter, Spring, and Summer. Students in the biology, mathematics, biomedical computing and physics programs attend classes during the fall, winter, and spring for the first and second year. At the

Yr.	Undeclared Science option	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SBIB-205, 206, 207 Gen. Biology Lab	1	1	1
	**SBIB-201, 202, 203 General Biology Lec.	3	3	3
	**SCHC-211, 212 General Chemistry Lec.	3	3	
	SCHO-230 Intro. to Organic Chemistry			3
	SCHA-261, 262, 263 Intro. to Chemical Analysis	3	3	3
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	**SPSP-311, 312 University Physics I, II		5	5
	*Liberal Arts (Core)	4	4	4
	‡Physical Education	0	0	0

**Any two of these three in a given quarter.
 ‡See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

beginning of their third year, employment arrangements are made for students in the five-year cooperative programs. Some students attend classes during the Fall Quarter while the rest work on their cooperative jobs. The two groups change at the beginning of the Winter Quarter, when those who were on co-op attend classes and the others work on co-op jobs. This interchange of the work/study periods continues throughout the remainder of the third, fourth and fifth years.

The accompanying diagrams illustrate the cooperative schedule as it applies to students in the five-year programs. Students in the five-year chemistry program participate in the co-op program as described above except their co-op experience starts at the beginning of their second year, Chemistry majors thus spend one year on campus and then spend alternate quarters in full-time study and full-time co-op employment for the next four years.

Chemical technology

Candidates enrolled in the chemical technology program spend their initial quarter in classes at the Institute. At the completion of the first quarter, the class is divided into two sections and each section alternates between academic and industrial quarters for the duration of the three-year program.

The accompanying diagram illustrates the cooperative schedule for the chemical technology program.

Teacher certification option

Students majoring in biology, chemistry, mathematics and physics can participate in a teacher preparation program offered jointly by Rochester Institute of Technology's College of Science and the University of Rochester's School of Education and Human Development. The professional semester is taken at the University of Rochester during fall term of the senior year.

Activities include a seminar on "secondary teaching" methods followed by a student teaching experience.

Students completing the program qualify for a N.Y. State teaching certificate for grades 7-12.

Admission at a Glance: College of Science Programs

General information on RIT's admission requirements, procedures and services is included in detail on pages 13-14 of this Bulletin.

Undergraduate programs are offered in the areas listed below.

The programs offered are flexible enough so that students can take courses to meet their individual needs and, at the same time, obtain a quality career-oriented education. Students can take electives in such courses as computer science, photography, or business.

The co-op plan of this college is ideal for students eager to increase their chances for employment after graduation.

Biology—Prepares students for graduate study in the biological disciplines and medical arts. Also for occupations in medical research labs, food and agriculturally related industries, pharmaceuticals and environmental organizations. Degrees granted: AS-2 year; BS-4 or 5 year, depending on co-op.

Biotechnology—Biotechnology is defined as the use of living organisms or their components in applied research and industrial processes to meet fundamental needs of society in agriculture, food production, pharmaceuticals, chemistry and energy. Graduates will be prepared to work as technicians or assistant scientists in biotechnology or to enter advanced degree programs in that field or in related areas such as molecular biology, genetics, microbiology, and physiology. Degree granted: BS-4 year.

Biomedical Computing—Graduates are prepared to assume positions on the staffs of medical and/or industrial laboratories or hospital computer departments, or to work with physicians and other health professionals in a clinical environment and on medical research projects. Degree granted: BS-5 year*

Chemistry—Graduates qualify for higher level positions in several fields of chemistry including professional industrial work in processing and laboratory operational research and experimental work, supervision of technical projects, managerial positions and graduate study. Degree granted: AS-3 year; BS-5 year.

Chemical Technology—A three-year co-op curriculum that leads to direct industrial employment. Emphasis is on the qualitative and quantitative analysis skills and knowledge to perform industrial laboratory tasks. Degree granted: AAS

Applied Mathematics, Computational Mathematics—Graduates qualify for positions in industry and business as well as graduate study. A combination of mathematics courses and electives in math-related areas and/or computer science greatly enhances employment opportunities. Degree granted: AS-2 year, BS-4 or 5 year, depending on co-op.

Medical Technology—Prepares students for employment in hospital, industrial-medical, or research laboratories. Students spend three years at RIT and one year in an approved hospital internship. Degree granted: BS-4 year*.

Ultrasound Technology—Prepares students for positions in hospitals, clinics, research and administration. Graduates are trained in abdominal, obstetrical and gynecological ultrasound scanning techniques and procedures. Baccalaureate option—three years at RIT and one year of clinical internship. Certificate option—one year of clinical internship. Degree granted: BS-4 year. Certificate-1 year.

Nuclear Medicine Technology—Prepares students to use radioactive materials in the diagnosis and treatment of disease. Graduates prepare and administer doses, operate nuclear medicine instruments, position patients for diagnostic procedures, and prepare information received from the tests for the doctor's interpretation. Students spend three year at RIT and one year in a hospital internship. Degree granted: BS-4 year.

Cooperative schedule for chemical technology

		Fall	Winter	Spring	Summer
1st year	A	RIT	RIT	Work	RIT
	B	RIT	Work	RIT	Work
2nd year	A	Work	RIT	Work	RIT
	B	RIT	Work	RIT	Work
3rd year	A	Work	RIT	Work	
	B	RIT	Work	RIT	

Cooperative schedule for five-year program in biology, mathematics, physics and biomedical computing

		Fall	Winter	Spring	Summer
1st and 2nd years		RIT	RIT	RIT	Vacation
3rd, 4th years	A	RIT	Work	RIT	Work
	B	Work	RIT	Work	RIT
5th year	A	RIT	Work	RIT	
	B	Work	RIT	RIT	

Cooperative schedule for five-year chemistry program

		Fall	Winter	Spring	Summer
1st year		RIT	RIT	RIT	Vacation
2nd, 3rd years	A	RIT	Work	RIT	Work
	B	Work	RIT	Work	RIT
5th year	A	RIT	Work	RIT	
	B	Work	RIT	RIT	

Physics—Graduates find employment opportunities with industrial, academic and government agencies, or pursue graduate study in such areas as biophysics, atmospheric science, applied science or industrial business administration. Degree granted: AS-2 year, BS-5 year.

Pre-Medicine, Dentistry, Etc—Students interested in pursuing a career in medicine, dentistry,

optometry, osteopathic medicine, veterinary science or podiatry, major in any College of Science or Institute program; no formal program exists specifically for preparation for these careers. The faculty Pre-professional Advisory Committee counsels and assists RIT students in making application to these professional schools. Degrees are awarded in the programs chosen by the students.

*Students in these programs receive an AS in General Science upon the successful completions! the first two years.

College of Science Admission Guide

Freshman Admission Requirements

Transfer Admission with junior standing

Program	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable Minimum GPA
Applied Mathematics, Computational Mathematics	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Chemistry or Physics	Physics or Chemistry; additional mathematics	Liberal arts major with a math/science option. Changes from engineering, science or other math-oriented programs-can be arranged.	2.0
Biology	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Biology	Physics or Chemistry; additional mathematics, C.E.E.B. Biology Achievement Test	Liberal arts major with a math/biology option or equivalent. Changes from other science major or engineering science can be arranged.	2.0
Biomedical Computing	Elem. Algebra; Plane Geometry; Inter. Algebra Trigonometry; Biology	Physics; Chemistry; Additional Mathematics Computer Science	Liberal arts major in science, mathematics, computer technology and engineering. Changes from other allied health majors can be arranged.	2.5
Biotechnology	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Biology	C.E.E.B. Biology or Chemistry Achievement Test	Not Applicable Decided on individual basis	2.0
Chemistry	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Chemistry	Physics, C.E.E.B. Chemistry Achievement Test, additional mathematics	Liberal arts major with a math/chemistry option or equivalent. Changes from other science majors or engineering science can be arranged.	2.0
Chemical Technology	Elem. Algebra; 1 year any science	Additional mathematics and science	Program terminal at AAS degree-no junior year courses.	
Medical Technology	Elem. Algebra; Plane Geometry; Inter. Algebra;- Trigonometry; Biology	Physics or Chemistry	Medical laboratory technology, other allied health programs or equivalent programs.	2.5
Medical Imaging Technologies Nuclear Medicine Technology	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Biology; Chemistry	Calculus, Physics	Biology, medical technology, radiologic technology, other allied health programs.	2.0
Ultrasound Technology	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; 2 years lab science	Additional mathematics and science	Biology, medical technology, radiologic technology, other allied health programs.	2.5
Physics	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics or Chemistry	Chemistry or Physics; additional mathematics; C.E.E.B. Physics Achievement Test	Liberal arts major with a math/physics option or equivalent. Changes from other science majors or engineering science can be arranged.	2.0
Undeclared Science Option	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Lab science	Physics, Chemistry Biology or additional mathematics	Not applicable	

* About one-third of the program includes electives in social science, literature, and humanities.

** Four years of English are required in all programs, except where state requirements differ.

7. Medical Technology. It is possible for a student to complete a BS degree program in biology in four years and complete internship and examination requirements for medical technology certification in the fifth year. The arrangement provides the student with a variety of options: a career as a medical technologist or a research technician, or entry into graduate or professional training.

Minor concentrations

Minor concentrations in other fields are also possible for the biology major through planned use of electives. Chemistry, physics, computer science, mathematics, engineering, engineering technology, management, and photography are potential options which enhance the biology degree.

Biotechnology Program

G. Thomas Frederick, Head

The Department of Biology offers a program leading to the BS degree in biotechnology. This undergraduate program is one of only a few such programs in the United States.

The program requires a strong aptitude and interest in biology, chemistry, biochemistry, and genetics. Students learn the modern techniques and applications of biochemistry, cell physiology, genetics (general, microbial and viral), genetic engineering, microbiology, molecular biology and hybridoma formation. The program provides experience in using gel electrophoresis, a biohazard cabinet, fermentation systems, centrifugation, and scintillation counting, as well as other laboratory techniques and instruments.

Graduates of the program are prepared for employment as technicians or assistant scientists in industrial and academic research laboratories in the field of biotechnology. Industries that employ biotechnologists include those involved in agriculture, food production, pharmaceuticals, chemistry, and energy. The program also prepares students for possible entrance into advanced degree programs in biotechnology or related areas.

Yr.	Biotechnology	Qtr. Credit Hour*		
		FALL	WTR.	SPG.
1	SBIB-201, 202, 203 General Biology Lec.	3	3	3
	SBIB-205, 206, 207 General Biology Lab	1	1	1
	SBIB-250 Introduction to Biotechnology		1	
	SCHG-215, 216, 217 General & Analytical Chemistry	3	3	3
	SCHG-225, 226, 227 General & Analytical Chemistry Lab	1	1	2
	SMAM-251, 252 Calculus I, II	4	4	
	SMAM-309 Statistics			4
	*Liberal Arts (Core)	4	4	4
‡Physical Education Elective	0	0	0	
2†	SBIB-445 Tissue Culture	3		
	SBIB-446 Plant Tissue Culture		3	
	SBIB-350 Molecular Biology			4
	SCHO-231, 232, 233 Organic Chemistry Lec.	3	3	3
	SCHO-235, 236, 237 Organic Chemistry Lab	1	1	1
	ICSS-200 Survey of Computer Science	4		
	SCHA-312 Analytical Chemistry-Separations			3
	SCHA-319 Analytical Chemistry-Separations Lab			1
*Liberal Arts (Core)	4	8	4	
‡Physical Education Electives	0	0	0	
3	SBIB-404 Introduction to Microbiology	5		
	SBIB-402 Immunology		3	
	SBIB-442 Hybridoma Techniques		1	
	SBIB-421 Genetics			4
	SBIB-310 Plant Physiology			4
	SCHP-742 Survey of Physical Chemistry	3		
	SCHB-243, 702 Biochemistry	4	4	
	*Liberal Arts (Concentration)	4	4	4
Elective		4	4	
4	SBIB-407 Microbial and Viral Genetics	4		
	SBIB-403 Cell Physiology	4		
	SBIB-561 Biotechnology Senior Project	2		
	SBIB-417 Industrial Microbiology		4	
	SBIB-450 Genetic Engineering		4	
	SBIB-579 Topics in Biotechnology			3
	Liberal Arts Electives	4	4	4
	Liberal Arts (Senior Seminar)		2	
Free Electives	4	4	8	

†Associate's degree awarded upon successful completion of second year.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Requirements for the BS degree in biotechnology

The student must meet the minimum graduation requirements of the Institute as described on page 17 of this bulletin. In addition, the program requires the successful completion of a total of 68 quarter credit hours in biology: General Biology, Introduction to Biotechnology, Molecular Biology, Plant and Cell Tissue Culture, Tissue Culture, Introductory Microbiology, Immunology, Hybridoma Techniques, Genetics, Plant Physiology, Microbial and Viral Genetics, Cell Physiology, Industrial Microbiology, Genetic Engineering, Topics in Biotechnology, and the Biotechnology Senior Project.

Additional requirements include general and analytical chemistry, organic chemistry, two courses in biochemistry, analytical chemistry/separations, and survey of physical chemistry. Two course in calculus, one in statistics, and one in computer science are also required.

Institute requirements for Liberal Arts may be found on page 97. The policy on Physical Education is described on page 23.

Chemistry and Chemical Technology

Terence C. Morrill, Head

The Department of Chemistry offers programs leading to the AAS degree in chemical technology, the AS and BS degrees in chemistry, the BS degree in chemistry (biochemistry option), and the MS degree in chemistry.

Chemical Technology

The three-year terminal program in chemical technology leads to the AAS degree and is designed to integrate the component skills, knowledge, and attributes necessary for the performance of industrial laboratory tasks. Emphasis is placed on laboratory experience centered around qualitative and quantitative analysis. Advanced laboratory work is designed to teach the student special laboratory techniques and the operation of modern instrumentation. Graduates of the chemical technology program are highly sought after as technical support personnel by industrial chemical laboratories.

Chemistry

The five-year cooperative program in chemistry leads to the bachelor of science degree and has been approved by the Committee on Professional Training of the American Chemical Society. The program prepares graduates for higher level positions in the several fields of chemistry including professional industrial work in processing and laboratory operations, research and experimental work, supervision of technical projects, and managerial positions. A substantial fraction of graduates continue their education for advanced degrees in chemistry or pursue careers in pharmacy, medicine and dentistry. The program provides students with the option of planning an elective concentration in complementary fields such as photoscience, business, graphic arts, audio visual communications, biology, criminal justice, engineering, environmental studies, packaging science, printing, computer science, physics or mathematics. Students may also elect to complete the BS degree requirements in a traditional (non-cooperative) four-year program.

Yr.	Chemistry	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SCHC-200 Chemical Safety	0		
	SCHC-230 Intro. to Co-op Seminar		0	
	SCHC-211, 212 General Chemistry	3	3	
	SCHA-261, 262, 263 Intro. to Chemical Analysis	3	3	3
	SCHO-230 Intro. to Organic Chemistry			3
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SCHC-201 Chemical Literature			2
	ICSP-205 Computer Techniques		3	
	* Liberal Arts (Core)	4	4	4
	‡ Physical Education Electives	0	0	0
2		FALL		SPG.
		WTR.		SMR.
	SCHA-311 Anal. Chem. Instr. Anal. Lec.	1		
	SCHA-318 Anal. Chem. Instr. Anal. Lab			3
	SCHA-312 Anal. Chem. Separation Techniques Lec.			1
	SCHA-319 Anal. Chem. Separation Techniques Lab	4		
	SMAM-305 Calculus IV			4
	SMAM-306 Differential Equations	4		4
	SPSP-311, 312 University Physics I, II	1		1
	SPSP-371, 372 University Physics Lab I, II	4		4
* Liberal Arts (Core)	0		0	
‡ Physical Education Electives				
3†		FALL		SPG.
		WTR.		SMR.
	SCHP-340 Introduction to Physical Chemistry	3		
	SCHP-441 Physical Chemistry Lec.			3
	SCHP-445 Physical Chemistry Lab			1
	SCHO-431 Organic Chemistry Lec.			3
	SCHO-435 Organic Chemistry Lab			2
	SPSP-331 Electronics & Electricity	4		
	SMAM-431 Matrix Algebra	4		
	GLLC-530 German I			4
* Liberal Arts (Core)	4		4	
Institute-wide Elective	3			
‡ Physical Education Elective	0			
4		FALL		SPG.
		WTR.		SMR.
	SCHP-442, 443 Physical Chemistry Lec.	3		3
	SCHP-446, 447 Physical Chemistry Lab	1		1
	SCHO-432, 433 Organic Chemistry Lec.	3		2
	SCHO-436, 437 Organic Chem. Lab	2		2
	SCHC-402 Introduction to Research	0		
	Institute-wide Elective			3
	SCHI-762 Inorganic Chemistry			3
	GLLC-531 German II	4		
* Liberal Arts (Concentration)	4		4	
5		FALL		SPG.
		WTR.		SMR.
	SCHI-763 Inorganic Chemistry or	3		
	SCHB-702 Biochemistry	3		
	SCHA-711 Instrumental Analysis	2		
	SCHA-720 Instrumental Analysis Lab	2		
	Chemistry Electives	3		6
	* Liberal Arts (Concentration/Elective)	4		4
	Liberal Arts (Senior Seminar)			2
	Institute-wide Electives	3		6

† Upon completion of the third year, the associate in applied science degree is awarded

‡ See Pg. 23 for Policy on Physical Education.

* See Pg. 97 for Liberal Arts requirements.

Yr.	Chemical Technology*	Qtr. Credit Hour»			
		FALL	WTR.	SPG.	
1	SCHC-200 Chemical Safety	0			
	SCHC-230 Intro. to Co-op Seminar	0			
	SCHT-241, 242 Chem. Tech I (General) & II (Analytical)	6		6	
	SMAM-204 College Algebra	4			
	GLLC-220 English Composition	4			
	ICSP-205 Computer Techniques			3	
	SCHC-201 Chemical Literature			2	
	* Liberal Arts (Core)			4	
	‡ Physical Education Elective	0		0	
	2	SCHT-243, 244 Chem. Tech III, IV (Organic)	6		6
SMAM-214, 215 Intro to Calculus I, II		3		3	
SPSP-211, 213 College Physics Lec.		3		3	
SPSP-271, 273 College Physics Lab		1		1	
SCHC-402 Intro to Research		0			
SCHT-309 Glassblowing Techniques				2	
* Liberal Arts (Core)		4			
‡ Physical Education Elective		0			
3†		SCHT-305, 306 Chemistry Specialty	4		4
		SCHT-307, 308 Research Familiarization	3		3
	SPSP-212 College Physics Lec.			3	
	SPSP-272 College Physics Lab			1	
	SPSP-331 Electricity & Electronics			4	
	* Liberal Arts (Core)	8			

† Upon completion of the third year, the associate in applied science degree is awarded.

** (Course sequence for students on Co-op (FALL SPG.) is available from the Chemistry Department.)

Biochemistry Option

The biochemistry option of the chemistry program provides students with the opportunity to integrate substantial biology and biochemistry experience into the BS chemistry program. Graduates of this option will qualify for professional study in medicine and dentistry, as well as graduate work in Ph.D. programs in biochemistry and molecular biology, and rewarding careers in the pharmaceutical and biochemistry industries.

Requirements for the AS and BS degrees in Chemistry and the AAS degree in Chemical Technology

The student must meet the minimum graduation requirements of the Institute as described on page 18 and in addition must complete the requirements contained in the particular program listed herein or its equivalent as determined and approved by the Chemistry Department.

To meet the requirements leading to the BS degree approved by the Committee on Professional Training of the American Chemical Society, the student must take specifically designated courses in chemistry and related sciences and must complete a minimum of 187 quarter credit hours and 374 quality points.

All students must meet the requirements for the Institute's writing policy, as specified by the Chemistry Department.

Yr.	Chemistry (Biochemistry option)	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SCHC-200 Chemical Safety	0		
	SCHC-230 Intro. to Co-op Seminar		0	
	SCHC-211, 212 General Chemistry Lec.	3	3	
	SCHA-261, 262, 263 Intro. to Chemical Analysis	3	3	3
	SCHO-230 Intro. to Organic Chemistry			3
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SBIB-201, 202, 203 General Biology Lec.	3	3	3
	SBIB-205, 206, 207 General Biology Lab	1	1	1
*Liberal Arts (Core)	4	4	4	
‡Physical Education Electives	0	0	0	
2		FALL		SPG.
		WTR.		SMR.
	SCHA-311 Anal. Chem. Instrumental Analysis Lec.	3		
	SCHA-318 Anal. Chem. Instr. Anal. Lab	1		3
	SCHO-431 Organic Chemistry Lec.			2
	SCHO-435 Organic Chemistry Lab			3
	SMAM-305 Calculus IV	4		4
	ICSP-205 Computer Techniques	4		1
	SPSP-311, 312 University Physics Lec.	1		
	SPSP-371, 372 University Physics Lab			
	or			
	SPSP-211, 212 College Physics Lec.	(3)		(3)
SPSP-271, 272 College Physics Lab	(1)		(1)	
SCHC-201 Chemical Literature (WTR. or SPG.)	(2)		2	
*Liberal Arts (Core)	4			
‡Physical Education Electives	0		0	
3†		FALL		SPG.
		WTR.		SMR.
	SCHO-432, 433 Organic Chemistry Lec.	3		2
	SCHO-436, 437 Organic Chemistry Lab	2		2
	SPSP-331 Electronics and Electricity	4		
	SCHA-312 Anal. Chem. Separation Techniques Lec.			3
	SCHA-319 Anal. Chem. Separation Techniques Lab			1
	SMAM-306 Differential Equations			4
*Liberal Arts (Core)	8		4	
‡Physical Education Elective	0			
4		FALL		SPG.
		WTR.		SMR.
	SCHP-340 Intro. to Physical Chemistry	3		
	SCHP-441 Physical Chemistry Lec.			3
	SCHP-445 Physical Chemistry Lab			1
	SCHB-702 Biochemistry	3		
	SCHB-704 Biochemistry—Molecular Biology			3
	SCHC-402 Introduction to Research	0		
*Liberal Arts (Concentration)	8		4	
Science Electives	3-4		3-7	
5		FALL		SPG.
		WTR.		SMR.
	SCHB-703 Biochemistry—Metabolism	3		
	SCHP-442, 443 Physical Chemistry Lec.	3		3
	SCHP-446, 447 Physical Chemistry Lab	1		1
	*Liberal Arts Electives	8		4
Liberal Arts (Senior Seminar)			2	
Science Electives	3		6-8	

†Associate's degree award upon successful completion of third year

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Mathematics

George T. Georgantas, Head

Programs

The Department of Mathematics offers two types of programs: Applied Mathematics and Computational Mathematics. Each program is designed to lead to a bachelor of science degree in applied mathematics or computational mathematics, as the case may be. However, one may become eligible for the associate of science degree in applied mathematics upon successful completion of the first two years of the program.

Applied Mathematics

The Applied Mathematics Program has been specially designed to prepare students as applied mathematicians and analysts in high-technology industry and federal agencies, as well as in medical research units. Students in this program must select some mathematics-related area as their minor concentration. Possible minors include: applied statistics, physics, biology, business and economics, chemistry, computer science, electrical engineering, industrial engineering, mechanical engineering, operations research, photoscience.

Because of increasing opportunities for employment of our graduates with a background in statistics, the department offers a special sequence of courses in applied statistics. Courses in this minor concentration include: Probability, Applied Statistics I-II, Regression Analysis, Design of Experiments, and Mathematical Statistics I-II.

Yr.	Applied Mathematics	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SMAM-210, 211 Freshman Seminar	1	1	
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SMAM-265 Foundations of Discrete Mathematics			4
	ICSP-220 FORTRAN	4		
	ICSP-241 Programming I—Algorithmic Structures		4	
	ICSP-242 Programming II—Data Structures			4
	***Science Electives	4	4	4
2	Liberal Arts (Core)	4	4	
	Physical Education Elective	0	0	0
	SMAM-305 Calculus IV	4		
	SMAM-306 Differential Equations I		4	
	SMAM-351 Probability	4		
	SMAM-352 Applied Statistics I		4	
	SMAM-307 Differential Equation II, or			
	SMAM-318 Solutions to Bdry Val Probs, or			
	**SMAM-353 Applied Statistics II			4
	SMAM-431 Matrix Algebra			4
	ICSP 243 Programming III—Design & Implementation	4		
3	***Science or Liberal Arts (Core)	4		
	Liberal Arts (Core)		4	4
	Liberal Arts (Core) (Split format)		2	2
	Elective		4	4
	Physical Education Elective	0	0	0
	SMAM-432 Linear Algebra	4		
4	SMAM-361 Mathematical Modeling			4
	*Mathematics Elective	4		4
	Liberal Arts (Core/Concentration)	4		4
	#Elective	4		4
5	SMAM-411, 412 Real Variables	4		4
	SMAM-531, 532 Abstract Algebra	4		4
5	*Mathematics Elective	4		4
	Liberal Arts (Concentration/Electives/Senior Seminar)	12		10
	#Elective	4		

NOTE: A detailed analysis of the above program is contained in a booklet prepared by the Department of Mathematics and is available upon request.
 #The primary objective of these unspecified electives is to fulfill the requirement of a minor concentration in one of the areas mentioned above. After that requirement is fulfilled, the electives become entirely free electives.
 *See Mathematics Department for approved mathematics electives.
 ***If science sequence begins in the winter quarter, an extra Liberal Arts course should be taken in the fall quarter of the first year, and no Liberal Arts course taken in the fall quarter of the second year.
 **Only if a statistics minor concentration is elected.

Computational Mathematics

The Computational Mathematics Program prepares students for a career in applied mathematics and computers. It has been specially designed to incorporate a heavy concentration of computer science courses. Students are prepared to become mathematical analysts and scientific programmers. In this program, much emphasis is given to usage of the computer as a tool in solving physical problems which have been mathematically modelled.

Co-op

RIT's co-operative education program, known as "co-op," enables students to alternate periods in school (academic blocks) with jobs in their chosen field (work blocks) after the successful completion of the first two years of their program requirements. Co-op is optional for students, but nearly every student in the Department of Mathematics opts for it for the obvious reasons: good salary, experience in applying classroom knowledge to the "real world," motivation, and enhancement of full-time job opportunities upon graduation. *

Transfer Programs

Transfer programs are arranged on an individual basis.

Requirements for the AS and BS degrees:

The student must meet the minimum requirements of the Institute as described on page 17; in addition he/she must complete the requirements contained in one of the particular programs listed below, or its equivalent, as determined and approved by the Mathematics Department. In conjunction with a faculty advisor, individual student programs will be established to meet particular needs, interests, and goals. Additional information is available from the Department of Mathematics.

Course Descriptions:

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Yr.	Computational Mathematics	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SMAM-210, 211 Freshman Seminar	1	1	
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SMAM-265 Foundations of Discrete Mathematics			4
	ICSP-220 FORTRAN	4		
	ICSP-241 Programming I—Algorithmic Structures		4	
	ICSP-242 Programming II—Data Structures			4
	***Science Electives	4	4	4
	Liberal Arts (Core)	4	4	
Physical Education Elective	0	0	0	
2	SMAM-305 Calculus IV	4		
	SMAM-306 Differential Equations I		4	
	SMAM-351 Probability	4		
	SMAM-352 Applied Statistics I		4	
	SMAM-410 Advanced Calculus			4
	SMAM-431 Matrix Algebra			4
	ICSP-243 Programming III—Design & Implementation	4		
	ICSP-305 Assembly Language Programming		4	
	*Computer Science Elective			4
	***Science or Liberal Arts (Core)	4		
Liberal Arts (Core)		4	4	
Liberal Arts (Core) (Split format)		2	2	
Physical Education Elective	0	0	0	
3		FALL		SPG.
		WTR.		SMR.
	SMAM-432 Linear Algebra	4		
	SMAM-467 Theory of Graphs and Networks	4		
	SMAM-361 Mathematical Modeling			4
	*Mathematics Elective			4
	ICSS-315 Digital Computer Organization	4		
Liberal Arts (Core/Concentration)	4		4	
Elective			4	
4	SMAM—511, 512 Numerical Analysis	4		4
	SMAM-531, 532 Abstract Algebra	4		4
5	*Mathematics Elective	4		4
	Liberal Arts (Concentration/Electives/Senior Seminar)	12		10
	*Computer Science Elective	4		4
	Elective	4		

NOTE: A detailed analysis of the above program is contained in a booklet prepared by the Department of Mathematics and is available upon request.

*See Mathematics Department for approved mathematics and computer science electives.

***If science sequence begins in the winter quarter, an extra Liberal Arts course should be taken in the fall quarter of the first year, and no liberal arts course taken in the fall quarter of the second year.

Physics

Arthur Z. Kovacs, Head

The Physics Department offers programs leading to the AS and BS degrees in physics.

The BS degree in physics is a five-year program with a cooperative work experience. Graduates with this degree find employment opportunities with industrial, academic, and government agencies, or continue their education in MS or Ph.D. programs in physics or physics-related areas, such as biophysics, atmospheric science, or industrial business administration.

Requirements for the AS and BS degrees in physics

The student must meet the minimum graduation requirements of the Institute as described on page 17 and in addition must complete the requirements contained in the particular program listed below or its equivalent as determined and approved by the Physics Department. In conjunction with a faculty advisor, individual student programs will be established to meet particular needs, interests, and goals. A planned elective concentration in another field such as biology, chemistry, mathematics, computer science, business, or photo science is possible.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Yr.	Physics	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SPSP-200 Physics Orientation	2		
	SPSP-311, 312 University Physics I, II		4	4
	SPSP-371, 372 University Physics Lab I, II		1	1
	SMAM-251, 252, 253 Calculus I, II, III	4	4	4
	SCHC-211, 212 General Chemistry	3	3	
	SCHG-205, 206 Chemical Principles Laboratory	1	1	
	ICSP-205 Computer Techniques	3		
	GLLC-220 English Composition	4		
	*Liberal Arts (Core)		4	8
	‡Physical Education Electives	0	0	0
2†	SPSP-313 University Physics III	4		
	SPSP-373 University Physics Laboratory III	1		
	SPSP-314 Introduction to Modern Physics		4	
	SPSP-315 Introduction to Semiconductor Physics			4
	SPSP-321 Introduction to Laboratory Techniques		4	
	SPSP-374 Modern Physics Laboratory			1
	SMAM-305 Calculus IV	4		
	SMAM-306, 307 Differential Equations I, II		4	4
	Technical Elective	3-4		
	Institute-wide Free Elective			3-4
*Liberal Arts (Core)	4	4	4	
‡Physical Education Electives	0	0	0	
3	SPSP-401, 402 Intermediate Mechanics	4		4
	SPSP-421 Experimental Physics I	3		
	SPSP-431 Electronic Measurements I			4
	**SPSP-455 Optical Physics	4		
	SPSP-480 Theoretical Physics I			4
	*Liberal Arts (Concentration)	4		4
4	SPSP-411, 412 Electricity and Magnetism	4		4
	**SPSP-415 Thermal Physics	4		
	SPSP-522 Introduction to Quantum Mechanics			4
	Institute-wide Free Electives	3-4		3
	*Liberal Arts (Concentration/Elective)	4		4
	Liberal Arts (Senior Seminar)			2
5	SPSP-501 Theoretical Physics II, or SPSP-432 Electronic Measurements II	4		
	SPSP-531 Solid State Physics	4		
	SPSP-550, 551 Physics Seminar	1		1
	Physics Electives (400-500 level)			4,4
	Institute-wide Free Electives	3-4		3-4
	*Liberal Arts Electives	4		4

†Associate's degree awarded upon successful completion of second year
 **SPSP-455 and SPSP-415 given in alternate years.
 ‡Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

Biomedical Computing

J. Richard Garnham, Program Director

RIT's biomedical computing bachelor of science degree curriculum is one of only a few similar programs in the United States. It was developed by the College of Science and the School of Computer Science and Technology because of the increasing use of computers in biomedical research and the health industry. Students receive training in the basic sciences, medical sciences and computer science with emphasis on clinical and laboratory applications. This array of courses provides graduates with the ability to communicate with medical personnel and trains them to use computers for the solution of clinical problems, laboratory analyses, medical information systems, and medical research.

Students are strongly encouraged to obtain experiential biomedical computing education by participation in the cooperative education program (co-op). The program spans five years to allow students to alternate quarters in school with quarters in paid employment during their last three years. Co-op allows students the opportunity to practice new skills in real-life situations and to test their chosen field before making a lifelong commitment. The experiences they acquire not only make their education more relevant, but also make them more valuable to prospective employers.

Students consult with faculty advisors in order to tailor their academic programs to individual career goals. Upper level electives are used to prepare graduates for specialized employment opportunities within biomedical computing, for graduate school in the sciences or computer science, or for post-graduate professional school.

Yr.	Biomedical Computing	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	ICSS-202 Intro. to Computer Science	4		
	ICSP-241 Programming I—Algorithmic Structures		4	
	ICSP-242 Programming II—Data Structures			4
	SCLB-201 Intro. to Biomedical Computing		1	
	SBIG-201, 202, 203 General Biology Lec.	3	3	3
	SBIG-205, 206, 207 General Biology Lab	1	1	1
	SCHG-215, 216, 217 General & Analytical Chemistry Lec.	3	3	3
	SCHG-225, 226, 227 General & Analytical Chemistry Lab	1	1	2
	*Liberal Arts (Core)	4	4	4
‡Physical Education Electives	0	0	0	
2	ICSP-243 Programming III—Design & Implementation	4		
	ICSP-305 Assembly Language Programming		4	
	ICSP-220 FORTRAN			4
	SCLG-301 Medical Terminology	3		
	SBI3-305, 306 Physiology & Anatomy		4	4
	SMAM-251, 252 Calculus I, II OR	4	4	
	SMAM-221, 222, 223 College Mathematics	(4)	(4)	(4)
	*Liberal Arts (Core)	4	4	8
	‡Physical Education Electives	0	0	0
3		FALL	WTR.	SPG.
				SMR.
	ICSS-315 Digital Computer Organization	4		(4)
	ICSS-325 Data Organization & Management	(4)		4
	SMAM-309 Statistics			4
	SCLM-432 Biology Laboratory Techniques	4		
	SPSP-211, 212 College Physics	3		3
	SPSP-271, 272 College Physics Laboratory OR	1		1
	SPSP-311, 312 University Physics	(4)		(4)
SPSP-375, 376 University Physics Laboratory	(1)		(1)	
*Liberal Arts (Concentration)	4		4	
4	SPSP-331 Electricity & Electronics	4		
	Computer Science Electives	4		4
	Chemistry Electives	3		3
	*Liberal Arts (Concentration/Elective)	4		4
	**Program Electives			4
5†	**Program Electives	8		8
	*Liberal Arts Elective	4		4
	Liberal Arts (Senior Seminar)			2

† There is some flexibility in the order in which these courses may be taken.

**Program electives must be approved by the biomedical computing advisor and can be used to concentrate in a science, computer science or a related area.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements. f

Requirements for the BS in biomedical computing

The student must meet the minimum graduation requirements of the Institute as described on page 17 and in addition must complete the requirements contained in the particular program or its equivalent as determined and approved by the Department of Clinical Sciences. Transfer students may be required to take additional course work, depending on the program they completed at their

previous school. Specific requirements will be determined for each transfer student by the department.

Course Descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Medical Technology Program

James C. Aumer, Program Director

The medical technology program prepares students for employment in hospital laboratories, industrial, medical or research laboratories and pharmaceutical companies. As medical technologists they will perform analyses which aid in the diagnosis and treatment of disease. They must be able to carry out complex text determinations, operate sophisticated instrumentation, and detect and correct errors. The program leads to a bachelor of science degree and meets all requirements of the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Students enrolled in the medical technology program attend classes at RIT during the Fall, Winter and Spring quarters for three years. During the third year, students take a concentration of clinically-oriented courses which will prepare them for their hospital experience. In the Fall Quarter of their third year they apply to hospital schools of medical technology that are approved by the Committee on Allied Health Education and Accreditation (CAHEA). They will then spend their fourth academic year at the hospital that accepts them as an intern for clinical training in medical technology. While at the hospital the student will receive additional course work as well as practical experience in each of the laboratory areas: hematology, microbiology, chemistry, and immunohematology.

The medical technology program is affiliated with Rochester General Hospital and St. Mary's Hospital in Rochester and with Millard-Fillmore Hospital in Buffalo. Students may, however, seek admission to any approved hospital for their clinical experience.

Upon successful completion of the hospital experience, a bachelor of science is awarded. The student is then eligible to take a national registry examination for certification as a medical technologist.

Yr.	Medical Technology (Typical Course Schedule)	Qtr.			Credit Hours
		FALL	WTR.	SPG.	
1	SBIB-201, 202, 203 General Biology Lec.	3	3	3	
	SBIG-205, 206, 207 General Biology Lab	1	1	1	
	SCHG-215, 216, 217 General Analytical Chemistry	3	3	3	
	SCHG-225, 226, 227 General Analytical Chemistry Lab	1	1	2	
	SCLM-210 Medical Technology Seminar	1			
	SMAM-221, 222, 223 College Math	4	4	4	
	*Liberal Arts (Core)	4	4	4	
‡Physical Education Elective	0	0	0		
2	SBIB-305, 306 Physiology and Anatomy		4	4	
	SCHO-231, 232, 233 Organic Chemistry Lec.	3	3	3	
	SCHO-235, 236, 237 Organic Chemistry Lab	1	1	1	
	SPSP-211, 212, 331 College Physics & Electronics	3	3	4	
	SPSP-271, 272 College Physics Lab	1	1		
	ICSP-205 Computer Techniques			3	
	SBIB-315 Medical Genetics		2		
	*Liberal Arts (Core)	8	4	4	
‡Physical Education Elective	0	0	0		
3	SCLM-401 Hematology/Immunohematology			4	
	SBIB-404 Microbiology	5			
	SCHB-234 Biochemistry	4			
	SCLM-432, 433 Biology Laboratory Techniques		4	4	
	SMAM-309 Statistics		4		
	SBIB-402 Immunology	3			
	SCLM-405 Diag. Bacteriology and Mycology		4		
	*Liberal Arts (Concentration)	4	4	4	
Elective			4		
Liberal Arts (Senior Seminar)	2				

BS degree: the fourth year taken at an approved hospital for training medical technologists.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Requirements for the BS degree in medical technology

The student must meet the minimum graduation requirements of the Institute as described on page 17 and in addition must complete the requirements contained in the particular program or its equivalent as determined and approved by the Department of Clinical Sciences. Transfer students will be required to complete a minimum of 45 quarter credit hours on campus and to complete all program requirements before beginning the clinical training experience. Specific requirements will be determined for each transfer student by the program director.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

Medical Imaging Technologies

Nuclear Medicine Technology Program

Judith Newell, Program Director

The program leading to the BS degree in nuclear medicine technology spans four years, the first three of which are spent on campus. The fourth year consists of clinical training at one or more approved hospitals.

Clinical training in nuclear medicine technology

The NMT clinical training begins in early June and ends in May of the following year. The first four weeks of training are an intensive introduction to the theory and practice of nuclear medicine technology. Classes during this time are held on the RIT campus, and laboratory sessions take place at Rochester hospitals.

Most of the training is performed in nuclear medicine departments of the program's hospital affiliates. Each student is assigned (subject to the hospital's approval) a particular combination of three hospitals and trains approximately four months in each. The teaching is done primarily by physicians and technologists on the hospital staffs. Student progress and performance is monitored by the RIT nuclear medicine technology coordinator who makes periodic visits to the hospital departments. Readings, problem assignments and project work are an integral part of the student's clinical training. Periodically during each four-month rotation, students return to the RIT campus for lectures and discussions.

The hospital training emphasizes the following areas: (a) radiation safety and protection; (b) patient positioning and nursing procedures; (c) radionuclide imaging and external monitoring; (d) nuclear medicine department administrative procedures.

The training also includes a substantial component of training in radioimmunoassay (RIA) theory and practice. One week of classroom and laboratory work in RIA at RIT during the winter of the training year is followed by four weeks of radioimmunoassay clinical training at one of the affiliated hospitals.

The RIT nuclear medicine technology program has affiliations with the following Upstate New York hospitals: Syracuse area—Community General Hospital; Crouse—Irving Memorial Hospital. Rochester area—The

Yr.	Nuclear Medicine Technology	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SMAM-221, 222, 223 College Math	4	4	4
	SCHG-215, 216, 217 General & Analytical Chemistry Lec.	3	3	3
	SCHG-225, 226, 227 General & Analytical Chemistry Lab	1	1	2
	SBIB-201, 202, 203 General Biology Lec.	3	3	3
	SBIB-205, 206, 207 General Biology Lab	1	1	1
	*Liberal Arts (Core)	4	4	4
	‡Physical Education Elective	0	0	0
2	SPSP-211, 212, 213 College Physics Lec.	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
	SCHG-202 Organic Chemistry Lec.		3	
	SCHG-222 Organic Chemistry Lab		1	
	SCHG-234 Biochemistry			4
	SBIB-305, 306 Physiology & Anatomy		4	4
	ICSP-205 Computer Techniques	3		
	*Liberal Arts (Core)	8	4	4
‡Physical Education Elective	0	0	0	
3	SPSP-351, 352, 353 Radiation Physics	5	5	5
	SBIB-430 Radiation Biology	4		4
	SMAM-309 Statistics			4
	*Liberal Arts (Concentration)	4	4	4
	**Program Elective	4	4	
	Institute-wide Elective		4	4
4†	Liberal Arts (Senior Seminar)	2		
	SCLM-401 Introduction to Clinical Nuclear Medicine	4		
	SCLN-402 Nuclear Medicine Procedures—Central Nervous System	1		
	SCLN-501 N.M. Procedures—Reticuloendothelial System	1		
	SCLN-502 N.M. Procedures—Skeletal System	1		
	SCLN-503 N.M. Procedures—Respiratory System	1		
	SCLN-510 N.M. Procedures—Urinary System	1		
	SCLN-511 N.M. Procedures—Endocrine Systems		2	
	SCLN-512 N.M. Procedures—Cardiovascular System		2	
	SCLN-513 N.M. Procedures—Digestive System			1
	SCLN-514 N.M. Procedures—Special Studies			1
	SCLN-515 N.M. Procedures—Hematological and In Vitro Studies			1
	SCLN-516 Instrumentation and Computers in Nuclear Medicine ..		2	
	SCLN-517 Radiochemistry and Radiopharmacology		2	
	SCLN-518 Radionuclide Therapy and Radiation Biology		1	
	SCLN-519 Radiation Healthy Safety			2
	SCLN-520 Radioimmunoassay			4
SCLN-521 Review in Nuclear Medicine			2	
SCLN-522 Clinical Nuclear Medicine I	6			
SCLN-523 Clinical Nuclear Medicine II		7		
SCLN-524 Clinical Nuclear Medicine III			7	

†Clinical Internships—Affiliated Hospitals

**Program electives must be approved by the Nuclear Medicine Technology Program Director and can be used to concentrate in an area related to Nuclear Medicine.

‡See Pg. 23 for Policy on Physical Education.

*See Pg. 97 for Liberal Arts requirements.

Genesee Hospital; Highland Hospital[^]
Rochester General Hospital; Park-Ridge Hospital. Binghamton area—Our Lady of Lourdes Hospital; Charles Wilson Memorial Hospital. Canandaigua area—Frederick Ferris Thompson Hospital. Buffalo area—Sisters of Charity Hospital.

The RIT program is also affiliated with Veterans Administration Hospital, St. Louis, Missouri. Students who wish to intern at this hospital make application in the month of December preceding the start of the clinical year. Students selected for training there spend the entire year in St. Louis.

Requirements for the BS degree in nuclear medicine technology

The student must meet the minimum graduation requirements of the Institute as described on page 17 and in addition must complete the requirements contained in the particular program or its equivalent as

determined and approved by the Department of Clinical Sciences. In conjunction with a faculty advisor, individual student programs will be established to meet particular needs, interests, and goals. A planned elective concentration in another field such as biology, chemistry, mathematics, computer science, business or photo science is possible.

Accreditation

The nuclear medicine technology program has been accredited by the Committee on Allied Health Education and Accreditation (CAHEA) and the Joint Review Committee on Education Programs in NMT of the American Medical Association.

Medical Imaging Technologies

Ultrasound Technology Program

Roger W. Warner, Program Director

The Diagnostic Medical Sonography (Ultrasound) Program offers two options—one leading to a BS degree and the other to a certificate.

The program aims at professional preparation of ultrasound technologists with specialty training in abdominal, obstetrical and gynecological ultrasonic techniques and procedures. Depending upon their background, professional experience and career goals, graduates may pursue staff, administrative, research, or teaching positions, or continue their education toward an advanced degree. Both program options will also allow allied health or nursing professionals to be trained in a second health specialty.

Requirements for the BS degree in ultrasound:

The student must meet the minimum graduation requirements of the Institute as described on page 17 and, in addition, must complete the requirements contained in the particular curriculum listed below or its equivalent as determined and approved by the Department of Clinical Sciences. The program is a two-or four-year effort, including the one-year clinical internship. Associate degree graduates and registered or certified practitioners from a related health field can earn a BS degree by entering the last two years of the program. Additional course work may be required, depending on the program completed at a previous school.

Requirements for the certificate option:

The student must meet the Institute requirements as well as the specific requirements listed below. The certificate option is a one-year clinical internship that has a cross-sectional anatomy prerequisite course requirement. It is available to associate's and baccalaureate degree graduates who are licensed or certified practitioners with two years of experience in a related health field.

Clinical training in ultrasound technology:

The clinical internship for both the BS degree and certificate options will be conducted in a consortium of 13

Yr. Ultrasound Technology Baccalaureate Curriculum Outline

Qtr. Credit Hours

Yr.	Course	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1	SBIB-201, 202, 203 General Biology Lec.	3	3	3
	SBIB-205, 206, 207 General Biology Lab	1	1	1
	SMAM-221, 222, 223 College Math	4	4	4
	Chemistry Electives	4	4	4
	*Liberal Arts (Core)	4	4	4
	‡Physical Education Electives	0	0	0
2	SPSP-211, 212, 213 College Physics Lec.	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
	ICSS-202 Intro. to Computer Science or			
	ICSP-205 Computer Techniques	4		
	SCLG-301 Medical Terminology	3		
	SBIB-305, 306 Physiology & Anatomy		4	4
	SMAM-309 Statistics			4
	*Liberal Arts (Core)	4	8	4
‡Physical Education Electives	0	0	0	
3	SCLS-411 Intro. to Diagnostic Ultrasound	2		4
	SCLG-415 Pathophysiology			4
	SCLS-413 Ultrasound Instrumentation		4	
	SCLS-412 Ultrasonic Cross-Section Anatomy		2	
	SBIB-315 Medical Genetics	5		
	SPSP-361 Ultrasonic Physics	4	4	4
	*Liberal Arts (Concentration)	4	8	4
	Program Electives	2		
4	Clinical Internships—Affiliated Hospitals			
	SCLS-551 Intro. to Clinical Ultrasound	5		
	SCLS-552 Intro. to Obstetrical Ultrasound	5		
	SCLS-553 Intro. to Gynecologic Ultrasound	5		
	SCLS-554 Advanced Obstetrical Ultrasound		5	
	SCLS-555 Advanced Gynecologic Ultrasound		5	
	SCLS-556 Intro. to Abdominal Ultrasound I		6	
	SCLS-557 Intro. to Abdominal Ultrasound II			7
	SCLS-558 Advanced Abdominal Ultrasound			7
SCLS-560, 561 Seminar in Ultrasound		1	2	

†See Pg. 23 for Policy on Physical Education.
 *See Pg. 97 for Liberal Arts requirements.

Yr. Ultrasound Technology Certificate Curriculum Outline Course Requirements

Qtr. Credit Hours

Yr.	Course	Qtr. Credit Hours		
		FALL	WTR.	SPG.
	Prerequisite Course Requirement: SCLS-412 Ultrasonic Cross-Section Anatomy— 4 credits or equivalent			
4	Clinical Internships—Affiliated Hospitals			
	SCLS-551 Intro. to Clinical Ultrasound	5		
	SCLS-552 Intro. to Obstetrical Ultrasound	5		
	SCLS-553 Intro. to Gynecologic Ultrasound	5		
	SCLS-554 Advanced Obstetrical Ultrasound		5	
	SCLS-555 Advanced Gynecologic Ultrasound		5	
	SCLS-556 Intro. to Abdominal Ultrasound I		6	
	SCLS-557 Intro. to Abdominal Ultrasound II			7
SCLS-558 Advanced Abdominal Ultrasound			7	
SCLS-560 Seminar in Ultrasound		1	2	

affiliated hospitals in the major medical centers of Rochester, Buffalo, Syracuse and Binghamton. An intensive introduction to ultrasound will be taught during the first month of the internship. Students will then be assigned to rotate through 2 different hospital sites for their clinical training.

Both certificate and BS degree programs will allow graduates to take the national certifying exam for specialization in abdominal, obstetrical and gynecological ultrasound procedures.

Accreditation

The ultrasound technology program is designed to meet the Essentials of Accredited Educational Programs for

the Diagnostic Medical Sonographer as set forth by the Committee on Allied Health Education Accreditation (CAHEA).

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from the Admissions Office.

National Technical Institute for the Deaf

William E. Castle, Director
Peter J. Pere, Dean

The National Technical Institute for the Deaf was created to provide deaf students with the technical training that will lead to meaningful employment in business, industry, government, and education. Public Law 89-36 authorized the establishment of NTID, and Rochester Institute of Technology was chosen as the sponsoring institution in late 1966 by the Department of Health, Education and Welfare. In the fall of 1968, a pilot group of 71 deaf students began their studies at NTID and for the academic year 1983-84 enrollment will be approximately 1,200.

The partnership: NTID at RIT

As one college in nine at RIT, NTID is governed by the RIT Board of Trustees.

The fact that NTID is located on a college campus designed primarily for hearing students is important to the students' academic, personal, social, and communication development. The NTID academic programs, designed for deaf students, lead to certificates, diplomas, and associate's degrees from RIT. Most NTID students take some courses along with hearing students in other colleges of RIT. Some NTID-sponsored students are full-time or part-time students in the associate's, bachelor's, and master's degree programs of the other colleges of RIT. Special educational support departments made up of NTID staff members help them in their studies in those other colleges.

Facilities

There is a modern complex of buildings on RIT's Rochester campus which was designed specifically to serve deaf students.

The Lyndon Baines Johnson Building is the main academic building. It has a theatre, laboratories, offices, speech and hearing areas, and classrooms.

Classrooms are designed to cut down on distractions. There are no windows, colors are soft, and seats are placed in a semicircle to allow the best possible vision from all parts of the room.

The theatre seats more than 500 people and has closed circuit television. A number of productions are offered each year using both voice and sign. There are also two well-equipped television studios, which are used to produce class and

self-instruction videotapes and all captioning done at NTID.

The residence halls in this building complex contain dormitory rooms, recreation areas, student lounges, and study and conference areas. The residence halls are shared by deaf and hearing students. There are three residence halls: Mark Ellingson Hall, Peter N. Peterson Hall, and Alexander Graham Bell Hall.

The Hettie L. Shumway Dining Commons consists of a large dining room and complete food service facilities.

Other special features for deaf students include a visual emergency system in the academic and residence halls. A sophisticated telecommunication system links all parts of the RIT campus.

A new NTID building of offices and classrooms will be completed and open by Fall 1983 to accommodate additional student enrollments.

Educational philosophy

The educational goal of NTID at RIT is to provide opportunities for qualified deaf students to prepare for successful careers in business, computer science, engineering, applied science, allied health, photography, printing, art, media, or social services. Students may pursue training for semi-professional careers through the programs managed by NTID. NTID provides special support services which enable deaf students to pursue professional careers in any one of the other colleges of RIT. In addition to preparation in technical areas, NTID offers experiences which assist deaf students in developing needed personal, social, and communication competencies.

NTID also serves deaf persons throughout the world through educational outreach, publications, internships, and related services. NTID is interested as well in helping deaf adults add to their vocational and technical skills through continuing education.

NTID at RIT conducts research to better understand the role of deafness in education and employment and to develop creative teaching techniques. There are training activities for its faculty and staff and for other professionals working with deaf persons across the country.

Cross registration

Any qualified deaf student may enroll in associate, bachelor's or master's degree programs offered by other RIT

colleges or take selected courses. These students are called cross-registered.

An NTID student cross-registered in courses in any RIT college has the support services of interpreters, tutors, note-takers, speech and hearing specialists, and counselors available to them.

There are several ways to become a cross-registered student.

1. Deaf students may take selected courses in another RIT college.

2. After completing a program of study offered by NTID, students may wish to continue their education in another RIT college.

3. Deaf students may enroll directly from high school or transfer directly from another college into an RIT program.

To enroll in another college at RIT, NTID students discuss the possibility with their counselor, academic advisor and a member of the educational support department assigned to the college of their choice. The final decision as to whether the student is admitted is left to the college in which the student seeks enrollment

Admission

To qualify for admission to RIT through NTID, students must meet certain standards agreed upon by RIT and the U.S. Department of Education.

1. A student should have attended a school or class for deaf students and/or have needed special help because of being deaf.

2. Students must have a hearing loss that seriously limits their chances of success in college without special support services. There is a general agreement that an average hearing loss of 60 decibels (ASA) or 70 decibels (ISO) or greater across the 500; 1,000; and 2,000 Hz range (unaided) in the better ear is a major handicap to education.

3. The NTID program at RIT is designed for students who have finished a secondary educational program. Students can be considered for admission before completing a secondary program if their secondary school authorities feel that they will gain more from the NTID program than by remaining in secondary school. Age and personal/social maturity are given special consideration in such a situation.

4. Students' educational background should show that they can probably

succeed in a program of study at NTID or one of the other colleges of RIT. Students who are admitted should have an overall eighth grade achievement level or above. This means that the average score on an achievement test that includes reading, math and language should be at an eighth grade level.

5. Students must show that they are personally and socially mature enough to enter a program at NTID or one of the colleges of RIT. The information is provided through the student's personal references.

6. A student must be a citizen or permanent resident of the United States.

Summer Vestibule Program

The Summer Vestibule Program is a series of educational experiences designed to prepare deaf students for further post secondary training, to determine their academic strengths and weaknesses and to provide an environment for developing program and career choices.

During the summer program, new students have the opportunity to explore and evaluate, through program sampling, the various programs of study available through NTID and the other colleges at RIT. Concurrently, the faculty has the opportunity to evaluate the student, offer counsel and plan for Fall Quarter.

The counseling staff helps students to more fully understand their abilities, interests and achievement levels through the interpretation and discussion of test data, background experiences, personal and work values. Aptitudes and interests are then related to available academic programs and possible occupations. This gives students the opportunity to select a program and career which best suit their individualized needs. The students are also guided through a series of specially designed living arrangements and self-governance experiences which assist them in making satisfactory adjustments to college life and developing interpersonal relationship skills. The Summer Vestibule Program has proven invaluable in improving students' ability to take full advantage of opportunities at RIT.

Charges and fees

The cost of attending the National Technical Institute for the Deaf includes tuition, room, board and academic fees. For more specific information on admission, costs and programs, please consult RIT's

Official Bulletin for NTID, available from NTID.

Special support services

Special support services are provided to NTID-sponsored students at RIT. Interpreting services are available upon request for any class in which one or more deaf students are in attendance. In many classes for baccalaureate programs, trained hearing RIT students take notes on special notetaking pads and give copies of them to the deaf students. Tutorial services are provided to deaf students as needed.

Note taking allows the deaf student to watch the interpreter or teacher while the notetaker records classroom information.

In addition, every NTID-sponsored student has a personal/career counselor, who helps the student plan his or her educational program and adjust to college life. Mental health services and preventive mental health programming are provided for all hearing-impaired students. Services to assist in career development are an important part of the total NTID program. All special support services are geared toward helping the deaf student gain the maximum benefit from his or her educational experiences at RIT—experiences that will lead to successful employment in the mainstream of the work environment.

Personal, social, and cultural growth

Experiences aimed at enriching and increasing students' educational opportunities in personal, social, cultural, and aesthetic areas of growth are provided throughout NTID and RIT. Both academic courses and co-curricular programs support these areas of student development. Formal certification for many of these learning experiences is available through RIT's Complementary Education program. Successful experiences in these areas help students become more well-rounded individuals. Skills and attitudes are developed and practiced which help students become more successful professionals in their chosen careers, as well as more successful in their personal and community lives.

Educational experiences include Outdoor Experiential Education, Community Services, wellness programs, Leadership Development, Educational Travel, intramurals, discussion sessions on issues of mental health and life adjustment, theatre, music and dance, student government and clubs, student newspaper, and student T.V. productions. Such activities are not only fun and

educational, but also give hearing-impaired students opportunities, to meet people from all areas of RIT and to become creative and experienced leaders.

In addition to intramural athletics, male and female hearing-impaired students may also become members of RIT varsity teams in intercollegiate competition. Hearing-impaired athletes have helped RIT to winning seasons in hockey, track, and swimming.

Employment Opportunities

Historically, more than 95 percent of NTID sponsored graduates who choose to enter the labor market have found jobs. Many RIT deaf graduates choose to continue their education through one of the other colleges at RIT or at other institutions.

The high employment rate is largely the result of the fact that deaf graduates hold technical skills which seem to meet employers' needs. Also, NTID's highly individualized employment preparation program teaches students job search skills. Employment advisors help students develop strategies to find jobs and to maintain employment. They also help employers understand NTID and other programs at RIT, deafness, and graduates' technical and communication skills.

Employment advisors constantly monitor employment and economic trends in order to provide the most current information to students. They also maintain liaisons with employers in order to provide feedback to technical departments regarding employers' needs in terms of technical skills. This helps NTID monitor and update its educational programs to make students marketable in business and industry nationwide.

Programs of study

Technical and professional education at NTID prepares students for a variety of successful careers. These programs are designed to meet the increasing demand for technicians, semi-professionals, and specialists for employment in industry, business, government, and the professions. Technical programs are available at the certificate, diploma, and associate degree levels. NTID students can prepare for technical careers in seven major areas.

Business Careers Programs respond to the need in industry for people skilled in operating office equipment, keeping financial records, performing clerical duties, and using computers.

Computer Careers Programs provide opportunities, through the data processing major, to work in computer operations and in preparing computer programs.

Students selecting the Engineering Technologies Careers may choose among three areas. Construction technologies careers involve helping to design and participate in the construction of buildings, roads and bridges. Industrial technologies careers involve working with manufacturing systems and special equipment used in industry.

The electromechanical technology program involves work with systems and special equipment used in industry throughout the country. The A.A.S. programs in Industrial Drafting, Electromechanical, Civil and Architectural Technology Accreditation Committee technology Accreditation Commission of the Accreditation Board of Engineering and Technology. (ABET)

Students who have an interest in science and who also like doing things to benefit people can combine both interests in the Applied Science/ Allied Health Careers. Three program majors are offered: medical laboratory, medical records and optical finishing technology.

Visual Communication Careers offers four program areas: applied art, printing production, applied photography, and media production. The NTID Applied Art Department sponsors an In-House Co-op. In-House Co-op is a cooperative work program on campus where students get experiences with the real world of applied art.

All curricula at NTID include appropriate general education and communication courses. These encompass the common knowledges, skills and attitudes needed by each individual to be effective as a person, a member of a family, an employee, a consumer and a citizen.

NTID at RIT recognizes the need for good communication and has services covering all types of communication instruction. Related services are provided in reading, writing, use of residual hearing, speechreading, speaking, and manual/ simultaneous communication.

NTID Undergraduate Programs

Business Occupations	•		
Office Practice & Procedures		•	•
Data Processing	•	•	•
Architectural Drafting		•	
Architectural Technology			•
Civil Technology			•
Industrial Drafting		•	•
Industrial Drafting Technology			•
Manufacturing Processes		•	
Electromechanical Technology			•
Physician's Office Assistant	•		
Histological Assistant	•		
Hematology Assistant		•	
Microbiology Assistant		•	
Clinical Chemistry Assistant		•	
Medical Laboratory Technician			•
Medical Records Technician			•
Optical Finishing Technology	• ¹	•	•
Applied Art	•	•	•
Media Production Technology		•	•
Applied Photography	•	•	•
Printing Production Technology	•	•	•
Interpreting for the Hearing Impaired			•

Cooperative work experience

Cooperative work experience (co-op) is an important component, of NTID students' career development at RIT. Almost every program of study requires at least one co-op experience before students can be certified for graduation. Co-op jobs range from one quarter (10 weeks) to five quarters (50 weeks) of actual job experience, depending on the requirements of the specific program. Most co-ops occur during summer quarter.

Interpreting For the Deaf

The purpose of the AAS degree in interpreting is to develop skills for the delivery of interpreting and other services needed by deaf persons in educational and other settings. While the emphasis is on developing interpreting skills, additional skills related to assisting deaf students in "mainstream" programs—notably, tutoring and notetaking—are also included. It is anticipated that graduates of the program will be able to get jobs in educational and community settings and other positions requiring a combination of skills. The AAS may also serve as a starting point for more advanced educational degree in other disciplines related to working with deaf persons.

All students must successfully complete the interpreting core courses (54 credit hours). Beyond this requirement, students will also select from one or three major concentrations of study: Tutoring/Notetaking, Educational Programs, or Interdisciplinary Study.

Transfer credits from another institution may be accepted, and in some instances students have the option of credit by exam for some of the professional courses if they already possess the skills required. Transfer and credit by exam options are determined on an individual basis.

Yr. Two-Year Associate Degree in Interpreting

Quarter Credit Hours

		FALL	WTR.	SPG.	SMR.
1	NITP-201, 202 Expressive Interp. I, II	3	3		
	NITP-211 Voice Interp. I			3	
	NITP-251, 252 Aspects & Issues of Deafness I, II	3		3	
	NITP-261, 262 Theory & Practice of Interpreting I, II	3	3		
	NITP-271 The Professional Interp. I			3	
	NITP-281 Interpreting Practicum I				5
	NITP-283 Interpreting Seminar I				1
	*Liberal Arts Requirements	8	4	8	
*Physical Education Elective	0	0	0	0	
NITP-391 Prin. of Tutoring/Notetaking		3			
2	NTIP-212, 213 Voice Interp. II, III	3	3		
	NITP-303 Expressive Interpreting III	3			
	NITP-331 Expressive Transliterating		3		
	NTIP-341 Intro. to Specialized Interpreting Settings			3	
	NITP-372 The Professional Inter. II	3			
	NITP-382 Interpreting Practicum II			5	
	NITP-384 Interpreting Seminar II			1	
	*GLLC-520 Vocabulary Building		5		
	*Contemporary Science Course		4		
	#*Technical Concentration Requirements		7	8	

*Courses may be offered/taken in quarters other than shown.
 #* Technical requirements vary from 6-15 hours depending on the concentration; maximum is represented.

Tutoring/Notetaking Concentration

- NITP-391 Principles of Tutoring/Notetaking
- NITP-392 Tutoring/Notetaking Practicum
- GLLC-547 Practical Writing
- GLLC-402 Conference Techniques

Educational Programs:

- NITP-391 Principles of Tutoring/Notetaking
- NITP-395 Mainstreaming: Educational Programs and Alternatives
- GLLC-547 Practical Writing
- GLLC-402 Conference Techniques

Interdisciplinary Study:

- NITP-391 Principles of Tutoring/Notetaking
- NITP-395 Mainstreaming: Educational Programs and Alternatives

Department of Military Science and Reserve Officers' Training Corps (ROTC)

LTC Richard K. Reinholtz, Professor
of Military Science

Background

The Military Science Department and ROTC was established at RIT in 1969. The Professor of Military Science has commissioned officers every year since 1971. Over the years the program has included students from every academic discipline in the Institute.

Today the Military Science Department and ROTC is an academic course, a physical education course, and an extra-curricular activity. Participation in the program includes classroom instruction, laboratory practicums, physical training, and some weekend field exercises. RIT students who join the Reserve Officers' Training Corps become cadets in a dynamic and challenging aspect of life at RIT. The title of cadet carries with it the potential for many rewards and responsibilities as a member of the Institute community. Annual social events include the Dining-In and the spring Military Ball. Also, cadets participate in student orientations, demonstrations of military training throughout the academic year, special events geared towards fostering community relations and fund raising for worthy charities.

Military Science Department and ROTC graduates of RIT are working in commissioned officer positions that range from commanding units overseas to writing computer programs in North Carolina. RIT Military Science Department and ROTC graduates may be trained as pilots, linguists, lawyers, and scientists when they enter service in the Army of the United States.

Airborne, Air Assault (helicopter) and Ranger training are available to cadets in the upper division of ROTC. RIT cadets may earn their badges as parachutists, air assaultists, or rangers and become fully qualified to be assigned duties in these activities after commissioning.

ROTC extracurricular activities include adventure training, pistol team, and numerous Ranger outings. The department has cross-country ski equipment, conducts rafting exercises

Yr.	Department of Military Science Four-Year Program	Qtr. Credit Hours		
		FALL	WTR.	SPG.
1 MS I	MMSM-201 Introduction to Military Science and Basic Map Reading OR XPEF-Orienteering MMSM-202 Applied Health Dynamics OR XPEH-Military Preventive Medicine and First Aid MMSM-203 Military Heritage OR XPEF-Drill and Ceremonies Leadership Laboratory (optional)	1	1	1
		2	2	2
2 MS II	*MMSM-301 Military Geography *MMSM-302 Psychology & Leadership *MMSM-303 The Military and American Society <i>*Anyone of the following courses may be taken in lieu of this course:</i> XPEF-Orienteering (Fall only) XPEH-Military Preventive Medicine and First Aid (Winter only) XPEF-Drill and Ceremonies (Spring only) XPEF-ROTC Rangers XPEF-Army Conditioning Drills Leadership Laboratory (optional)	3	3	3
3 MS III	MMSM-401 Military Tactics MMSM-402 Military Communications MMSM-403 Military Operations	4	4	4
4 MS IV	MMSM-501 Combined Arms Operations MMSM-502 Military Administration & Logistic Management... MMSM-503 Military Ethos MMSM-510 Senior Seminar	2		

Yr.	Department of Military Science Two-Year Program Basic Camp/Advanced Placement/Summer Compression	Qtr. Credit Hours		
		fall	wtr.	spg.
3 MS III	MMSM-401 Military Tactics MMSM-402 Military Communications MMSM-403 Military Operations	3	3	3
4 MS IV	MMSM-501 Combined Arms Operation MMSM-502 Military Administration & Logistic Management MMSM-503 Military Ethos MMSM-510 Senior Seminar	2	4	4

in the fall, and offers survival training.

For those cadets enrolled in the upper division (described below) the program includes an annual trip to Fort Drum, N.Y. Usually conducted during April, this exercise is preparation for the Advanced Camp. The Advanced Camp at Fort Bragg, N.C., trains and evaluates thousands of cadets annually from all schools on the Eastern Seaboard of the United States. After Advanced Camp, selected cadets have continued their training in positions ranging from Special Forces platoon leaders to Engineer platoon leaders.

Characteristics of the program

The Department of Military Science and ROTC offers a unique educational experience. A cadet is exposed to a curriculum that cannot be effectively duplicated. Modern military weapons, tactics, and leadership experiences cannot be gained from other sources. Only through this department can a college graduate acquire the knowledge and skills to serve his country as a

commissioned officer in the U.S. Army. In addition, Army ROTC offer the college student adventure, training, extra money, and an option concerning job opportunities.

The four-year army ROTC program.

This program is divided into two parts: the Basic Course (Junior Division) and Advanced Course (Upper Division).

The Basic Course is available throughout the freshman and sophomore years and is open to all students. ROTC physical education courses may be substituted for Military Science courses. Students enrolled in the Basic Course study basic military organizations, military first aid, psychology and leadership, and military history. This complete experience qualifies a student for enrollment in the Advanced Course (Upper Division), scholarships, airborne training, summer employment, air assault training, ranger training and many other opportunities to gain valuable on-the-job experience.

The Advanced Course is conducted during the last two years of college and includes attendance at the ROTC Advanced Camp, normally between the junior and senior years. Military Science Department classes during the Advanced Course serve as a prelude to subsequent instruction at specific Army Service Schools. Advanced Course ROTC cadets perform in leadership positions within a cadet battalion and may participate in and/or help conduct various corps of cadets training activities.

The six-week Advanced Camp at Fort Bragg, N.C., gives each person an opportunity to plan, organize and lead his or her peers through a vigorous and challenging training program. Attendees are paid travel expenses and a salary for this intellectually and physically rewarding experience.

The two-year program. This program is offered to all qualified students with two school years remaining who did not previously participate in the Basic Course. Students in this program attend a six-week Basic Summer Camp between their sophomore and junior years. Upon successful completion of Basic Camp, the student may be enrolled in the Advanced Course for the last two years. It should be noted that 2-year scholarships are available on a competitive basis during the Basic Camp. Interested students should begin processing applications for this program early in the sophomore year.

Commissioning

Commissioning of cadets as second lieutenants takes place during graduation day ceremonies. Prior to commissioning ceremonies, each cadet must successfully complete the following requirements:

1. Complete all degree requirements
 2. Complete the Military Science curriculum
 3. Attend and successfully complete the six-week Advanced Summer Camp
- In addition, cadets desiring a commission must complete at least one course in each of the following fields of study:

1. Written Communication Skills
2. Human Behavior
3. Military History
- *4. Management
- *5. National Security Studies

*These courses may be deferred until after graduation only if approved.

Financial Benefits

A monthly subsistence allowance of \$100 per month is provided tax free, directly to each Advanced Course or Scholarship cadet throughout the school year. This, plus pay for Advanced Camp attendance, amounts to over \$2,500 for the last two years of college. In addition, ROTC offers two and three year scholarships which pay for full tuition, fees, books, and required supplies.

Graduate Study Opportunities

Commissioned officers usually have an opportunity to pursue graduate work in their chosen discipline. Normally, the cost of a graduate degree or attendance at a professional school is at the individual's expense. Certain academic specialties may be paid in full by the U.S. Army.

Course descriptions

For a complete outline of courses offered at RIT, please request the Course Description catalog from Admissions Office. For more information

Call:

Department of Military Science
Rochester Institute of Technology
Phone: (716) 475-2881 or 2882

or Visit

Department of Military Science
George Eastman Memorial Building,
Room 03161
Rochester Institute of Technology
Rochester, New York 14623

Trustees

Maurice I. Abrams, M.D.*
Honorary Director
American School for the Deaf, Inc.

James R. Aisdorf*
Former Vice President
& General Counsel
Garlock, Inc.

Theodore J. Altier
Chairman and Treasurer
Altier and Sons Shoes, Inc.

Robert B. Anderson*
Partner
Robert B. Anderson & Co.

Mrs. Marcus N. Barbour*

Bruce B. Bates
Vice Chairman
Board of Trustees
Rochester Institute of Technology
Vice President
E.F. Hutton & Company, Inc.

George S. Beinetti*
Former Chairman of the Board
Rochester Telephone Corporation

John L. Blake
Director
City of Rochester & Monroe County
Private Industrial Council

W. Frank Blount
Southeastern Regional Vice President
for Business Services at AT&T

Mrs. Clinton E. Braine*
President
Rochester Institute of Technology's
Women's Council

Theodore C. Briggs*
Retired Chairman of the Board
Lawyers Co-operative Publishing Co.

Mrs. David L. Brooke

William A. Buckingham
Vice President and
Deputy General Manager
Manufacturers Hanover, N.A.

Howard F. Carver*
Former Chairman of the Board
The Gleason Works

Colby H. Chandler
Vice Chairman, Board of Trustees and
Chairman of the Executive Committee
Rochester Institute of Technology
Chairman of the Board and
Chief Executive Officer
Eastman Kodak Company

Albert K. Chapman*

Brackett H. Clark*
Honorary Vice Chairman
Board of Trustees
Rochester Institute of Technology
Chairman of the Board and Treasurer
Rapidac Machine Corporation

Hugh E. Cumming
Former President and Director
Curtice-Burns, Inc.

E. Kent Damon
Vice Chairman
Board of Trustees
Rochester Institute of Technology
Vice President and Secretary
Xerox Corporation

Robert H. Downie

Francis E. Drake, Jr
Retired Chairman of the Board
Rochester Gas & Electric Corporation

Mrs. James C. Duffus
Former President
Rochester Institute of Technology's
Women's Council

Richard H. Eisenhart
Chairman Emeritus
Board of Trustees
Rochester Institute of Technology
Chairman
R.H. Eisenhart, Inc.

Walter A. Fallon
Retired Chairman of the Board and
Chief Executive Officer
Eastman Kodak Company

Mrs. Julian M. Fitch
Former President
Rochester Institute of Technology's
Women's Council

Maurice R. Forman*
Retired Chairman
B. Forman Company

Karl F. Fuchs*
President
Alliance Tool Corporation

Daniel E. Gill
Chairman of the Board and President
Bausch & Lomb, Incorporated

James S. Gleason
President and Chief Executive Officer
The Gleason Works

Lawrence C. Gleason*
Former Chairman of the Board
The Gleason Works

Fred H. Gordon, Jr.*
Chairman
Executive Committee
Mixing Equipment Co., Inc.
(a unit of General Signal Corporation)

Lucius R. Gordon*
Chairman of the Board
Mixing Equipment Co., Inc.
(a unit of General Signal Corporation)

Thomas H. Gosnell
Treasurer
Board of Trustees
Rochester Institute of Technology
President
Lawyers Co-operative Publishing Co.

Ezra A Hale*
Honorary Chairman
Board of Trustees
Rochester Institute of Technology
Honorary Chairman of the Board
Central Trust Company

Alfred M. Hallenbeck
Counsel
Board of Trustees
Rochester Institute of Technology
Vice President and General Counsel
Sybron Corporation

Alexander D. Hargrave
Chairman of the Board and
Chief Executive Officer
Lincoln First Banks, Inc.

James C. Henderson
President
Rochester Telephone Corporation

John E. Heselden
President
Gannett Newspaper Division

John D. Hostutler
President
Industrial Management Council

Thomas E. Husted
Retired General Manager
Rochester Products Division
General Motors Corporation

Frank M. Hutchins
Chairman
Board of Trustees
Rochester Institute of Technology
Chairman of the Board
Hutchins/Young & Rubicam

Stanley R. Jacobs*
Former Member
New York Stock Exchange

Herbert W. Jarvis
President and Chief Operating Officer
Sybron Corporation

Paul C. Jenks, M.D.
Physician

Byron Johnson
Senior Partner
Johnson, Mullan, Brundage &
Keigher, P.C.

John Wiley Jones*

Chairman of the Board
Jones Chemicals, Inc.

Thomas F. Judson, Sr.*

Chairman of the Board
John B. Pike & Son, Inc.

Arthur M. Lowenthal***William J. Maxion**

Director

Case-Hoyt Corporation

Russell C. McCarthy*

Retired Manager
Industrial Management Council

J. Warren McClure*

President

McClure Media Marketing

Motivation Co.

C. Peter McColough*

Chairman of the Board and
Chief Executive Officer

Xerox Corporation

Paul Miller*

Former Chairman of the Board

Gannett Co., Inc.

Mrs. Edward T. Mulligan**Alfred J. Murrer**

Chairman of the Board

The Gleason Works

Raymond E. Olson*

Retired Vice Chairman of the Board

Sybron Corporation

Frederick G. Ray

Chairman of the Board

President and Chief Executive Officer

Rochester Savings Bank

Ernest I. Reveal

Retired Chairman of the Board

R.T. French Company

Jorge A.G. Rivas

Presidente

Grupo RIMA, S.A.

M. Richard Rose

President

Rochester Institute of Technology

Harris H. Rusitzky

Secretary

Board of Trustees

Rochester Institute of Technology

President

Serv-Rite Food Service & Consulting
Corporation

John E. Schubert

Former Chairman of the Board

The Community Savings Bank

James E. Shapiro

Vice President

Xerox Corporation

F. Ritter Shumway*

Honorary Member of the Board

Sybron Corporation

Ritter Company

Mrs. F. Ritter Shumway*

Former President

Board of Health

County of Monroe

Robert J. Strassenburgh II

Former Chairman and President

Strassenburgh Laboratories

Robert L. Tarnow

Chairman of the Board

Goulds Pumps, Inc.

Gaylord C. Whitaker*

Matrix Unlimited, Inc.

Ronald A. White

President

Graphic Systems Division

Rockwell International Corporation

Wallace E. Wilson*

Group Vice President (Retired)

General Motors Corporation

Kenneth W. Woodward, M.D.

Manager

Clinical Services

Xerox Corporation

*Member of Honorary Board

Endowed Professorships

College of Business

J. Warren McClure Professorship in Marketing

Established: 1977

Donor Mr. and Mrs. J. Warren McClure

Purpose: To perpetuate Mr. McClure's professional interest in the field of marketing.

Held by: Professor Stanley Widrick

College of Continuing Education

Frederick H. Minett Professorship in Continuing Education

Established: 1972

Donor Mr. Minett by bequest

Purpose: To provide a permanent memorial for Mr. Minett and to recognize his interest in students who obtain their education through the evening division.

Held by: Professor John D. Hromi

Paul A. Miller Distinguished Professorship in Continuing Education

Established: 1978

Donor RIT Board of Trustees

Purpose: To honor Dr. Miller on the occasion of his retirement as President of the Institute and to give lasting recognition to his standing as an acknowledged authority in the field of continuing education.

Held by: Presently open

Russell C. McCarthy Chair

Established: 1979

Donors: Mr. Fred Gordon, Mr. Lucius Gordon, Mixing Equipment Company and General Railway Signal Company, units of General Signal Corporation, and other friends of Mr. McCarthy.

Purpose: To honor Mr. McCarthy as Manager of the Industrial Management Council for twenty years and his role as a champion of and an authority on industry and business. Mr. McCarthy has served RIT as a Trustee and Honorary Trustee since 1947.

Held by: Professor James Forman

College of Engineering

James E. Gleason Professorship in Mechanical Engineering

Established: 1967

Donor Estate of James E. Gleason

Purpose: To provide a permanent memorial for Mr. Gleason who served as a Trustee of RIT from 1930 until 1964, and to strengthen RIT in the field in which he received his education.

Held by: Professor Ray C. Johnson

College of Fine and Applied Arts

Charlotte Fredericks Mowris Professorship in Contemporary Crafts

Established: 1976

Donor Mrs. Charles F. Mowris

Purpose: To perpetuate her interest in the School for American Craftsmen through the work of faculty and students as talented craftsmen.

Held by: Presently open

College of Graphic Arts and Photography

Melbert B. Cary, Jr. Professorship in Graphic Arts

Established: 1969

Donor Mary Flagler Cary Charitable Trust

Purpose: To provide a permanent memorial for Mr. Cary as a former president of the American Institute of Graphic Arts and to perpetuate his interest in the field.

Held by: Professor Alfred F. Horton

Richard S. Hunter Professorship of Color Science, Appearance and Technology

Established: 1982

Donor Mr. and Mrs. Richardl S. Hunter

Purpose: To enable RIT to increase its research and educational efforts in the areas of color science, technology and appearance science in order to benefit the industry and science of color.

Held by: Professor Franc Grum

James E. McGhee Professorship in Photographic Management

Established: 1967

Donor Master Photodealers & Finishers Association and friends of Mr. McGhee

Purpose: To provide a permanent memorial for Mr. McGhee, a former vice president of the Eastman Kodak Company and lifelong friend of the photo finishing industry.

Held by: Professor Ellsworth J. McCune

Paul and Louise Miller Distinguished Professorship In Newspaper Production Management

Established: 1976

Donor Frank E. Gannett Newspaper Foundation

Purpose: To honor the former chairman of the Board of the Gannett Company, and to perpetuate his interest in good management practices in the newspaper industry.

Held by: Professor Robert G. Hacker

College of Liberal Arts

Caroline Werner Gannett Professorship in the Humanities

Established: 1974

Donor Mrs. Frank E. Gannett

Purpose: To perpetuate Mrs. Gannett's lifelong interest in education especially those fields of study that have a humanistic perspective.

Held by: Professor Marjorie Grene

All Institute

William A Kern Professorship in Communications

Established: 1971

Donor Rochester Telephone Corporation

Purpose: To commemorate the 100th Anniversary of that company and to provide a memorial for a former president of the company and a man who served as RIT Trustee from 1959 to 1964.

Held by: Professor Mihai Nadin

Officers

M. Richard Rose, BS, MS, Ph.D.
President

Thomas R. Plough, BA, MA, Ph.D.
Vice President
Academic Affairs

Robert D. Frtsina, BA, MA, Ph.D.
Senior Vice President
Institutional Advancement

H. Donald Scott, BA, BS
Vice President Finance and
Administration

Fred W. Smith, BA, MA, Ph.D.
Vice President
Student Affairs

William E. Castle, BS, MA, Ph.D.
Vice President
Government Relations
Director, National Technical Institute
for the Deaf

Alfred L. Davis, AB, MA
Vice President

Office of the President

M. Richard Rose, BS, MS, Ph.D.
President

Andrew J. Dougherty, BS, MBA
Executive Assistant to the President

Catherine Cappel-Whittemore
Administrative Assistant to the
President

Deans

Paul Bernstein, BS, MA, Ph.D.
Graduate Studies

Robert A. Clark, BS, Ph.D.
College of Continuing Education

Mark F. Guldin, BS, MS, Ph.D.
College of Graphic Arts and
Photography

Robert H. Johnston, BS, MA, Ph.D.
College of Fine and Applied Arts

Richard A. Kenyon, BME, MS, Ph.D.
College of Engineering

Walter F. McCanna, BS, Ph.D.
College of Business

Dennis C. Nystrom, BS, Ed.D.
College of Applied Science and
Technology

John E. Pallouras, BA, MA, Ph.D.
College of Science

Peter J. Pere, BBA, MA, Ed.D.
National Technical Institute for the
Deaf

Mary C. Sullivan, RSM.BA, MA, Ph.D.
College of Liberal Arts

College of Applied Science and Technology

George T. AHey, BA, MS—Director,
School of Food, Hotel and Tourism
Management; Professor
Donald D. Baker, BA, M.Ed., MBA,
Ed.D.—Associate Dean, Associate
Professor

W. David Baker, BS, MS—Director,
School of Engineering Technology;
Associate Professor

Wiley R. McKinzie, BA, MS—Director,
School of Computer Science and
Technology; Associate Professor
Dennis C. Nystrom, BS, Ed.D.—
Dean; Professor

David L. Olsson, BS, MS, Ph.D.—
Director, Department of Packaging
Science, Professor

Clinton J. Wallington, BA, Ph.D.—
Director, Department of Instructional
Technology; Professor

School of Computer Science and Technology

Peter G. Anderson, Ph.D., BS,
Massachusetts Institute of
Technology—Professor

Rodger Baker, BM, BS, MS,
University of Rochester—Associate
Professor

John A. Biles, MS, BA, University of
Kansas—Assistant Professor

James R. Carbin, BS, SUNY at
Albany; MS, Rensselaer Polytechnic
Institute—Professor

Warren Carithers, BS, MS, University
of Kansas—Instructor

Ethel Comte, RN, BA, University of
Illinois (Chicago Circle); MS,
Rochester Institute of
Technology—Instructor

Lawrence Coon, AB, University of
Rochester; MA, Oakland University;
Ph.D., Ohio State University—
Assistant Professor

Evelyn Culbertson, BS, State
University of New York—Brockport;
MS, Syracuse University—Associate
Professor

Roy Czernikowski, BEE, Catholic
University of America; ME, Ph.D.,
Rensselaer Polytechnic
Institute—Professor

Mary Ann Dvovich, BS, SUNY at
Brockport; MS, Rochester Institute of
Technology—Instructor

John L. Ellis, Ph.D., MS, University of
Toledo; MS, University of Oregon—
Assistant Professor

Henry Ettinger, BS, University of
Rochester; MS, Syracuse University—
Assistant Professor

James Hammerton, MA, Cambridge
University, MBA, New York
University—Assistant Professor

James E. Heliotis, BS, MS, Cornell
University; Ph.D., University of
Rochester—Assistant Professor

Jack Hollingsworth, BS, BA,
University of Kansas; MS, Ph.D.,
University of Wisconsin—Professor

Daryl Johnson, BS, St. John Fisher
College; MS, Rochester Institute of
Technology—Visiting Professor
Guy Johnson, BS, Pennsylvania
State; MS, Syracuse—Associate
Professor

Andrew Kitchen, MA, University of
Edinburgh, Scotland; MS, Rochester
Institute of Technology; Ph.D.,
University of Rochester—Associate
Professor

Jeffrey Lasky, BBA, City University of
New York; MBA, City University of
New York; MS, University of
Minnesota—Assistant Professor

Michael J. Lutz, BS, St. John Fisher
College; MS, SUNY at Buffalo—
Associate Professor

Peter Lutz, BS, St. John Fisher
College; MS, Ph.D., SUNY at
Buffalo—Associate Professor

Wiley R. McKinzie, BA, University of
Wichita; MS, SUNY at Buffalo—
Associate Professor

Rayno Niemi, BS, MS, Ph.D.,
Rensselaer Polytechnic Institute—
Associate Professor

Kenneth Reek, B. Tech., MS,
Rochester (Institute of Technology—
Assistant Professor

Margaret Reek, BT, MS, Rochester
Institute of Technology—Instructor
William Stratton, BS, MS, Hunter
College; MS, SUNY at Buffalo—
Associate Professor

Walter A. Wolf, BA, Wesleyan
University; MA, Brandeis University;
Ph.D., Brandeis University—Lecturer

Adjunct Faculty

Vishwas Abhyankar, Ph.D., University
of Rochester

James Chmura, BS, MS, Rutgers
University

Teiji Furugori, MS, University of
Rochester; Ph.D., SUNY at Buffalo

Ralph Longobardi, BSEE, Rochester
Institute of Technology; MS, Ph.D.,
Syracuse University

Walter Maurer, BA, University of
Wisconsin; MS, Rochester Institute of
Technology

Donald McClimans, BA, University of
Rochester; MS, Perdue

Werner Schenk, BA, Los Angeles
State College; MBA, University of
Rochester

William Thiel, MS, Rochester Institute
of Technology

School of Engineering Technology

John F. Adams, BEE, MSEE,
Clarkson College—Professor

Ronald F. Amberger, BME,
Rensselaer Polytechnic Institute; M.
Eng., Penn State University; P.E.—
Professor

W. David Baker, BS, Monmouth
College, MS, Rochester Institute of
Technology—Director, School of
Engineer Technology; Associate
Professor

Charles L. DeRolier, BS, ME,
Rochester Institute of Technology—
Chairman, Mechanical Engineering
Technology; Associate Professor

Thomas J. Dingham, AAS, Hudson
Valley Community College; BSEE,
MS (ET) Rochester Institute of
Technology—Associate Professor

Robert H. Easton, BS, U.S. Military
Academy; MSCE, Iowa State
University; P.E.—Associate Professor

Kevin M. Foley, AAS, Monroe
Community College; BS, SUNY
College of Environmental Science
and Forestry, Syracuse University;
MBA, Rochester Institute of
Technology—Chairman, Civil
Engineering Technology, Assistant
Professor

Burton S. Garreit, ME, Stevens
Institute of Technology; MS,
University of Michigan—Associate
Professor

Louis B. Gennaro, MS, Northeastern
University; BS, U.S. Military
Academy—Assistant Professor
Joseph D. Greenfield, BEE, City
College of New York; MSEE,
Pennsylvania State—Professor

Alan C.H. Hu, BSCE, Ta Tung
University Shanghai; MPH,
Minnesota; Ph.D.,
Oklahoma—Professor

Richard A. Hultin, BSME, MSME,
Northeastern University; P.E.—
Assistant Professor

David G. Krtpinsky, MSE, BE,
Youngstown University—Assistant
Professor

William C. Larsen, BS, MSCE,
Dartmouth; P.E.—Associate Professor

Carl A. Lundgren, BS, Rensselaer
Polytechnic Institute; MBA, University
of Rochester—Assistant Professor

Robert E. McGrath, Jr., MSCE,
Syracuse University; BCE, Rensselaer
Polytechnic Institute; P.E.—Professor

Robert A. Merrill, BS, Clarkson
College; MS, Northeastern; P.E.—
Associate Professor

Mark Piterman, MCE, Odessa Marine
Engineers Institute—Assistant
Professor

Charles G. Porter, BSIE, Columbia
University, MBA, Rochester Institute
of Technology—Assistant Professor

Venkataswamy Raju, BS, MS, Madras
University; MBA, Missouri State
University; ME, Rochester Institute of
Technology—Assistant Professor

James A. Reynolds, AAS, BS,
Rochester Institute of Technology;
MSEE, Illinois—Professor

Carol A. Richardson, MSEE, Union;
BSEE, University of Wyoming—
Assistant Professor

John D. Sherrtck, BEE, Clarkson;
MSEE, Worcester Polytechnic; P.E.—
Associate Professor

Martin J. Siebach, AAS, BS,
Rochester Institute of Technology;
MSEE, Illinois; P.E.—Associate
Professor

John A. Stratton, AAS, BS, Rochester
Institute of Technology; MS,
Rensselaer Polytechnic Institute;
P.E.—Chairman, Electrical
Engineering Technology, Associate
Professor

Thomas Young, BA, Hunter College;
MS, New York University—Associate
Professor

School of Engineering Technology Adjunct Faculty

Mark P. Allen, AAS, Suffolk County
Community College; BT, Rochester
Institute of Technology; P.E.

Charles M. Buehler, BSEE, University
of Wisconsin

Lloyd Merrill, ME, MME, Cornell
University; P.E.

Joseph F. Santoro, BS, Oswego
State; MA, Ohio State University

School of Food, Hotel and Tourism Management

George Alley, BA, Michigan State University, MS, Rutgers University—Director, School of Food, Hotel and Tourism Management; Professor
Frank A. Bucci, BS, University of New Hampshire; MBA, Boston College—Associate Professor
Francis M. Domoy, BS, MA, SUNY at Buffalo; Ph.D., Michigan State University—Associate Professor
Leila P. Hopkins, R.D., BS, Tennessee; MS, University of Iowa—Associate Professor
Dorothy C. Humm, R.D., BS, Drexel University; MBA, Rochester Institute of Technology—Assistant Professor
Richard Marecki, BA, MA, Ph.D., CTC, SUNY Buffalo—Associate Professor

Linda Underhill, R.D., BS, MS, Rochester Institute of Technology—Instructor

Carol Whitlock, R.D., BS, MS, Pennsylvania State University; Ph.D., University of Massachusetts—Associate Professor

Clinical Faculty

Jean Fox, Director of Dietetics, Rochester General Hospital
Jean Queale, Chief of Dietetic Service, The Veterans Administration Hospital, Canandaigua, New York

Adjunct Faculty

Alan Argulski, AAS, Erie Tech.; BS, Rochester Institute of Technology
William Bruton, BS, St. Bonaventure University; MS, University of Minnesota

Ruby Jurincie, R.D., AAS, Mars Hill Junior College; BS, University of Tennessee; MS, SUNY at Buffalo
David Van Varick, AB, Bowdoin College; JD, Boston University
Donna Sorenson, BA, Wheaton College; MA Wesleyan College; MS, Cornell University

Instructional Technology

Clinton J. Wellington, BA, University of Missouri at Kansas City; Ph.D., University of Southern California—Professor
Thomas Zigon, BS, MS, Rochester Institute of Technology—Instructor

Packaging Science

A. Ray Chapman, MBA, Rochester Institute of Technology; BS, Michigan State University—Assistant Professor

Daniel L. Goodwin, BS, MS, Michigan State University—Associate Professor

David L. Olsson, BS, MS, Ph.D., Michigan State University—Director, Department of Packaging Science; Professor

Karen L. Proctor, BS, Michigan State University; MBA, Rochester Institute of Technology—Assistant Professor
Fritz J. Yambrach, BS, Michigan State University; MBA, Utah State University—Assistant Professor

Adjunct Faculty

James A. Ebmeyer, BS, Michigan State University; MBA, Rochester Institute of Technology

Anita S. Olsson, BS, Wheaton College; MA, Michigan State University

Joan L. Pierce, BS, Michigan State University

Robert H. VanValkinburg, BID, Syracuse University; MFA, Rochester Institute of Technology

College of Business

Walter F. McCanna, BS, Marquette University; Ph.D., University of Wisconsin—Madison—Dean; Professor

Thomas E. Comte, BS, University of California—Davis; MBA, Columbia University; Ph.D., University of Missouri at Columbia—Associate Dean; Associate Professor

Gary J. Bonvillian, BS, MS, Rochester Institute of Technology—Assistant Dean for Operations
Terry L. Dennis, BS, Clarkson College; MS, Ph.D., Purdue—Director of Cooperative Education; Associate Professor

Barbara J. Howard, BS, MBA, Rochester Institute of Technology—Director, Graduate Programs

Philip R. Tyler, BS, Rochester Institute of Technology; MBA, DBA, Michigan State University—Director, Center for Management Development; Associate Professor

Department of Accounting and Finance

E. James Meddaugh, BS, Rutgers; MBA, Drexel; Ph.D., Pennsylvania State; C.P.A., New York—Staff Chairman, Department of Accounting and Finance; Professor
Stanley M. Dye, BA, Haverford College; C.P.A., New York; Distinguished Lecturer
Gene G. Hoff, BBA, Hartwick; MBA, University of Rochester; CMA; Assistant Professor

Paul A. Lebowitz, BA, Case Western University; MS, Rochester Institute of Technology; Assistant Professor
Jose A. Rullan, BS, Western Carolina University; MS, Rochester Institute of Technology; C.P.A., New York; Instructor

Daniel D. Tesson, BBA, St. John Fisher; MS, Clarkson College of Technology; C.P.A., New York; Assistant Professor

Robert J. Warth, BS, Rochester Institute of Technology; C.P.A., New York; Lecturer

Eugene O. Wilson, BS, MS, Syracuse University; MBA, University of Rochester; Associate Professor
Lorraine P. Wolch, BA, Harpur College; MBA, Rochester Institute of Technology; C.P.A., New York; Instructor

You-Keng Chiang, BA, Central University, Chungking; MA, Ph.D., University of Chicago; Professor

James C. Galloway, BA, University of Rochester; MBA, University of Pennsylvania; DBA, University of Virginia; Assistant Professor
Steven C. Gold, BA, BS, Rutgers; MA, Ph.D., SUNY-Binghamton; Assistant Professor

John A. Heimuth II, BA, MA, Old Dominion University; Ph.D., University of South Carolina; Assistant Professor

Frank E. Holley, BS, University of Illinois; Distinguished Lecturer
Lawrence E. McLean, AB, Duke University; MBA, University of Chicago; Assistant Professor
Michael R. Vetsuypens, BA, Rijksuniversiteit Gent, Belgium; MS, University of Rochester; Lecturer

Department of Management

Andrew J. DuBrin, AB, Hunter College; MS, Purdue University; Ph.D., Michigan State University—Staff Chairman, Department of Management; Professor

Robert J. Barbato, BA, Le Moyne College; Ph.D., Michigan State University; Assistant Professor
Janet C. Barnard, BS, Nazareth College; Ed.M., Ed.D., University of Rochester; Assistant Professor
J. Kenneth Graham, BA, Brown University; MBA, Ph.D., Union College and University; Assistant Professor

John K. Hartley, BS, MS, Georgia Institute of Technology; Associate Professor

William L. Mihal, BS, MS, Clarkson College; Ph.D., University of Rochester; Associate Professor
William A. Nowlin, BS, Empire State College—SUNY; MPA, SUNY-Brockport; Lecturer

Karen H. Paul, BA, MA, Ph.D., Emory University; Assistant Professor
Robert F. Pearse, BA, Olivet College; AM, Ph.D., University of Chicago;; Distinguished Lecturer
George M. Sullivan, BS, St. Peter's College; JD, Seton Hall University; LLM, New York University; Assistant Professor

Nathan B. Winstanley, BS, University of Massachusetts; MS, Ph.D., Purdue University; Lecturer

Department of Marketing

Eugene H. Fram, BS, ML, University of Pittsburgh; Ed.D., SUNY-Buffalo; Staff Chairman, Department of Marketing; Professor

Yusuf A. Choudhry, BE, East Pakistan University of Engineering and Technology; MBA, Syracuse University; Lecturer

Dale F. Gibson, BA, St. Lawrence University; MBA, University of Pennsylvania; Associate Professor

Dean C. Siewers, BS, Marietta College; MBA, Duke University; Ph.D., University of North Carolina; Assistant Professor

Patricia Sorce, BA, Kent State University; MS, Ph.D., University of Massachusetts; Assistant Professor

Julian E. Yudeison, BS, University of Pennsylvania; MBA, Emory University; Ph.D., Northwestern University; Associate Professor
Stanley M. Widrick, BS, Clarkson College; MBA, SUNY-Buffalo; Ph.D., Syracuse University; Associate Professor

Department of Decision Sciences

Thomas A. Williams, BS, Clarkson University; MS, Ph.D., Rensselaer Polytechnic Institute—Staff Chairman, Department of Decision Sciences; Professor

Bernard J. Isselhardt, BA, MS, Southern Illinois University; Ph.D., University of Iowa; Assistant Professor

George A. Johnson, BS, University of Rochester; MBA, DBA, Indiana University; Professor

Thomas F. Pray, BS, MS, Clarkson College; Ph.D., Rensselaer Polytechnic Institute; Associate Professor

Will iam J. Stevenson, BIE, MBA, Ph.D., Syracuse University; Associate Professor

Paul D. VanNess, BA, MBA, University of Michigan; MS, Rochester Institute of Technology; Associate Professor

School of Retailing

John S. Zdanowicz, BS, Rochester Institute of Technology; MBA, Ph.D., Michigan State University—Director, School of Retail Management; Associate Professor

College of Continuing Education

Administrative Officers and Staff

Robert A. Clark, BS, Ph.D.; Dean; Professor

Frederic P. Gardner, BS, MS, Ed.D.; Associate Dean; Professor

Norman A. Flannigan, BS, M.Ed., Ph.D.; Assistant Dean Operations; Associate Professor

Delores Baxter, Administrative Assistant to the Dean

Lottus C. Carson, BA, MA; Director Community Programs & Services

Betty J. Glasenapp, ABA; Administrative Coordinator, Summer Session

Irene M. Hawryschuk, BA; Coordinator, Information and Advising Services

Ronald J. Hilton, BA, MA, Ph.D.; Director of Research and Professional Development; Professor

Genevieve Knapp, Management Diploma; Coordinator, Financial Services

Andrea L. Schaefer, BA, MS; Publications Coordinator
Janet Switzer, Management Diploma, BS; Registration Administrator
Marianne Yarzlnsky, BS; Coordinator, Operational Services

Energy Education and Training Division

Dorothy K. Paynter, BA, M.Ed.; Director; Associate Professor
Harriet G. Friedstein, BS, MS, C.A.S.; Project Director
Lee A. Sengbusch, BA, MA, Ph.D.; Project Director

External Program Development

Richard L. Harris, BA, M.Ed., Ed.D., Director, Associate Professor
Jessie M. James, BA, MS; Program Consultant; Instructor
Robert M. Way, AB, MS; Program Consultant, Associate Professor
Helen I. Widrick, BS, MS; Program Consultant, Lecturer
Susan Rogers, BFA, MS; Consultant Cable TV

Academic Areas

Business Management Studies

Rolf Z. Zerges, BS, MA; Director, Chairperson Business Administration and Community Studies; Associate Professor

Lynda Rummel, BS, MS, Ph.D.; Chairperson, Management Development Program; Assistant Professor

Daniel Smialek, BS, Chairperson, Business Studies; Assistant Professor

Humanistic Studies

Andrea C. Walter, BA, MA, Ed.D.; Director, Humanistic Studies Chairperson, Behavioral Science; Professor

Walter R. Bieder, BA, MA; Behavioral Science; Assistant Professor

Elizabeth A. Conley, BA; Chairperson, Communications

Karen L. Finch, BS, MS; Chairperson, Deaf Studies

Alan Fischler, BA, MA; Chairperson, Humanities, International Studies
Susan M. Rogers, BFA, MS Ed.; Chairperson, Fine Arts & Design
Frances Welles, MFA; Arts Manager Chairperson, Crafts

Technical Studies

Bernard A. Logan, BS, M.Ed.; Director, Chairperson, Electrical and B. Tech.; Associate Professor
Lloyd B. Andrus, Lecturer
Mario Di Quilio, BS, MS; Chairperson, Engineering Drawing; Associate Professor

Frederick P. Frey, Jr., BS, MS; Chairperson, Mathematics; Assistant Professor

Alfred C. Haacke, BS; Chairperson, Computer Systems, Physics; Associate Professor

Charles DeRoller, BS, ME; Chairperson, Manufacturing Engineering Technology; Associate Professor

Robert N. Klafehn, BS, MS; Chairperson, Electromechanical; Associate Professor
Orville H. Adler, AAS, B. Tech.; Chairperson, Machine Shop

Center for Applied Statistics

John D. Hromi, BS, BEE, M.Litt. D.Eng.; Director, Professor

School of Applied Industrial Sciences

James D. Forman, AAS, BS, MS; Director, Russel McCarthy; Professor
Orville H. Adler, AAS, B. Tech.; Chairperson, Machine Tool Technology

John Amon, AAS, Senior Technical Associate; Lecturer

Doris DeMers, B, BA, M.Ed.; Senior Technical Associate, Lecturer

Joseph Donoghue, BA, MA; Student Affairs

William Foos, Senior Technical Associate, Lecturer

Robert Holdridge, Senior Technical Associate, Lecturer

Robert Holmes, BSME; Senior Technical Associate, Lecturer

William C. Kicherer, BSEE; Manager Academic Technical Services

Robert N. Klafehn, BS, MS; Chairperson, Electro-mechanical; Associate Professor

Carol Lennox, BS, MS; Senior Technical Associate, Lecturer

D. Kevin Loucks, AAS; Senior Technical Associate, Lecturer

Richard Merriam, BS; Senior Technical Associate, Lecturer

Ruth L. Mets, BA, Ed.M.; Communications, Lecturer

Sheila Mitchell, BA, MS; Mathematics, Lecturer

James E. Morton, MA, Th.B.; Senior Technical Associate, Lecturer

Marcus E. O'Connell, Senior Technical Associate, Lecturer

Elizabeth Paciorek, BS; Senior Technical Associate, Lecturer

Frank Pachla, Senior Technical Associate, Lecturer

John Peck, BA; Career Development Specialist

Ronald Perry, AAS; Senior Technical Associate, Lecturer

Alan J. Reiter, BS, MS Ed.; Senior Technical Associate, Lecturer

William Stanton, AAS, BS; Senior Technical Associate, Lecturer

Marion Toth, BA; Senior Technical Associate, Lecturer

Deborah Urquhart, BS, MS; Admissions Counselor

College of Engineering

Richard A. Kenyon, BME, MS, Ph.D., P.E.—Dean, Professor

Swaminathan Madhu, MA, MSEE, Ph.D., Associate Dean for Graduate Studies—Professor

Charles W. Haines, AB, MS, Ph.D., Associate Dean for Co-operative Education and Administrative Services—Associate Professor

Margaret M. Urckfitz, Assistant to the Dean

Betty M. Weatherhog, Administrative Assistant to the Dean

Roy S. Czernikowski, BEE, ME, Ph.D.—Head, Computer Engineering Department; Professor

Harvey Rhody, BSEE, MSEE, Ph.D.—Department Head, Electrical Engineering; Professor

Richard Reeve, BS, MS, Ph.D.—Department Head, Industrial Engineering; Professor

Bhaichandra V. Karlekar, BEME, MSME, Ph.D., P.E.—Department Head, Mechanical Engineering; Professor

Computer Engineering Department

George A. Brown, BSEE, Vanderbilt; MSEE, University of Rochester—Professor

Dr. Tong-han Chang, BS, Jiao Tong University, Shanghai, China; Ph.D., Chinese Academy of Science, Peking, China—Associate Professor

Roy S. Czernikowski, BEE, Catholic University of America; ME, Ph.D., Rensselaer Polytechnic Institute—Professor

John L. Ellis, Ph.D., MS, University of Toledo; MS, University of Oregon—Assistant Professor

V.C.V. Pratapa Reddy, BE.M. Tech., Osmania University, India; Ph.D., Indian Institute of Technology, Madras—Assistant Professor

Electrical Engineering Department

George A. Brown, BSEE, Vanderbilt; MSEE, University of Rochester—Professor

Roy S. Czernikowski, BEE, Catholic University of America; ME, Ph.D., Rensselaer Polytechnic Institute—Professor

Soheil A. Dianat, BSEE, Aria-Mehr University, Iran; MSEE, Ph.D., George Washington University—Visiting Assistant Professor

Antonije R. Djordjevic, BS, M.Sc., D.Sc., University of Belgrade, Yugoslavia—Visiting Associate Professor

Dr. Mohamed K. El-Sherbiny, BSEE, M.Sc., Assiut University, Egypt; Ph.D., Iowa State—Visiting Associate Professor

Lynn F. Fuller, BS, MS, Rochester Institute of Technology; Ph.D., SUNY at Buffalo—Associate Professor
Roger E. Heintz, BSEE, Michigan Technological University, MSEE, Ph.D., Syracuse—Associate Professor

Robert A. Houde, BSEE, Northeastern University; MSEE, University of Rochester; Ph.D., University of Michigan—Associate Professor

Kenneth W. Hsu, BS, National Taiwan Normal University, China; MSEE, Ph.D., Marquette; P.E.—Assistant Professor

Robert E. Lee, BSME, MSEE, Ph.D., Rochester—Associate Professor
Swaminathan Madhu, MA, University of Madras; MSEE, Tennessee; Ph.D., Washington—Professor

Athimootil V. Matthew, BEE, Jadavpur University, India; M. Tech., Indian Institute of Technology, India; Ph.D., Queens University, Canada—Associate Professor

James E. Palmer, BSc, University of Western Ontario; MSEE, University of Pennsylvania; Ph.D., Case Institute of Technology—Professor

Robert E. Pearson, AAS, BSEE, Rochester Institute of Technology—Instructor

David Periman, BS, MS, Cornell, Associate Professor

V.C.V. Pratapa Reddy, BE, M. Tech., Osmania University, India; Ph.D., Indian Institute of Technology, Madras—Assistant Professor
Harvey Rhody, BSEE, Wisconsin; MSEE, Cincinnati; Ph.D., Syracuse—Professor

Alton F. Riethmeier, BSEE, Valparaiso University; MSEE, University of Rochester—Associate Professor

Edward R. Salem, BSEE, Pennsylvania State; MSEE, Catholic University of America; Ph.D., Buffalo—Professor

Tapan K. Sarkar, B. Tech., Indian Institute of Technology, India; MScE, University of New Brunswick, Canada; MSEE, Ph.D., Syracuse; P.E.—Associate Professor

Ronald B. Standier, B. Sc., University of Denver; M.Sc. Physics, Ph.D., New Mexico Institute of Mining and Technology—Assistant Professor

Fung-I Tseng, BSEE, Taiwan University; MSEE, Chiao-Tung University, Taiwan; Ph.D., Syracuse—Associate Professor

Raman M. Unnikrishnan, BSEE, University of Kerala, India; MSEE, South Dakota State University; Ph.D., Missouri—Associate Professor

Dr. Jayanti Venkataraman, BS, MS (Physics) Bangalore University; Ph.D., Indian Institute of Science, Bangalore, India—Visiting Assistant Professor

Watson F. Walker, BSEE, Brooklyn Polytechnic Institute; Ph.D., Syracuse—Professor

Industrial Engineering Department

Barbara Brenner, BSIE, Rochester Institute of Technology; MSIE, Purdue—I nstructor

Rajendra B. Nalavade, B. Tech., Chemical Engineering, Indian Institute of Technology, Bombay, India; MSIE, National Institute of Technology, Bombay, India; Ph.D., Ohio State University—Assistant Professor

Sudhakar R. Paidy, BS, Osmania University, India, MSIE, Ph.D., Kansas State University—Associate Professor

Richard Reeve, BS, MS, Ph.D., Buffalo—Professor

Jasper E. Shealy, BS, Georgia Institute of Technology; MS, Ph.D., SUNY at Buffalo—Professor

Kai Sung, BS, National Chiao Tung University, Taiwan; MS, Washington University; Ph.D., Case Western Reserve; Distinguished Visiting Professor

Mechanical Engineering Department

William Bober, BCE, City College of New York; MS, Pratt Institute; Ph.D., Purdue; P.E.—Associate Professor

Richard G. Budynas, BME, Union College; MSME, Rochester, Ph.D., Massachusetts; P.E.—Professor

Robert A. Elisor*, BME, City College of New York; MSME, Ph.D., University of Rochester, P.E.—Associate Professor

Dr. Hany A. Ghoneim, B.Sc., M.Sc., Cairo University, Egypt; Ph.D., Rutgers—Assistant Professor

Amitabha Ghosh, B. Tech., M. Tech., Indian Institute of Technology, Kanpur, India; Ph.D., Mississippi State University—Assistant Professor

Grace K. Golden, BSME, University of Missouri—Lecturer

Surendra K. Gupta, B. Tech., Indian Institute of Technology, Kanpur, India; MS, University of Notre Dame—Instructor

Charles W. Haines, AB, Earlham; MS, Ph.D., Rensselaer Polytechnic Institute; Mathematics and Mechanical Engineering—Associate Professor

William F. Halblieb, BSCE, Massachusetts Institute of Technology; MSME, University of Rochester; Ph.D., Cornell, P.E.—Professor

Robert J. Hefner, BS, MS, Ph.D., (Chemical Engineering) Georgia Institute of Technology—Associate Professor

Richard B. Hetnarski, MSME, Gdansk Technical University; MS, Warsaw University; Dr. Tech. Sci., Polish Academy of Sciences; P.E.—Professor

Ray C. Johnson, BS, MS, Ph.D., University of Rochester; P.E.—Gleason Professor of Mechanical Engineering

Satish Kandlikar, BE, Marathwada University, India; M. Tech., Ph.D., Indian Institute of Technology, Bombay, India—Assistant Professor

Bhalchandra V. Kartekar, BEME, College of Engineering, Baroda, India; MSME, Ph.D., University of Illinois; P.E.—Professor

Richard A. Kenyon, BME, Clarkson College; MS, Cornell; Ph.D., Syracuse; P.E.—Professor

Rajendra T. Khanwalkar, B. Tech., Indian Institute of Technology, Delhi, India; Ph.D., John Hopkins University—Assistant Professor

George T. Komorowski, BSME, MS (Computer Systems Management), Rochester Institute of Technology—Assistant Professor

Chris Nilsen, BS, Rochester Institute of Technology; MSME, Worcester Polytechnic Institute; Ph.D., Michigan State; P.E.—Associate Professor

Alan H. Nye, BSEM, MSME, Clarkson College; Ph.D., University of Rochester—Associate Professor

Frank Sciremammano, Jr., BS, MS, Ph.D., University of Rochester—Assistant Professor

Robert L. Snyder, BS, Rochester Institute of Technology; Ph.D., Iowa State; P.E.—Professor

Wayne W. Walter, BE, State University of New York Maritime College, Bronx; MS, Clarkson College; Ph.D., Rensselaer Polytechnic Institute; P.E.—Associate Professor

Paul H. Wojciechowski, BS, MS, Ph.D., University of Rochester—Associate Professor

Academic Technical Associates

Edward D. Beary, BS, Cornell—Technical Associate, Microelectronic Engineering

Donald E. Buss—Senior Technical Associate and Operations Manager, Electrical Engineering Department

Lisa Schlachter, Technical Associate, Industrial Engineering

Adjunct Faculty

John C. Bancroft, BSc., MSc., University of Calgary, Ph.D., Brigham Young University

Michael Branigan, BS, Rochester Institute of Technology; MSIE, Georgia Institute of Technology

Chiang Chuang, BSME, National Tsing Hua University, Taiwan; MSME, Ph.D., University of California

David DeMarie, BS (Chemistry), Iowa State University

Dominick J. Fantauzzo, BS, MS, Rochester Institute of Technology

Louis R. Gabello, BS, MS, Rochester Institute of Technology

Ronald Jodoin, BS, Worcester Polytechnic Institute; Ph.D., University of Rochester

Robert L. Kieffer, BS, Clarkson College; MS, Syracuse

Cheng-Chang Ku, BSEE, Rochester Institute of Technology; MSEE, Georgia Institute of Technology

Jagdish Maheshri, B.Ch.E., University of Bombay, India; MS, Ph.D. (Chemical Engineering), University of New Hampshire

Alexander E. Martens, BSEE, Efrfesslaw (Germany); MSEE, University of Rochester

Robert A. Moore, BSEE, MSEE, Rochester Institute of Technology

Robert O. Naess, BEE, Marquette University

William Nelson, MSEE, Rensselaer Polytechnic Institute

Edward Newburg, BS, MS, Purdue; Ph.D., University of Illinois

Mukles Rahman, BS, Bangladesh; MS, Ph.D., University of Wisconsin

Jammi S. Rao, BE, Andhra University; M. Tech., Ph.D., D.Sc., India Institute of Technology, India

Jacob C. Rubin, BSME, City College of New York; MSME, New York University; MSEE, MS (Photo Science) Rochester Institute of Technology

Douglas C. Sargent, BSE, Case Western Reserve University; MSE, Ph.D., Purdue

James Schueckier, BS, MS, Rochester Institute of Technology

Rahmatollah Shabahang, BS, Pahlavi University, Tehran, Iran; MSME, Texas A&I University; D.Sc. (ME), George Washington University

Akshay Shah, BS, Gujarat University, Ahmedabad, India; MS, Ph.D., University of Georgia

Dinesh Shah, BSME, University of Bombay, India; MSME, Illinois; Ph.D., Syracuse

Jeffrey Sisson, BS, Newark College of Engineering; MS, Rochester Institute of Technology; MBA, University of Rochester

Jack Taylor, Ph.B., MS, Ph.D., University of Wisconsin

Douglas Wiggins, BS, Rochester Institute of Technology

Edwin Zucker, BSE, MSME, University of Connecticut

Charles F. Lewis, B.Arch., Pratt Institute of Technology—Lecturer

Frederick Lipp, BFE, School of the Art Institute of Chicago; MFA, Rochester Institute of Technology—Professor

Steve Loar, BS, Murray State University; MA, Northern Illinois University—Assistant Professor

Craig J. McArt, BID, Syracuse University; MFA, Rochester Institute of Technology—Professor; Chairman of Industrial and Interior Design

Bernadette Merkel, BFA, MFA, Rochester Institute of Technology—Associate Professor; Chairman Graphic Design

Fred Meyer, BFA, MFA, Cranbrook Academy of Arts—Professor, Special Assistant to the Dean for Graduate Affairs

Edward C. Miller, BFA, SUNY at Buffalo; MFA, Illinois State—Associate Professor

Robert C. Morgan, BA, University of Redlands; Ed.M., Northeastern University; MFA, University of Massachusetts; Ph.D., New York University—Assistant Professor

Ronald E. Padgham, BFA, Ohio Wesleyan; MFA, Syracuse University; Ed.D., University of Rochester—Professor; Chairman of Fine Arts

James Palmer, BFA, MFA, Rochester Institute of Technology—Lecturer

R. Roger Remington, BFA, Rochester Institute of Technology; MS, University of Wisconsin; Professor

Luvon Sheppard, BFA, MST, Rochester Institute of Technology—Instructor

Joyce Shikowitz, BFA, Rhode Island School of Design; MFA, Indiana University—Assistant Professor

James H. Sias, MA, Michigan State University—Assistant Professor

Bruce Sodervick, BS, Indiana State; MFA, Southern Illinois—Associate Professor

Joanne Szabia, BFA, Madonna College; MA, Catholic University of America; Ph.D., Walden University—Professor

James E. Thomas, BS, Philadelphia College of Art; MFA, Pennsylvania State—Professor

Toby Thompson, BID, Syracuse; MFA, Rochester Institute of Technology—Professor

James Ver Hague, BS, Massachusetts Institute of Technology; MS, Rensselaer Polytechnic Institute; BA, SUNY at Buffalo—Associate Professor

Robert Wabnitz, Diploma, Rochester Institute of Technology; Certificate University of Rochester—Assistant Professor

Joseph A. Watson, BFA, University of Georgia; MFA, Yale University—Associate Professor

Sheila Welts, BA, California College of Arts and Crafts; MFA, Rochester Institute of Technology—Professor

Lawrence Williams, BFA, Kansas City Art Institute; MFA, University of Illinois—Professor

College of Fine and Applied Arts

Robert H. Johnston, BS, Kutztown State College; MA, Columbia University; Ph.D., Pennsylvania State University—Dean; Professor

Peter Giopulos, BFA, Syracuse University; M.Ed., Ph.D., Pennsylvania State University—Associate Dean; Professor

Robert Kerr, BFA, Illinois State; MFA, Rochester Institute of Technology—Assistant Dean; Professor

Rose Marie Deorr, BS, Rochester Institute of Technology—Assistant Dean for Administration

School of Art and Design

Mary Ann Begland, BS, Ohio State University; MFA, Kent State University—Assistant Professor

Eric Beiimann, BS, SUNY College at Buffalo; MFA, Rochester Institute of Technology; Advanced Studies, Pratt Center for Contemporary Printmaking—Lecturer

Harry J. Bliss, Pratt Institute of Technology—Lecturer

Kener E. Bond, Jr., B.Ed., SUNY-Buffalo; MFA; Rochester Institute of Technology—Professor

Philip W. Bornath, BAE, MAE, Art Institute of Chicago—Professor

Robert A. Cole, BA, MS, Maryland—Associate Professor

David Dickinson, Chelsea School of Art, London, England; SKHS, Oslo, Norway; MFA, Rochester Institute of Technology—Assistant Professor

Mark Foster, BFA, MFA, Rochester Institute of Technology—Visiting Assistant Professor

Joan Hantz, BA, Bennington College; MM, University of Michigan—Lecturer

Robert Heischman, BFA, Miami University; UCFA, Ruskin School of Art—Associate Professor

Barbara Hodik, BS, Ed., Benedictine College; MA, New York University; Ph.D., Pennsylvania State—Associate Professor

Robert M. Kahute, BFA, Syracuse University; MFA, Rochester Institute of Technology—Assistant Professor

Heinz Klinkon, BFA, Rochester Institute of Technology—Visiting Assistant Professor

Norman Williams, BFA, MS, Syracuse University—Associate Professor; Chairman of Foundation Studies
Hans Barschel, Professor Emeritus
Ruth Gutfrucht, Professor Emeritus
Stanley Witmeyer, Professor Emeritus

School for American Craftsmen

Donald G. Bujnowski, BS, SUNY at Buffalo; MA, Minnesota—Professor
John Dodd, BFA, Rochester Institute of Technology—Lecturer
Gary Griffin, BA, California State University; MFA, Tyler School of Art, Temple—Associate Professor
William A. Keyser, Jr., BS, Carnegie-Mellon Institute of Technology; MFA, Rochester Institute of Technology—Professor, Chairman of Crafts
Max L. Lenderman, BS, MS, Indiana State; MFA, Kansas—Associate Professor
Graham Marks, BFA, Philadelphia College of Art; MFA, Alfred University—Assistant Professor
Robert D. Schmitz, BS, East Carolina University; MS, Alfred University; MFA, Wisconsin—Professor
Douglas E. Sigler, MFA, Rochester Institute of Technology; MFA, Rochester Institute of Technology—Associate Professor
Michael Taylor, BS, Middle Tennessee State University; MA, East Tennessee State University—Assistant Professor
Leonard A. Urso, BFA, MFA, SUNY at New Paltz—Assistant Professor

College of Graphic Arts and Photography

Mark F. Guldin, BS, MS, Ph.D.—Dean, Professor
Carol J. Johnson, BS—Assistant to the Dean
John L. Kronenberg, BS—Associate Dean
Warren Daum, BS, MS—Administrative Consultant

Department of Academic Support Services

David A. Engdahl, BS, M.Ed.—Director, Professor
James R. Walsh, BS, M.Ed.—Associate Director, Associate Professor
William R. Peterson, BFA—Administrative Assistant
Linda A. Tolan, BA—Administrative Assistant

School of Photographic Arts and Sciences

Administrative Staff

Russell C. Kraus, BA, Ed.D.—Director, Associate Professor

Thomas Iten, BFA, MS—Chairman, Applied Photography; Associate Professor

Ronald Francis, AB, Ph.D.—Chairman, Imaging and Photographic Sciences; Professor
Leslie Stroebel, BS, M.Ed.—Chairman, Photographic Technology; Professor

Richard D. Zakia, BS, Ed.D.—Chairman, Fine Arts Photography; Professor

Faculty

Peter Anderson—Visiting Associate Professor

Charles A. Arnold, Jr., BFA, Rhode Island School of Design; MBA, Rochester Institute of Technology—Professor

Joseph Biegel, MS, Rochester Institute of Technology—Lecturer
Terry L. Bollman, AB, Drury College; MS, Rochester Institute of Technology—Assistant Professor
Willem Brouwer, Ph.D., Delft, Holland—Visiting Professor
Owen Butler, BFA, Rochester Institute of Technology—Assistant Professor

Tim Callahan, BS, Rochester Institute of Technology—Lecturer

Burt H. Carroll, B.Ch., Cornell; Ph.D., Wisconsin

Guenther Cartwright, BA, University of Oregon; MFA, Buffalo—Assistant Professor

Kathleen Collins, AB, Stanford, MFA, Rochester Institute of Technology—Assistant Professor

John C. Compton, BS, MS, Rochester Institute of Technology—Associate Professor

Ira B. Current, BA, Colorado—Associate Professor

Andrew Davidhazy, BFA, MFA, Rochester Institute of Technology—Associate Professor

Mary A. Donadio, BS, Nazareth—Lecturer

William W. DuBois, BFA, Ohio University; M.Ed., Bowling Green State University—Assistant Professor

David A. Engdahl, BS, M.Ed., University of Rochester—Professor

Lothar K. Engelman, Ph.D., University of Frankfurt—Professor

Richard Floberg, BA, Iowa State; MS, Boston University—Associate Professor

Michael A. Geissinger, BFA, MST, Rochester Institute of Technology—Assistant Professor

Edward Granger, Ph.D., University of Rochester—Lecturer

Franc Grum, Ph.D.—Richard S. Hunter Professor

John Head, MFA, Rochester Institute of Technology—Assistant Professor
Bradley T. Hindson, BA, Rutgers; MFA, Ohio University—Associate Professor

John E. Karpen, BS, MFA, Rochester Institute of Technology—Associate Professor

Robert Kayser, BS, City College of New York; MS, Rochester Institute of Technology—Assistant Professor

Weston D. Kemp, MFA, Rochester Institute of Technology—Associate Professor

Robert B. Kushner, MS, Rochester Institute of Technology—Associate Professor

Leon LeBeau, Ph.D., University of Illinois—Adjunct Professor

Hadrian Lechner, MS, Boston University—Assistant Professor

Henry W. Leichtner, Master Photographer—Adjunct Professor

Howard LeVant, BS, Institute of Design, Illinois Institute of Technology—Assistant Professor

Amok Lungershausen, MA, Ohio University—Lecturer

Ellsworth McCune, BSEE, Ohio University—James E. McGhee Professor, Lecturer

James E. McMillon, Jr., BFA, MFA, Ohio University—Professor

Beatrice Nettles, BFA, Florida; MFA, Illinois—Associate Professor

Richard Norman, BA, Rochester Institute of Technology—Lecturer and Technical Associate

James Reilly, BA, Franklin and Marshall; MA, Buffalo—Lecturer and Technical Associate

Martin A. Rennalls, Prof. Cert. (Film), West Indies Film, Kingston, Jamaica; Prof. Cert. (Film), Colonial Film Unit, London; MS, Boston University—Professor

John Retallack, BFA, Rochester Institute of Technology—Lecturer

David J. Robertson, BFA, Pratt Institute; MA, Columbia University Teachers College—Professor

Nile R. Root, MS, Rochester Institute of Technology—Associate Professor

Elliott Rubenstein, BA, MA, St. John's University; MFA, Buffalo—Associate Professor

John Schott, BS, Canisius College, MS, Ph.D., Syracuse University—Assistant Professor

Martin Scott, AB, Lafayette College—Lecturer

William S. Shoemaker, BS, Rochester; MS, University of Miami—Professor

Donald L. Smith, BS, Rochester—Associate Professor

Michael Soluri, BS, Brockport; MFA, Rochester Institute of Technology—Assistant Professor

Malcolm Spaul, BS, St. Lawrence University; MFA, Rochester Institute of Technology—Assistant Professor

Erik Timmerman, BS, Wisconsin, MFA, Southern California—Assistant Professor

John F. Trauger, AB, Bucknell; MLS, SUC at Geneseo—Associate Professor

Charles C. Werberig, BFA, MS, Syracuse—Associate Professor

John Westbrook, MS, Rochester Institute of Technology—Lecturer

Tom Muir Wilson, BFA, Cranbrook Academy of Art; MFA, Rochester Institute of Technology—Associate Professor

School of Printing

Administrative Staff

William A. Pakan, BS, MS, Ph.D.—Director, Professor
W. Frederick Craig, BS, M.Ed., Staff Chairman, Management Division, School of Printing; Associate Professor

Walter G. Home, BS, M.Ed.—Staff Chairman, Photography Plates, and Press Division, School of Printing; Professor

Emery E. Schneider, BS, M.Ed., Staff Chairman, Design Composition Division, School of Printing; Associate Professor.

Joseph L. Noga, BS, MS—Coordinator, Graduate Program, School of Printing; Associate Professor

Technical and Education Center Administrative and Technical Staff

Herbert E. Phillips, AAS—Director
Sven Ahrenkilde—Assistant to the Director

Chester J. Daniels, BS, MS—Senior Technologist

William S. Eisner, BS—Director, Technical Services

Zenon A. Elyjiw—Senior Technologist

A. Val Johnson, BS, M.Ed.—Seminar Coordinator

Patricia Knittel, BA—Editor

William D. Siegfried—Seminar Director

Franz Sigg—Research Associate

Faculty

Bekir E. Arpag, BS, Rochester Institute of Technology—Associate Professor

Barbara Birkett, BA, Aquinas College; MBA, Michigan—Lecturer

William H. Birkett, BS, Illinois; MBA, Michigan, CMA—Associate Professor

Edward A. Brabant, BS, Rochester Institute of Technology—Professor

Joseph E. Brown, BS, Carnegie-Mellon University; MS, Kansas State—Associate Professor

Walter A. Campbell, BA, Hobart; MBA, M.Ed., Rochester—Professor

Walter E. Capell, BA, Buffalo; J.D. New York Law School—Lecturer

Robert Y. Chung, BA, Eastern Washington State University; MS, Rochester Institute of Technology—Assistant Professor

Frank J. Coat, BS, Eisenhower College—Instructor

W. Frederick Craig, BS, West Virginia Institute of Technology; M.Ed., Rochester—Associate Professor

Joseph D. DeLorenzo, BS, Alabama, MS, Polytechnic Institute of Brooklyn, Ph.D., Boston University—Lecturer

Hugh R. Fox, AB, Dartmouth; JD, Rutgers—Assistant Professor

Clifton T. Frazier, BS, West Virginia Institute of Technology; M.Ed., Rochester—Associate Professor
Marie Freckleton, BFA, MST, Rochester Institute of Technology—Lecturer

Mark F. Guldin, BS, Rochester Institute of Technology; MS, South Dakota State; Ph.D., Iowa—Professor
Robert G. Hacker, BS, Illinois State; MS, South Dakota State; Ph.D., Iowa—Paul and Louise Miller Professor in Newspaper Management
Walter G. Home, BS, Rochester Institute of Technology; M.Ed., Rochester—Professor

Alfred F. Horton, AAS, Rochester Institute of Technology—Associate Professor

James I. Horton, BS, Rochester Institute of Technology; M.Ed., Rochester—Associate Professor

Jack Jenkins, BS, Rochester Institute of Technology—Assistant Professor

Herbert H. Johnson, BS, Rochester Institute of Technology—Associate Professor

Alexander S. Lawson, Diploma, Rochester Institute of Technology—Adjunct Professor and Professor Emeritus

James V. Mannino, BS, Rochester Institute of Technology—Instructor

John C. McCracken, BS, Rochester Institute of Technology—Instructor

Joseph L. Noga, BS, Connecticut; MS, Bridgeport—Associate Professor

David P. Pankow, BA, MA, Brooklyn; MLS, Columbia—(Assistant Professor)

Archibald D. Provan, BS, Rochester Institute of Technology; M.Ed., Rochester—Associate Professor
Harry Rab, BSME, MSME, Newark College of Engineering—Assistant Professor

Werner Rebsamen, Diploma, Academy of Fine Arts, Zurich—Associate Professor

Emery E. Schneider, BS, Southern Illinois University; M.Ed., Rochester—Associate Professor

Anthony R. Sears, BS, Rochester Institute of Technology—Professor

Julius L. Silver, BA, Brooklyn College; Ph.D., Connecticut—Professor

Miles F. Southworth, BS, Michigan; M.Ed., Rochester—Professor

Ruth Terry—Lecturer

Robert S. Tompkins, Composition Specialist—Assistant Professor

Robert J. Webster, BS, SUNY at Buffalo; MS, Ball State—Associate Professor

Charles J. Weigand, BS, MS, SUC at Oswego—Associate Professor

Hermann Zapf, Calligrapher and Type Designer—Adjunct Professor

Academic Technical Associates

David L. Dembroski—Technical Associate

Daniel Gramlich—Technical Associate

John Marciniak—Coordinator, Technical Services

Larry Pocobello, BS, Rochester Institute of Technology—Technical Associate

College of Liberal Arts

Mary C. Sullivan, RSM, BA, MA, Ph.D.—Dean; Professor

Dane R. Gordon, BA, BD, MA—Associate Dean; Professor

Robert E. Golden, AB, MA, Ph.D.—Associate Dean; Associate Professor

Amok J. Berman, BA, MA, MSW—Director, School of Human Services, Assistant Professor

Thomas J. O'Brien, BS, MA—Staff Chairperson, Language and Literature; Professor

Joanne M. Jacobs, BA, MA—Staff Chairperson, Social Science; Assistant Professor

Glenn J. Kist, AB, MA, Ph.D.—Staff Chairman, Science and Humanities; Associate Professor

Marjorie G. Grene, BA, Wellesley College; MA, Ph.D., Radcliffe College, Harvard University—Caroline Werner Gannett Professor of the Humanities

Mihai Nadin, MS, MA, Ph.D., University of Bucharest—William A. Kern Professor of Communications

Language and Literature Faculty

Sam Abrams, AB, Brooklyn College; MA, University of Illinois—Assistant Professor

Bruce A. Austin, BA, Rider College; MS, Illinois State University; Ph.D., Temple University—Associate Professor

Andrew W. Boone, BA, Stonehill College; MA, Candidate, Middlebury College—Lecturer

Anne Cirocco, BA, MA, SUNY at Buffalo—Lecturer

Sarah Collins, AB, Centre College; MA, Ph.D., Indiana University—Professor

Martha Cummings, BA, MA, Ed.D., University of Florida—Lecturer

William DeRitter, BA, St. Lawrence; MA, University of Rochester—Associate Professor

Catherine Doyle, BA, University of Colorado; MS, SUNY at Brockport—Lecturer

Rhona Genzel, BA, City College of New York—Lecturer

Robert E. Golden, AB, University of Michigan; MA, Ph.D., University of Rochester—Associate Director

Kathleen Hanford, BA, Mount Holyoke College; MS, Nazareth College—Lecturer

Diane Hope, BS, SUNY at Brockport; MA, SUNY at Buffalo; Ph.D., SUNY at Buffalo—Assistant Professor

Ellen Kuiper, BA, University of North Carolina; MA, University of Maryland—Lecturer

Andrew Malcolm, BS, MS, Rochester Institute of Technology—Lecturer
Lakshmi Mani, BA, MA, Calcutta; MA, SUC at Geneseo; Ph.D., McGill—Professor

Megan Marks, BFA, Emerson College; MFA, University of Iowa—Lecturer

Stanley B. McKenzie, BS; Massachusetts Institute of Technology; MA, Ph.D., University of Rochester—Professor

David Murdoch, BA, Shurtleff College; MA, Redlands University; Ph.D., Occidental College—Professor

Joseph M. Nassar, BA, MA, University of Toledo; Ph.D., SUNY at Binghamton—Associate Professor

Thomas J. O'Brien, BS, University of Rochester; MA, Columbia University—Professor

Janet K. Pattow, BA, Wells College; MS, SUNY at Brockport; MA, University of Rochester—Lecturer

James J. Philbin, BA, Connecticut; MA, Stanford—Professor

Mark L. Price, BA, MA, Miami University—Associate Professor

Katherine M. Quill, BA, Smith College; MA, Ph.D., University of Rochester—Assistant Professor

Sandra E. Saari, AB, Carleton College; MA, Ph.D., Occidental College—Professor

L. Robert Sanders, BA, MA, SUNY at Albany—Professor

Alan Sandy, BA, Amherst College; **Diplome de langue, ESPPPE**, Sorbonne; MA, Ph.D., Berkeley—Visiting Professor

Norris M. Shea, BA, Gannon; MA, Western Reserve—Professor

Caroline Snyder, BA, MA, Radcliffe; Ph.D., Harvard—Professor

Sister Mary Sullivan, BA, Nazareth College; MA, Ph.D., University of Notre Dame—Professor

U.T. Summers, AB, Vassar; MA, Radcliffe—Associate Professor

Elaine C. Thiesmeyer, AB, Connecticut College; MA, Cornell University—Associate Professor

Paul G. Ventura, BA, MS, University of Pittsburgh—Lecturer

Wilma Wierenga, AB, Calvin College; MA, Middlebury College, Johannes Gutenberg University—Lecturer

Science and Humanities Faculty

Lars Aagaard-Morgensen, Mag. art., Aarhus University; MA, State University of New York; MA, Temple University; Lie. theol., Aarhus University—Associate Professor

Frank Annunziata, AB, Manhattan College; MA, City College of the City University of New York; Ph.D., Ohio State University—Professor

Rodney A. Bailey, BA, University of Connecticut; Ph.D., Washington State University—Associate Professor

James I. Campbell, AB, Mount St. Mary's College; MA, Marquette University; Ph.D., University of Notre Dame—Professor

Richard Chu, BA, Taiwan University; MA, University of California at Berkeley; Ph.D., Columbia University—Professor

William Clohesy, BS, Loyola University; MA, Southern Illinois University; Ph.D., New School for Social Research—Visiting Assistant Professor

Douglas R. Coffey, Diploma, Cleveland Institute of Art; BFA, Denver; MA, Western Reserve—Associate Professor

Charles D. Collins, AB, Rutgers University; MA, University of Iowa; Ph.D., University of Iowa—Visiting Associate Professor

Norman R. Coombs, BS, MS, Ph.D., Wisconsin—Professor

Thomas Cornell, BA, Southwestern at Memphis; MS, Georgia Institute of Technology—Instructor

Dane R. Gordon, BA, MA, University of Cambridge; BD, University of London; MA, University of Rochester—Professor

Elizabeth Haigh, BA, Pomona College; MA, University of California-Berkeley; Ph.D., University of Rochester—Visiting Assistant Professor

Warren L. Hickman, AB, Colgate University; MA, Columbia University; Docteur Sciences Politique, Graduate Institute of International Studies, University of Geneva, Switzerland—Professor

Nabil M. Kaylani, BA, American University of Beirut; MA, Ph.D., Clark University—Professor

Glenn J. Kist, AB, MA, Xavier; Ph.D., Loyola University, Chicago—Associate Professor

Tina Lent, BA, MA, University of California at Los Angeles—Instructor

Richard D. Lunt, BA, Oberlin; MA, Ph.D., New Mexico—Professor

Paul A. Miller, BS, West Virginia; MA, Ph.D., Michigan State—Professor

Salvatore Mondello, BA, MA, Ph.D., New York University—Professor

Pellegrino Nazzaro, BA, P. Giannone; Ph.D., University of Naples—Professor

Kenneth R. Nelson, AB, University of Connecticut; MA, Georgetown University; Ph.D., University of Virginia—Professor

Robert J. Paradowski, BS, Spring Hill College; MA, Brandeis University; Ph.D., University of Wisconsin—Associate Professor

John T. Sanders, BA, Purdue University; MA, Ph.D., Boston University—Associate Professor

Edward Scheil, B. Mus. Ed., Westminster College; MM, Westminster Choir College—Instructor

David B. Suits, BA, Purdue University; MA, Ph.D., University of Waterloo—Assistant Professor

Charles W. Warren, AB, State University of Iowa; MA, Ph.D., Ohio State University—Professor

Houghton Wetherald, BA, Brown University; MFA, Oberlin—Professor

John A. White, BA, Ph.D., Cambridge University—Associate Professor

Fred L. Wilson, BA, Murray State University; Ph.D., University of Kansas—Professor
Hans W. Zandvoort, MFA, Royal Academy of Fine Arts, the Hague—Professor

Social Science Faculty

Louis J. Andoiino, BS, Rochester Institute of Technology; MA, Kent State University—Associate Professor
Brian P. Barry, BA, St. John Fisher; MSSc, Ph.D., Syracuse—Associate Professor

N. Evelyn Brandon, BS, MS Howard—Professor

Robert J. Brown, BS, SUNY at Potsdam; Ph.D., Syracuse—Associate Professor

Kathleen C. Chen, BA, Rangoon University, Burma; MA, Bryn Mawr College; Ph.D., Pennsylvania State—Professor

Constantino Dumangane, Sr., BA, MPA, Syracuse University—Assistant Professor

Donald L. Ellens tine, AB, Ottawa University, Kansas; MA, Ph.D., University of Kansas—Professor

Louis R. Eltscher III, Houghton; MA, American University—Associate Professor

Janet E. Famum, BA, SUNY at Brockport; Ph.D., University of Rochester—Assistant Professor

John L. Faulkner, BS, University of Colorado; MBA, University of Michigan; Ph.D., Candidate, University of Colorado—Lecturer

Paul H. Fertoe, BA, American University; M.Ph., Ph.D., Candidate, George Washington University—Instructor

Joseph E. Fitzpatrick, BA, M.Ed., Buffalo—Professor

James S. Fleming, AB, Wake Forest University; MA, Ph.D., University of Arizona—Associate Professor

Paul F. Grebinger, BS, Columbia University; Ph.D., University of Arizona—Visiting Associate Professor

Roger W. Harnish, BA, University of Rochester; MS, Ph.D., Oklahoma State University—Assistant Professor

Morton Isaacs, BA, Chicago, BS, MA, Columbia; Ph.D., Yeshiva—Professor

H. John Jacobi, BA, MA, Ph.D., Pennsylvania State University—Visiting Assistant Professor

Joanne M. Jacobs, BA, University of Rochester; MA, SUNY at Buffalo—Associate Professor

Hoyoung Lee, BA, Seoul National University, Korea, MA, Ph.D., Maryland—Associate Professor

Boris Mikoiji, BA, University of Graz; MA, Ph.D., Western Reserve—Professor

Francena L. Miller, BS, MS, Cornell; Ph.D., Pennsylvania State—Professor

Stephen Riley, BS, San Diego State University; MA, Ph.D., University of California, Riverside and U.C.L.A.—Associate Professor

Homa Shabahang, BS, Pahlavi University, Iran; MA, Texas A & I University; Ph.D., Oklahoma University—Instructor

Murti M. Sinha, AB, Bihar University, India; MA, Patna University, India; MA, The City College of the City University of New York; Ph.D., Cornell University—Associate Professor

Fred W. Smith, BA, MA, Wheaton College; Ph.D., Michigan State—Professor

James L. Troisi, AB, Lycoming College; MA, Ph.D., Syracuse University—Visiting Professor

Hector Velez, AA, Bronx, Community College; AB, Herbert H. Lehman College (City University of New York); MA, Cornell University—Assistant Professor

Michael Vemarelli, BS, University of Michigan; MA, Ph.D., SUNY at Binghamton—Assistant Professor

Criminal Justice Faculty

John O. Ballard, BA, MPA, Indiana University—Associate Professor

Paul Brule, BA, Wittenberg University; MA, Xavier University Graduate School—Assistant Professor

Patricia M. Carter, BA, Muskingum College; MA, SUNY at Albany; Ed.D., Western Colorado University—Assistant Professor

Elizabeth B. Croft, BA, MA, University of Rochester; MA, SUNY at Albany—Associate Professor

Richard B. Lewis, BA, SUNY at Albany; MS, Southern Illinois—Assistant Professor

John A. Muriey, BA, University of Dallas; MA, Claremont Graduate School and University Center—Assistant Professor

Charles Hales Pangburn, BS, SUNY at Empire; MA, SUNY at Brockport—Adjunct Lecturer

Social Work Faculty

Arnold J. Berman, BA, Hofstra University; MA, New York University; MSW, Syracuse University—Assistant Professor

Kijana Crawford-Adeleye, BA, Tougaloo College; MSW, Atlanta University—Associate Professor

Leonard A. Gravitz, BSEd., SUNY Cortland; MA, MSW, Washington University; Ed.D., University of Massachusetts, Amherst—Associate Professor

Helen W. Irving, BS, Gordon College; MSW, Syracuse University—Assistant Professor

Richard Morales, BA, Michigan State University, Michigan; MA, SUC at Brockport; MSW, Syracuse University—Assistant Professor

Marshall L. Smith, AB, MSW, University of Michigan; Ph.D., SUNY at Buffalo—Assistant Professor

Michael R. Stone, BA, SUNY at Geneseo; MSW, West Virginia University—Adjunct Lecturer

Betty Toney, BA, Pasadena Nazarene; MSW, University of California at Berkeley—Assistant Professor (joint appointment with NTID)

Adjunct Field Faculty

Kathryn Birke, MSW, University of Michigan-Agency: The Genesee Hospital

Christine Dandino-Baron, MSW, Syracuse University-Agency: The Center for Youth Services

David Dickinson Kaiser, Esq., J.D., Syracuse University-Agency: Family Service of Rochester

Harry Lange, MSW, SUNY at Buffalo-Agency: Hillside Children's Center

Paul Lippa, MA, SUNY at Buffalo-Agency: Fairport Central School District

Elaine Marchetti, MSW, University of California at Berkeley-Agency: Monroe Development Services

Harriette Royer, MA, SUNY at Oswego-Agency: The Mental Health Chapter of Health Association

James Sorrentino, MSW, University of Buffalo-Agency: Easthouse Corporation

Karen Steitler, MS, Nazareth College-Agency: Substance Abuse Intervention Services for the Deaf, RIT, School of Human Services

College of Science

John D. Paliouras, BA, MA, Ph.D.—Dean; Professor

William Bums, BA, MS—Associate Dean; Professor

Judy A. Witzel, BS—Assistant Dean for Administration

G. Thomas Frederick, BS, MS, Ph.D.—Department Head, Biology; Associate Professor

Terence C. Morrill, BS, MS, Ph.D.—Department Head, Chemistry; Professor

Alfred Bacharach, BS, Ph.D.—Department Head, Clinical Science; Professor

George T. Georgantas, AB, AM, Ph.D.—Department Head, Mathematics; Associate Professor

Arthur Z. Kovacs, AB, Ph.D.—Department Head, Physics; Professor

Barbara R. Fox, BA, MS—Assistant to the Dean for Support Services

David A. Lamb—Operations Manager

Biology Department

Margaret B. D'Ambruso, BA, Wilson College; MA, Wellesley College—Associate Professor

Jean A. Douthwright-Fasse, BS, Skidmore College; MS, Pennsylvania State University; MS, Ph.D., University of Rochester—Visiting Assistant Professor

Irene M. Evans, AB, University of Rochester; MS, Wesleyan University; Ph.D., University of Rochester—Assistant Professor

G. Thomas Frederick, BS, MS, Ph.D., Ohio State University—Associate Professor

Paul A. Haefner, Jr., BS, Franklin & Marshall College; MS, Ph.D., University of Delaware—Professor

M. Joseph Klingensmith, BS, Wheaton College; MS, Ph.D., University of Michigan—Professor

Douglas Merrill, BS, Ph.D., SUNY College of Environmental Science and Forestry, Syracuse University—Assistant Professor

Carole A. Sack, BA, University of Michigan; Ph.D., Michigan State—Associate Professor

Franz K. Seischab, BS, Cornell; MS, SUC at Geneseo; Ph.D., SUNY College of Environmental Science and Forestry, Syracuse University—Associate Professor

Raymond Sowinski, BS, Ph.D., Indiana University—Associate Professor

Egon Stark, BS, MS, University of Manitoba; Ph.D., Purdue—Professor

Chemistry Department

Jerry M. Adduci, BS, Rochester; Ph.D., Pennsylvania State—Associate Professor

Susannah Butler, BS, Michigan State; Ph.D., SUNY, Stony Brook—Assistant Professor

B. Edward Cain, BA, Harpur College; SUNY at Binghamton; Ph.D., Syracuse University—Associate Professor

Robert E. Gilman, AB, Dartmouth; MS, Ph.D., Michigan—Professor

Kay Henzel, BS, Bucknell University; Ph.D., Ohio State University—Assistant Professor

William Jensen, BS, Wisconsin; Ph.D., Wisconsin—Assistant Professor

Earl Krakower, BS, McGill; Ph.D., University of British Columbia—Professor

Terence C. Morrill, BS, Syracuse; MS, San Jose State; Ph.D., University of Colorado—Professor

John Neenan, BS, Wayne State University; Ph.D., University of California, Santa Barbara—Assistant Professor

Christian Reinhardt, BS, Lafayette; Ph.D., University of Rochester—Assistant Professor

L. Paul Rosenberg, BS, Bridgewater State; Ph.D., University of New Hampshire—Assistant Professor

F. Leslie Scott, BS, Cork; Ph.D., University of Ireland—Visiting Professor

Gerald A. Takacs, BS, University of Alberta; Ph.D., Wisconsin—Professor

David Tyminski, BS, SUNY Cortland; MS, Rochester Institute of Technology—Technical Specialist

Vladimir Vukanovic, Ph.D., University of Belgrade—Visiting Professor

Mathematics Department

Peter Arzberger, BS, University of Massachusetts; MS, Ph.D., Purdue University—Assistant Professor

Frank Bemhart, BS, University of Oklahoma; MS, University of Michigan; Ph.D., State University of Kansas—Visiting Assistant Professor

Christine Bishop, BS, Pennsylvania State University; MS, Virginia Polytechnic Institute—Lecturer

Patricia Clark, S.B., S.M., Massachusetts Institute of Technology; Ph.D., University of Rochester—Assistant Professor
David M. Crystal, BS, MS, SUNY at Albany—Associate Professor
David Farnsworth, BS, Union College; MA, Ph.D., University of Texas—Associate Professor
Sally Fischbeck, BA, University of Rochester; MS, Rochester Institute of Technology—Lecturer
Lester B. Fuller, BA, Houghton; MA, Michigan; Ph.D., Michigan State—Professor

J. Richard Garnham, BS, Purdue; MS, Ohio State—Associate Professor
George Georgantas, AB, University of Rochester; AM, Washington University; Ph.D., SUNY at Buffalo—Professor

James A. Glasenapp, BS, Houston; MA, SUNY at Buffalo—Associate Professor

Marvin Gruber, BS, Brooklyn College; MA, John Hopkins, SUNY Buffalo; Ph.D., University of Rochester—Associate Professor
Laxmi Gupta, BS, MS, Agra University, India; Ph.D., SUNY at Buffalo—Assistant Professor
Rebecca Hill, BS, Frostburg State College; MA, West Virginia University—Associate Professor
Edwin T. Hoefler, BA, Elmhurst College; AM Washington University; Ph.D., SUNY at Buffalo—Associate Professor

Richard J. Hoemer, AB, Lebanon Valley College; Ed.M., Temple; MA, SUNY at Buffalo—Professor
Wanda S.-Lojasiewicz, MS, Ph.D., University of Cracow, Poland—Assistant Professor

David Mathison, BA, St. Olaf College; MS, Ph.D., University of Rochester—Visiting Assistant Professor

Douglas Meadows, BS, Stanford University; MS, New York University; Ph.D., Stanford University—Assistant Professor

Edward A. Newburg, BS, MS, Purdue, Ph.D., University of Illinois—Professor

Richard Orr, BS, John Carroll University; MS, Case Institute of Technology; MS, SUNY Buffalo—Assistant Professor

John D. Paliouras, BA, Alfred; MA, Ph.D., University of Illinois—Professor

Howard M. Proskin, BS, SUNY at Albany; MS, Rutgers University—Assistant Professor

John F. Randolph, BS, W Texas State; MA, University of Michigan; MA, Syracuse; Ph.D., Cornell—Professor

James C. Runyon, BEE, Cornell; MSEE, Rochester—Associate Professor

Pasquale Saeva, BA, Niagara; MS, Bowling Green State; MS, Rochester Institute of Technology—Associate Professor

Jack Tishkoff, BS, MS, MA, University of Rochester—Associate Professor

Thomas C. Upson, BS, Tufts; MS, Rensselaer Polytechnic Institute—Associate Professor

Theodore Wilcox, BS, University of Michigan; MS, Ph.D., University of Washington—Assistant Professor

Paul Wilson, BA, MA, University of Cincinnati; Ph.D., University of Illinois—Associate Professor
James A. Wiseman, BA, Ph.D., Boston University—Assistant Professor

Helena Wisniewski, BA, William Paterson College of New Jersey; MS, Stevens Institute of Technology; Ph.D., The City University of New York—Assistant Professor
Kenneth Yasuda, MA, Ph.D., University of Rochester—Assistant Professor

Elmer Young, BA, Amherst College; MS, Ph.D., Ohio State University—Assistant Professor

Joseph Zacharski, BS, St. Peter's; MS, Rensselaer Polytechnic Institute—Assistant Professor

Physics Department

Hrishikesh Banerjee, BS, Presidency College; MS, University College of Science; Ph.D., Institute of Nuclear Physics, Calcutta—Professor

Peter A. Cardegna, BS, Loyola College; Ph.D., Clemson University—Assistant Professor

Christopher A. Ciarcia, BA, Gordon College; Ph.D., University of Lowell—Assistant Professor

F. Kingsley Edler, Jr., BS, North Carolina; MS, Ph.D., Yale—Professor

Alan B. Entenberg, AB, Washington University; Ph.D., University of Rochester—Assistant Professor

Charles A. Hewett, BS, MS, Missouri School of Mines; Ph.D., Missouri—Professor

Arthur Z. Kovacs, AB, Wabash College; Ph.D., Duke University—Professor

Ronald E. Jodoin, BS, Worcester Polytechnic Institute; Ph.D., University of Rochester—Associate Professor

Vern Lindberg, B.Sc., University of Alberta; MS, Ph.D., Case Western Reserve University—Assistant Professor

Lane D. McCord, AB, Wittenberg; MS, Purdue—Associate Professor
Varadaraja V. Raman, BS, St. Xavier; MS, Calcutta University; Ph.D., University of Paris—Professor

Franklin K. Schwandflugel, BA, MA, SUNY at Buffalo—Associate Professor

Eari H. Sexton, BS, Tufts; MS, Massachusetts Institute of Technology; MST, Cornell; Ph.D., SUNY at Albany—Associate Professor

Akshay V. Shah, BS, Gujarat University; MS, Ph.D., University of Georgia—Assistant Professor

John S. Shaw, BS, MS, Indiana University; Ph.D., SUNY at Albany—Associate Professor

Jerome Wagner, BS, Case Institute of Technology; MS, Ph.D., University of Wisconsin—Associate Professor

Anne Young, BA, Bryn Mawr; MS, Ph.D., Cornell—Assistant Professor

Department of Clinical Sciences

Alfred Bacharach, BS, Ph.D., Department Head, Clinical Sciences, Professor

Biomedical Computing

J. Richard Garnham, BS, Purdue; MS, Ohio State—Program Director, Associate Professor

Clinical Chemistry

Alfred Bacharach, BS, University of Natal, Ph.D., UCLA—Program Director, Professor

Clinical Faculty

Richard M. Bayer, Ph.D., Rutgers University—Rochester General Hospital, Rochester, NY

Clark L. Anderson, AB, University of Arizona, M.D., Chicago University, University of Rochester Medical School, Rochester NY

Nathan Hamblin, Rochester General Hospital, Rochester, NY

Howard N. Harrison, BS, University of California, MS, Ph.D., Cornell University, Rochester General Hospital, Rochester, NY

Norman P. Kubasik, Ph.D., Syracuse University, Upstate Medical Center—Genesee Hospital, Rochester, NY

Robert O. Kringler, BS, MS, University of Wisconsin—Eastman Kodak Company, Rochester, NY

Tai C. Kwong, BS, McMaster University, Ph.D., University of Toronto, Strong Memorial Hospital, Rochester, NY

William Lachenaier, BS, SUNY Empire State, Rochester General Hospital, Rochester, NY

Fred Lasky, AB, Ithaca College, Ph.D., SUNY at Buffalo, St. Mary's Hospital, Rochester, NY

Frank R. Mirabella, BS, RIT, MS, University of Rochester, Strong Memorial Hospital, Rochester, NY
Vivian A. Pallodoro, BS, Nazareth, MS, University of Rochester, Strong Memorial Hospital, Rochester, NY
Royden N. Rand, BA, Cornell, MA, Ph.D., University of Buffalo, Eastman Kodak Company—Health, Safety and Human Factors Laboratory, Rochester, NY

Harrison E. Sine, Jr., Ph.D., SUNY at Buffalo, The Genesee Hospital, Rochester, NY

Paul D. Woolf, BA, University of Pennsylvania, MD, New York University, University of Rochester Medical School, Rochester, NY

Medical Technology

James C. Aumer, AAS, Erie County Technical Institute, BS, MS, Michigan Technological University; (ASCP), Program Director, Assistant Professor
William A. Bums, BA, University of Arizona, MS, Elmira, Professor

Clinical Faculty

Alvin J. Marx, MD—Director, School of Medical Technology, St. Mary's Hospital, Rochester, NY

Ariene Nikiel, MT(ASCP)SM—Education Coordinator, School of Medical Technology, St. Mary's Hospital, Rochester, NY

Robert W. Hertzog—Director, School of Medical Technology, Millard Fillmore Hospital, Buffalo, NY
Sylvia Tokasz, H(ASCP)—Education Coordinator, School of Medical Technology, Millard Fillmore Hospital, Buffalo, NY

Janet Seeley, MT(ASCP)—Program Director, School of Medical Technology, Rochester General Hospital, Rochester, NY

Barbara Stein, MS, MT(ASCP)—Program Director, School of Medical Technology, St. Mary's Hospital, Rochester, NY

Zymunt M. Tomkiewicz, MD—Director, School of Medical Technology, Rochester General Hospital, Rochester, NY

Nuclear Medicine Technology

Judith L. Newell, BS, RIT, CNMT—Program Director, Assistant Professor

Kristen Waterstram-Rich, BS, RIT, CNMT—Clinical Coordinator

Clinical Faculty

James Baumgartner, CNMT—Chief Technologist, Department of Nuclear Medicine, Our Lady of Lourdes Hospital, Binghamton, NY

Arthur Coleman, MD—Chief Radiologist, Department of Diagnostic Imaging, Park-Ridge Hospital, Rochester, NY

Margaret Corkish, CNMT—Chief Technologist, Department of Nuclear Medicine, Genesee Hospital, Rochester, NY

Cindy Cress, CNMT—Chief Technologist, Department of Nuclear Medicine, Community General Hospital, Syracuse, NY

Linda Decker, CNMT—Chief Technologist, Department of Nuclear Medicine, University of Rochester Medical Center, Rochester, NY

Robert Donati, MD—Director, Department of Nuclear Medicine, Veterans Administration Hospital—John Cochran Division, St. Louis, MO

Peggy Francis, CNMT—Chief Technologist, Department of Nuclear Medicine, Rochester General Hospital, Rochester, NY

William Goldman, MD—Director, Department of Nuclear Medicine, Community General Hospital, Syracuse, NY

Linda Grasso, BS, Chief Technologist, Department of Nuclear Medicine, United Health Services, Inc., Wilson Site, Johnson City, NY

Linda Howell, CNMT—Chief Technologist, Department of Nuclear Medicine, Park-Ridge Hospital, Rochester, NY

Francis Kelley, MD—Chief of Radiology, Department of Nuclear Medicine, Highland Hospital, Rochester, NY

Robert Knack, MD—Director, Department of Nuclear Medicine, Our Lady of Lourdes Hospital, Binghamton, NY

Norman Kubasik, Ph.D.—Assistant Director, Clinical Chemistry, Genesee Hospital, Rochester, NY

SiMu Landman, MD—Medical Director of Nuclear Medicine, United Health Services, Inc., Wilson Site, Johnson City, NY

Anthony Leone, Jr., MD—Attending Radiologist, Pittsford, NY

Robert O'Mara, MD—Professor of Radiology, Chief, Division of Nuclear Medicine, University of Rochester Medical Center, Rochester, NY

Vincent Palumbo, MD—Director, Department of Nuclear Medicine, United Health Services, Inc., Wilson Site, Johnson City, NY

Gary Rizzo, Ph.D.—Special Determinations Laboratory, Highland Hospital, Rochester, NY

Sheila Rosenfeld, CNMT, M.Ed.—Educational Coordinator of Nuclear Medicine Technology Program, Veterans Administration Hospital—John Cochran Division, St. Louis, MO

Gerald Rusa, Ph.D.—Department of Nuclear Medicine, University of Rochester Medical Center, Rochester, NY

Kenneth Sokody, CNMT—Chief Technologist, Department of Nuclear Medicine, Sisters of Charity Hospital, Buffalo, NY

Barbara Sullivan, RN—Instructor for Staff Development, St. Mary's Hospital, Rochester, NY

Marsha Sundman, CNMT—Chief Technologist, Department of Nuclear Medicine, Highland Hospital, Rochester, NY

Herman Wallinga, MD—Staff Radiologist, Genesee hospital, Rochester, NY

David Weber, Ph.D.—Associate Professor of Radiology (Nuclear Medicine), Assistant Professor, Radiation Biology & Biophysics, University of Rochester Medical Center, Rochester, NY

Paul Weiss, MD—Director - Division of Nuclear Imaging, Department of Diagnostic Radiology/Nuclear Imaging, Rochester General Hospital, Rochester, NY

George Wilson, MD—Assistant Professor of Radiology, Staff Nuclear Medicine Physician, University of Rochester Medical Center, Rochester, NY

Ultrasound Technology

Roger Warner, BS, RDMS—Program Director, Assistant Professor

Kathleen J. Ritche, BS, ARDMS—Clinical Coordinator

Clinical Faculty

Gary Andrade, RDMS—Chief Sonographer, Diagnostic Ultrasound, Community General Hospital, Syracuse, NY

Joseph Augello, RDMS—Chief Sonographer, Diagnostic Ultrasound, Binghamton General Hospital, Binghamton, NY

Farhad Azimi, MD—Medical Director, Diagnostic Ultrasound, St. Joseph's Hospital, Syracuse, NY

Robert Benazzi, MD—Medical Director, Diagnostic Ultrasound, St. Mary's Hospital, Rochester, NY

Johan P. Bonk, MD—Medical Director, Diagnostic Ultrasound, Community General Hospital, Syracuse, NY

Denise Broffman, RT, RDMS—Chief Sonographer, Diagnostic Ultrasound, Children's Hospital of Buffalo, Buffalo, NY

Lawrence Cadkin, MD—Medical Director, Diagnostic Ultrasound, Binghamton General Hospital, Binghamton, NY

Arthur L. Coleman, MD—Medical Director, Diagnostic Ultrasound, Sisters of Charity Hospital, Buffalo, NY

Debbie Elmer, RT—Chief Sonographer, Diagnostic Ultrasound, Buffalo General Hospital, Buffalo, NY

Rosemary Flint, RT—Chief Sonographer, Diagnostic Ultrasound, St. Mary's Hospital, Rochester, NY

Mary Beth Geagen, RDMS—Chief Sonographer, Diagnostic Ultrasound, Deaconess Hospital, Buffalo, NY

Peter Gleason, MD—Medical Director, Westside Radiology, Rochester, NY

David Graham, MD—Medical Director, Diagnostic Ultrasound, Strong Memorial Hospital, Rochester, NY

John Kennedy, MD—Medical Director, Diagnostic Ultrasound, Highland Hospital, Rochester, NY

Kevin Kirch—Chief Sonographer, Diagnostic Ultrasound, St. Joseph's Hospital Health Center, Syracuse, NY

Roman Laluk, RT—Chief Sonographer, Diagnostic Ultrasound, Highland Hospital, Rochester, NY

Mike McGlothlin, RT—Chief Sonographer, Geneva General Hospital, Geneva, NY

Deborah Mendell, RT—Chief Sonographer, Diagnostic Ultrasound, Sisters of Charity Hospital, Buffalo, NY

Richard Munschauer, MD—Medical Director, Diagnostic Ultrasound, Children's Hospital of Buffalo, Buffalo, NY

Vincent Palumbo, MD—Medical Director, Diagnostic Ultrasound, Ideal-Wilson Medical Center, Johnson City, NY

Gail Phillips, RT, RDMS. Chief Sonographer, Westside Radiology, Rochester, NY

David Rowland, MD—Medical Director, Diagnostic Ultrasound, Deaconess Hospital, Buffalo, NY

Nicholas Russo, MD—Director, Diagnostic Ultrasound, Geneva General Hospital, Geneva, NY

David Ruthowski, Chief Sonographer, Diagnostic Ultrasound, Ideal-Wilson Medical Center, Johnson City, NY

Michael Schackman, MD—Medical Director, Diagnostic Ultrasound, Our Lady of Lourdes Hospital, Binghamton, NY

Derace L. Schaffer, MD—Medical Director, Diagnostic Ultrasound, Genesee Hospital, Rochester, NY

Kathy Thomas, RT, St. Mary's Hospital, Rochester, NY

Peggy Wharton, RDMS—Chief Sonographer, Diagnostic Ultrasound, Our Lady of Lourdes Hospital, Binghamton, NY

Janet Zweiben, BA, RDMS—Director of Ultrasound Training, Genesee Hospital, Rochester, NY

National Technical Institute for the Deaf

Office of the Director

William E. Castle, BS, Northern State College; MA, University of Iowa; Ph.D., Stanford University; Professor; Director, NTID, and Vice President, RIT

Janis L. Baader, Certificate/Diploma, Moser Business College; Administrative Assistant to the Vice President and Director

Wendell S. Thompson, BS, MBA, Rochester Institute of Technology; Assistant to the Vice President and Director

Office of Government and Community Affairs

Deborah M. Stendardi, BA, SUNY Cortland, MPA, SUNY Albany—Director

Office for Integrative Research

E. Ross Stuckless, BA, University of Toronto; MS, Gallaudet College; Ph.D., University of Pittsburgh; Professor; Director

Office of the Associate Vice President

Jack R. Clarco, BS, State University of New York College at Brockport, St. John Fisher College; MA, West Virginia University; Ed.D., Syracuse University; Associate Vice President

Division of Career Opportunities

James J. DeCaro, BS, MSM State University of New York at Buffalo; Ph.D., Syracuse University; Associate Professor; Director

Office of the Dean

Peter Pere, BA, University of Miami; MA, University of Tennessee; Ed.D., Memphis State University; Professor; Dean

Department of Educational Support Services Training

Joseph Avery, BSE, MSE, University of Central Arkansas; Associate Professor; Chairperson

College of Business Support Department

Richard D. Orlando, BS, MBA, Rochester Institute of Technology; Assistant Professor; Chairperson

College of Science and College of Engineering Support Department

Marie L. Raman, BS, University of Puerto Rico, Mayaguez; MS, Rochester Institute of Technology; Associate Professor; Chairperson

College of Graphic Arts and Photography Support Department

Zerbe Sodervick, BFA, University of Nebraska; MFA, Pratt Institute; Associate Professor; Chairperson

College of Liberal Arts Instruction and Support Department

Adele Friedman, BA, Barnard College; Ph.D., Yale University; Professor; Director

Human Services Support Section
K. Dean Santos, BA, University of Minnesota, Minneapolis; MSW, San Diego State University; Assistant Professor; Chairperson
Physical Education Support Department

Peter J. Seller, BA, Lewis College; MA, DePaul University; Ed.D., Illinois State University; Assistant Professor; Chairperson

Faculty

Full listings of NTID faculty and other support staff are published in the NTID Bulletin, available from NTID.

Division of Academic Affairs

Thomas R. Plough, BA, MA, Ph.D.—Vice President

Marion Kelly, BS—Administrative Assistant

Reno Antonletti, BS, MLS—Assistant Vice President, Academic Services

Lawrence W. Belle, BA, MA—Assistant Vice President, Faculty & Program Development

Michael F. Charles, BA, MBA—Assistant Vice President, Information Systems & Computing

Paul Kazmierski, BA, M.Ed., Ph.D.—Assistant Vice President, Student Academic Development

William H. Williams, BA, MS, Ph.D.—Special Assistant, Academic Planning

Douglas O. Ford, BS, MPA—Assistant to the Vice President

Gordon E. C. Fuller, BA—Director, The Center for Cooperative Education & Career Services

Academic Services

Reno Antonletti, BS, Rochester Institute of Technology, MLS, SUC at Genesee—Assistant Vice President; Director, Instructional Media Services; (Professor)

Instructional Media Services

Reno Antonletti, BS, Rochester Institute of Technology; MLS, SUC at Genesee—Director; (Professor)

David C. Abbott, BFA, MFA, Rochester Institute of Technology—Producer/Designer; (Associate Professor)

Harvey B. Carapella, BFA, Rochester Institute of Technology—Producer/Designer; (Assistant Professor)

David M. Cronister, BS, Rochester Institute of Technology—Television Director; (Instructor)

Robert K. Gascon, Engineering Manager, Television Center

Shirley Gray, BS, MS, University of Rochester; MLS, SUC at Geneseo—Media Resource Center Supervisor; (Assistant Professor)

Joan S. Green, BS, Ohio State; M.Ed., Trenton State; Rochester Institute of Technology—Assistant Director (Associate Professor)

Claudia Greene, BS, Rochester Institute of Technology—Photography Supervisor

Atvin Herdklotz, AAS, Madison C.C.—Audiovisual Technician

Cheryl Herklotz, BA, Nazareth College; Ph.D., University of Wisconsin—Media Specialist; (Instructor)

Susan B. Hubregsen, BFA, Rochester Institute of Technology—Producer/Designer; (Assistant Professor)

Carol Lake—Traffic Manager, Television

Larry A. McKnight, AAS, BS, Rochester Institute of Technology—Assistant Director; (Assistant Professor)

Joan Marsh, BFA, Rochester Institute of Technology—Graphics Supervisor

Robert J. Michel—Maintenance Engineer, Television

Scott Regan, BA, SUNY, Oswego—Head Graphics Assistant

David Stone, AAS, Monroe Community College—Assistant Producer, Audio

Steve Wunrow, BS, Rochester Institute of Technology—Assistant TV Director

Wallace Memorial Library

Patricia Pitkin, BA, MLS, SUC/Geneseo—Director; (Assistant Professor)

Joan Bawden, BS, Rochester Institute of Technology—Financial Assistant

Karen Caviglia, BS, Kansas University; MA, Indiana University; MLS, SUC at Geneseo—Reference Librarian; (Assistant Professor)

Virginia Church, BS, Wilmington College, MLS, SUNY, Buffalo—Head, Catalog Department; (Instructor)

Christine DeGolyer, AB, Cornell University; MLS, Syracuse University—Reference Librarian; (Assistant Professor)

Daiia Eichvalds, BA, State University of New York at Albany; MLS, SUNY at Geneseo—Original Cataloger; (Instructor)

Margaret F. Fallon, BA, SUC at Potsdam, MLS, SUNY at Albany—Original Cataloger (Instructor)

Elizabeth A. Gilmeister, BS, SUNY at Buffalo; MA, Arizona State University; MLS, SUC at Geneseo—Reference Librarian; (Assistant Professor)

Lois A. Goodman, BA, SUNY at Brooklyn; MLS, Pratt Institute—Head Public Services; (Associate Professor)

Charlotte Cooper, BA, Western Michigan University; MLS, Syracuse University—Head, Monographic Ordering Department; (Instructor)

Linda Karuth, BS, MLS, SUNY, Buffalo—Reference and Special Instruction Librarian

Ruth B. Lunt, BA, Oberlin; MLS, SUC at Geneseo—Reference Librarian; (Associate Professor)

Thomas G. McFadden, BA, College of Idaho; MA, Brown University; MLS, University of Pittsburgh—Reference Librarian; (Assistant Professor)

Chandra McKenzie, BS, MS, Rochester Institute of Technology—Head, Circulation Department

Barbara Polowy, AB, Clark University, MLS, Syracuse University—Reference Librarian; (Instructor)

Gladys M. Taylor, BS, SUC at Geneseo; MA, Cornell—Archivist (Associate Professor)

Gregory M. Toth, BA, University of Toronto; MA, University of Virginia; MLS, SUC at Geneseo—Reference Librarian; (Assistant Professor)

Office of the Registrar

Daniel P. Vilenski, BS, MA, Central Michigan University; Ed.S., Michigan State University—Registrar

Richard M. Pettinger, AB, Georgetown University; MBA, Rochester Institute of Technology—Associate Registrar

Victoria Aspridy, BS, Oswego State, MS, Brockport State University—Assistant Registrar

Joanne W. Beardsley, BS, St. Lawrence University—Assistant Registrar

Eric M. Hardy, BA, Tufts University, M.Ed., Cortland State—Assistant Registrar

Career Research

Nancy A. Neville, BA, Lehman College of CUNY; MS, Rochester Institute of Technology—Director
Kathryn A. Iuppa—Senior Research Assistant

The Center for Cooperative Education and Career Services

Gordon E. C. FuNer, BA, Brown University—Director

Mary Dean Brewer, BA, Winthrop University; MAT, University of South Carolina—Associate Director; Placement Counselor

Emanuel Contomanois, BA, State University of New York at Cortland; MA, Bowling Green State University—Assistant Director, Employer Services; Placement Counselor

Beverly Cudney, BS, State University of New York at Brockport; MS, Rochester Institute of Technology—Assistant Director, Student Services; Placement Counselor

Mariene Sigrid Alien, BFA, Pratt Institute; MS, University of Rochester—Placement Counselor

James R. Austin, BA, St. John Fisher College; MS, Rochester Institute of Technology—Senior Placement Counselor and Coordinator of Student Programming

Ted W. Brainard, BS, Rochester Institute of Technology—Placement Counselor

Patricia Burke-White, BS, Nazareth College of Rochester—Placement Counselor

Charles W. Dispenza, BS, MS, Cornell University—Senior Placement Counselor, Systems Coordinator

Lois A. Foley—Administrative Assistant

Suella C. Habbersett, BA, Muskingum College; M.Ret., University of Pittsburgh—Senior Placement Counselor, Coordinator of Job Development

Claire A. Periman, BA, Ithaca College; MBA, Northeastern University, Placement Counselor

Bonita M. Salem, BS, Rochester Institute of Technology, Placement Counselor

Pamela Bradley Smith, BS, M.Ed., University of Cincinnati—Placement Counselor

Joan Tiemey, BA, Cornell University; M.Ed., State University College at Brockport—Placement Counselor

Faculty and Program Development

Lawrence W. Belle, BA, MA, Case Western Reserve University; Ph.D., University of Rochester—Assistant Vice President (Associate Professor)

Gordon I. Goodman, BA, SUNY, Binghamton; MS, Rochester Institute of Technology—(Assistant Professor)

Joyce Herman, BA, University of Rochester, MS, Rochester Institute of Technology—(Associate Professor)

Barbara Hodik, BS, Benedictine College; MA, New York University; Ph.D., Pennsylvania State University—Associate Professor

Donald A. Hoppe, BS, MS, Iowa State University—Dean for Administrative Services

John H. Humphries, BA, SUC Oswego; MA, Ph.D., Syracuse University—Professor

Charles M. Plummer, BA, DePauw University; MS, Ph.D., Indiana University, Bloomington—(Associate Professor)

Edward Stockham, AB, Ph.D., University of Pennsylvania—Associate Professor

Information Systems and Computing

Michael F. Charles, BA, SUNY at Buffalo; MBA, Canisius—Assistant Vice President of Information Systems and Computing
Barbara T. Cuthbertson, BS, Simmons College—Administrative Assistant

Academic Computing

Ronald E. Stappenbeck, BS, MS, Rochester Institute of Technology—Director of Academic Computing; Associate Professor

Donna Cullen, BA, Gordon College; MA, Northwestern University—Software Specialist; (Instructor)

Frederick Howard, BS, SUNY at Geneseo—Jr. Software Specialist

Warren Kovitz—Jr. Software Specialist

C.R. Myers, BA, University of Rochester—Microcomputer Specialist

Dianne Parker, AAS, Cayuga Community College—User Computing Center Coordinator

Andrew Mathews, AAS, Cayuga Community College—User Computing Center Coordinator

Dorothy Proskin, BS, SUNY at Albany; MS, Rutgers University—Software Specialist; (Instructor)
Stephen A. Wilkins, AAS, SUC at Morrisville; BSBA, Kansas State; MS, Rochester Institute of Technology—Supervisor of Software Support; (Assistant Professor)

Data Center Operations

George C. Hopkins—Director of Data Center Operations

Donna Baiiva—Operations Librarian

Steven Good—Technical Assistant

Robert C. Pfromm—Supervisor of Computer Operator Operations, Second Shift

Richard Rowley—Supervisor of Computer Operator Operations

Systems Development

Robert R. Miller, BS, Boston College; MBA, Rochester Institute of Technology—Director of Systems Development

Ramona AkpoSani, BA, University of Vermont; MA, SUNY at Plattsburg—Systems Analyst

Stan Armstrong, AAS, Community College of the Finger Lakes; BS, McGill University—Programmer

Paul Bufano, AAS, Morrisville—Supervisor of Programming

Vasanthi P. Christopher, BS, Indian University of Madras; MS, Indian Institute of Technology; MS, MSIE University of Wisconsin (Madison)—Sr. Programmer

Richard Godown, AAS, Alfred State—Programmer

Lauren Johnson, BA, SUNY Binghamton—Systems Analyst

Peter F. Kulpa, BS, Rochester Institute of Technology—Sr. Systems Analyst

David B. McCandlish, BA, Johns Hopkins; MS, University of Rochester; MS, Rochester Institute of Technology—Sr. Programmer

Moses Powell, AAS, Monroe Community College; BS, University of Rochester—Sr. Systems Analyst

Nancy Simonds, AAS, Monroe Community College—Programmer

Laura Smith, AAS, Monroe Community College—Programmer

Jim Tefft, AAS, Seminole Jr. College; BS, Florida Technical University—Sr. Systems Analyst

Wendy Thompson, AAS, Monroe Community College—Systems Analyst

Gregory Hawryschuk, AAS, Monroe Community College; BS, MBA; Rochester Institute of Technology—Manager of Technical Support

Alan Brown, BFA, Rochester Institute of Technology—Data Base Technician

Neal Garber—Systems Programmer

Barbara King—Systems Programmer

Andrew W. Ludwick, BS, Rochester Institute of Technology—Data Base Technician

I.P. Licata—Data Base Administrator

Thomas Rutkowski, AAS, SUNY at Alfred—Systems Programmer

Robert D. Weeks, Sr., BS, Rochester Institute of Technology—Systems Programmer

User Services

Robert C. Weeks, Jr., BA, State University of New York; MS, Rochester Institute of Technology—Manager of User Services

Clay Davis, AAS, BS, Rochester Institute of Technology—Applications Specialist

Sheila Maas, AAS, State University of New York, Alfred—Office Systems Specialist

Barbara Phillips, AAS, State University of New York, Alfred—Publications Specialist

Barbara Simmons, BS, State University of New York; MBA, Rochester Institute of Technology—Applications Specialist

Student Academic Development

Learning Development Center

Paul R. Kazmierski, MA, B.Ed., M.Ed., Duquesne; Ph.D., Syracuse—Director, (Professor)

Irene M. Payne, BS, MS, SUC at Geneseo—Associate Director, College Program (Associate Professor)

Gladys Abraham, BA, SUNY at Albany; MS, SUC at Brockport—Associate Director, Community Program (Assistant Professor)

R. William Gage, BS, Rochester Institute of Technology; MA,

University of Rochester—Assistant Director (Associate Professor)

Marcla Birken, AB, Mt. Holyoke College; MS, Courant Institute of Mathematical Sciences, New York University (Assistant Professor)

Anne Cirocco, BA, MA, SUNY at Buffalo—Assistant Professor

Martha Young Cummings, BA, MA, Ed.D., University of Florida (Assistant Professor)

Rhona Genzel, BA, City College of New York—Supervisor, ESOL Program

Sue Heard, BA, Edinboro State College; MS, Duquesne University—Clinical Supervisor (Instructor)

Joseph M. Nassar, BA, MA, English University of Toledo; Ph.D., SUNY at Binghamton (Assistant Professor)

Mary Pizzente, BS, SUC at Geneseo; MS Ed., Syracuse (Associate Professor)

J. Wixsom Smith, BS, SUC at Geneseo; MS, Rochester Institute of Technology (Associate Professor)

Department of Military Science

LTC Richard K. Reinhoitz, BS, US Military Academy; MS, Purdue University—Professor

Major Michael Shinn, BS, Western Carolina College—Assistant Professor

Major Joseph Ciprich, BA, Villanova University—Assistant Professor

Captain Billy Freeborn, BA, Sam Houston State University—Assistant Professor

Captain James Carey, BA, Washington State University—Assistant Professor

Sergeant Major James Lyies—Detachment Sergeant Major

Master Sergeant Donald Roberts—Training Specialist

Staff Sergeant Robert Seay—Supply Specialist

Staff First Class Major L. Redd—Administrative NCO

Finance and Administration Division

H. Donald Scott, BA, University of Virginia; BS, Cornell University—Vice President, Finance and Administration

Audit Services

Joseph Pickard, BS, Arizona State University; MBA, Rochester Institute of Technology; C.I.A.—Director

Thomas Bolton, BS, Ithaca College; MBA, University of Rochester C.P.A., New York—Senior Auditor

James Fisher, BS, Rochester Institute of Technology—Staff Auditor

Gall Watch, BS, Rochester Institute of Technology—Staff Auditor

Business Services

James L. Fox, BA, Florida State University—Director of Business Services

William H. Batcheller—Assistant Director of Business Services

Apartment Housing

Edward O. Ingarick—Manager

Bookstore

William Simpson, BA, MBA, University of Massachusetts—Director of Bookstores

Sylvia Bail—Supplies Manager

Louis Gagliano, BS, Rochester Institute of Technology—Assistant Director

Thomas Guhi, BS, MS, Rochester Institute of Technology—PhotoDepartment Manager

David L. McIntyre, AAS, Jamestown Community College—Textbook Manager

Mariana Poison-Lorcak, AA, Berkshire Community College—Manager, Branch Stores and Specialty Services

Elian Tonehi, AAS, Monroe Community College—General Reading and Trade Book Manager

Campus Safety

Leslie Scoville, BS, Trenton State—Director

Andrea Benschhoff—Administrative Coordinator

Robert Day—Public Safety Specialist

Karen Lawrence—Office Supervisor

Jeffrey Meredith, AAS, Monroe Community College—Assistant Director of Programming

Stanley Perry—Investigator

Richard Stern, BS, SUNY Empire State College, Assistant Director, Operations

John Yockel, BA, St. John Fisher—Assistant Director for Administration

Food Service

James C. Bingham, AAS, Morrisville; BS, Rochester Institute of Technology—Director

Robert O. Day, AAS, Rochester Institute of Technology—Manager, Dining Commons

Gary Gasper, AAS, Morrisville—Manager, Catering and Clark Dining Room

Diane Gorski, BS, Rochester Institute of Technology—Production Manager, Dining Commons

Mitchell Green, BAS, Boston University—Assistant Director/Cash Operations

Janet Lee, AAS, SUNY at Delhi—Manager, Grace Watson Dining Hall

Mary Anne McQuay, AAS, Monroe Community College; BS, Buffalo State—Production Manager, Grace Watson Dining Hall

Craig Meal, AAS, Morrisville; BS, Oklahoma State University—Assistant Director, Residential Dining

Richard Swartz, AAS, SUNY at Morrisville; BS, Rochester Institute of Technology—Manager, College-Alumni Union

Purchasing

William Batcheller—Director

Lawrence Thibault—Assistant Director

Mariene Bice—Purchasing Agent

Deborah Bourcy—Administrative Assistant

Frank Cocola—Manager, Printing and Duplicating Services and Administrative Copy Center

Arthur D'Angelo—Manager, Mail Services

Robert Goldstein—Purchasing Agent

George Hariand—Manager, Property & Risk Management

Edward Ziegler—Director, Ice Arena

Special Events

Edward Steffens, BS, MBA, Rochester Institute of Technology—Director

Shirley Masseth—Administrative Assistant

Carole Truster—Assistant Director

Controller

William J. Welch, BBA, Niagara; CPA, New York—Controller

David R. Moszak, AAS, Alfred State—Assistant Controller

John A. Brodie, BS, Rochester Institute of Technology—Director, Financial Analysis

Marie Nitzman—Technical Assistant

Norman S. Welch, BS, Rochester Institute of Technology—Staff Accountant

Accounting

James C. Murphy, BS, University of Rochester—Director

John P. McCormick, BBA, St. Bonaventure; MBA, University of Rochester—Supervisor

Kerry W. Phillips, AAS, SUNY, Alfred—Staff Accountant

Alina J. Palls, BA, Rochester Institute of Technology—Staff Accountant

Budget

David B. Caiman, BS, Rochester Institute of Technology—Director

William J. Bianchi, BS, Rochester Institute of Technology—Assistant Director

Bursar's Office

Richard B. Schonblum, BS, Rochester Institute of Technology—Bursar

Rosemarie Gross—Assistant Bursar

Patrick Bates, BS, SUNY, Oswego—Director of Student Accounts

Dedra Chemelli, BA, SUNY, Oswego—Billing Supervisor

Collections

Mark Davitt—Manager

Payroll

James C. Murphy, BS, University of Rochester—Director

Margaret Gardner—Assistant Supervisor

Valerie A. Liotta—Supervisor

Personnel

Jeanne M. Healy, BS, LeMoyne College—Director

Date Andrewson, BS, University of Wisconsin; MA, Bowling Green State University—Associate Director for Operations

Wendy Benjamin, AAS, SUNY, Alfred—Administrative Assistant

Leslie Beikowitz, BA, Utica College—Training Administrator

Katherine Caracci—Personnel

Geri Curwin, BA, M.Ed., University of Massachusetts; MBA, Rochester Institute of Technology—Assistant Administrator, Staff Training & Development

Catherine P. Dittmar, BS, Wittenberg University—Personnel Data Administrator

Bev Gibson, BS, Colby-Sawyer College—Coordinator, On-Campus Student Employment

Ida Hardy, BA, SUNY, Cortland; MS, SUNY, Binghamton—Human Resources Coordinator

Charles L. Hayes, MS, Springfield College—Benefits Administrator

Denise L. Hess, BA, MS, Nazareth College; MBA, Rochester Institute of Technology—Compensation Analyst

Carole LaCentra, VA, B.Ed., University of Toronto; MA, University of Rochester—Student Employment Coordinator

James M. Papero, BS, Ed.M., University of Rochester—Associate Director

Mary Patricia Spinelli, BA, Wilkes College—Compensation Analyst

Physical Plant

William H. Mets, AAS, NYSU at Farmingdale; BS, University of Rochester—Director

Clifford E. Velte, BS, Tri-State University—Assistant to the Director

Lodewyk Boyon, AAS, Grotius College—Assistant Director for Energy Conservation

Donald G. Burkhardt, ABA, Rochester Business Institute—Assistant Director for Administrative Services

Roy S. Dementin, Jr., BS, Clarkson College—Assistant Director for Operations

Robert T. Downey—Assistant Director for Plant Engineering

Elizabeth Nolan Beat—Assistant Director for Telecommunications/Systems

Division of Resource Assessment and Analysis

George E. D. Brady, BA, Ed.M., University of Buffalo—Associate Vice President for Finance and Administration

Cheryl Becker, BA, MA, SUNY Albany, Secretary to the Associate Vice President for Finance and Administration

Institutional Research

John M. Whitely, BS, MBA, Rochester Institute of Technology—Director

Lo-yi Chung, BA, Chung-shan Science & Technology Institute; MA, Eastern Washington State University—Research Associate

Joan C. Dammeyer—Sr. Research Assistant

Office of Facilities Planning and Utilization

J. Scott Lawson, B.Arch., Rensselaer Polytechnic Institute, RA, N.Y.S.—Director

Catherine Harhen, BS, Rutgers University—Coordinator of Facilities Analysis

K. Robert Volk—Facilities Analyst

Institutional Advancement Division

Robert D. Frisina, BA, Westminster College, Fulton, Mo; MA, Gallaudet; Ph.D., Northwestern University—Senior Vice President

Sharon A. Stevenson—Administrative Assistant to Senior Vice President

James G. Miller, BS, The Pennsylvania State University—Associate Vice President (Admissions, Financial Aid, Veteran's Affairs, CCJCR)

Jack F. Smith, BA, University of Pittsburgh—Associate Vice President (Communications)

Admissions

James G. Miller, BS, The Pennsylvania State University—Associate Vice President

Beverly M. Miller—Administrative Assistant to Associate Vice President

David Finney, BA, Westminster College; MA, Bowling Green State University—Director

Joan M. Barrett, BS, Rochester Institute of Technology—Manager of Admissions Operations

Barbara Bell, BA, Indiana University; MS, Syracuse University—Assistant Director and Coordinator of Minority Recruitment

Joseph Dengler, BS, Rochester Institute of Technology—Associate Director/NTID

Arthur C. Friedel, BS, Rochester Institute of Technology—Assistant Director and Coordinator of International Admissions

Richard M. Fuller, BA, Ithaca College; MA, Bowling Green State University—Associate Director

George C. Hedden, BA, SUNY at Buffalo—Senior Admissions Officer

Edward Lincoln, AB, Eisenhower College—Assistant Director

Dorothy Lowe, BS, SUNY at Buffalo; Ed.M., University of Rochester—Assistant to the Director

Alumni Relations

Frank A. Cicha, BS, Rochester Institute of Technology—Director

Rosalind Hawkins—Administrative Assistant

Center for Community/ Jr. College Relations (CCJCR)

Richard L. Rinehart, BS, MS, Ed.D.—Director; Professor

Communications

Jack F. Smith, BA, University of Pittsburgh—Associate Vice President

Betty Adams, BA, University of Wisconsin—Executive Editor

Karen Beadling, BA, Antioch College—Coordinator of Publications

Carol Bonenfant, BA, SUNY/ Buffalo—Assistant to the Director of Public Information

Elizabeth Cain—Production Coordinator

James Castelein, BA, SUNY at Brockport—Coordinator of Photography

Robert R. Chandler, AAS, Rochester Institute of Technology—Sr. Graphic Designer

Agatha C. Crumb, BA, Syracuse University—Sr. Communications Coordinator

J. Roger Dykes—Sports Information Director

Neil Fagenbaum, AAS, SUNY at Morrisville; BS, SUNY at Geneseo—Manager of Media Relations

Norine Jones, BA, Hope College—Communications Coordinator

Cynthia K. Jutzin—Production Coordinator

Pamela M. King, BFA, Rochester Institute of Technology—Sr. Graphic Designer

Walter Kowalik, Jr., AA, Genesee Community College; BA, SUNY at Buffalo—Art Director

John Massey, BS, Rochester Institute of Technology—Director of Publications

Dean Mayer, BA, University of Wisconsin-Madison; MA, Northwestern University—Sr. Communications Coordinator

William McKee, BA, Syracuse University—Director of Public Information

Barbara Power, BA, Butler University—Advertising Manager/ Senior Communications Coordinator

Rod Reilly, AAS, Rochester Institute of Technology—Senior Photographer

Carolyn M. Tinkham—Administrative Assistant to the Associate Vice President

A. Sue Weisler, BFA, Rochester Institute of Technology—Senior Photographer

Development

O. Terry Bruce, BS, Rochester Institute of Technology; MS, Rochester Institute of Technology—Director of Development Data Systems

Michael J. Catillaz, BA, SUNY Albany; MBA, Rochester Institute of Technology; Ed.S., SUNY Albany—Assistant to the Director of Development

Donna Lee Dey, BA, MA, University of Windsor—Research Assistant

Josephine Dudley—Special Assistant to Director of Development

Roger M. Hewett, BA, Union College—Senior Development Office

Warren W. Klenk, BA, LaSalle College; MA, Temple University—Development Officer

William H. Mathews, BA, Hobart College; MA, Temple University—Research Associate

Norman Miles, BA, University of Rochester; MA, Syracuse University—Director, National Development

John H. Potter, BA, MA, University of Missouri—Director of Planned Giving

Nancy Hallstead Purdy, BA, Wells College—Records Manager

Ellie Smith—Coordinator, RIT Fund

Financial Aid

Parvesh Singh, BA, Jiwaji University; MBA, University of Scranton—Director of Financial Aid

James Winter, BS, MS, SUNY Albany—Assistant Director of Financial Aid

Angela Brancato, AA, Onondaga Community College; BS, Rochester Institute of Technology—Financial Aid Counselor

Jane E. DeMallie, A.A., Monroe Community College; BA, Utica College of Syracuse University, MS, SUNY at Albany—Financial Aid Counselor

Molly Diem—Administrative Assistant/Office Supervisor

Rae Lynn C. Romano, BA, SUNY at Oswego—RIT/NTID Financial Aid Counselor

Elena Turchetti, BS, SUNY at Brockport—Financial Aid Counselor/ CWSP Coordinator

Veterans' Affairs

Eugene F. Clark, Jr., Director

Suzanne M. MacFall, Secretary

Student Affairs Division

Fred W. Smith, BA, MA Wheaton College; Ph.D., Michigan State University—Vice President for Student Affairs and Dean of Complementary Education

Barry R. Culhane, BA, University of Windsor, Canada; Ed.D., University of Rochester—Assistant Vice President for Campus Life

Stanley D. McKenzie, BS, Massachusetts Institute of Technology; MA, Ph.D., University of Rochester—Assistant Vice President for Student Affairs and Dean of Complementary Education

Elaine M. Spaul, BA, George Washington University; MA, Georgetown University; Ph.D. (ABD), SUNY, Buffalo—Assistant Vice President for Student Affairs and Director of Complementary Education

Elaine M. Spaul, BA, George Washington University; MA, Georgetown University; Ph.D. (ABD), SUNY, Buffalo—Assistant Vice President for Student Affairs and Director of Complementary Education

Elaine M. Spaul, BA, George Washington University; MA, Georgetown University; Ph.D. (ABD), SUNY, Buffalo—Assistant Vice President for Student Affairs and Director of Complementary Education

Elaine M. Spaul, BA, George Washington University; MA, Georgetown University; Ph.D. (ABD), SUNY, Buffalo—Assistant Vice President for Student Affairs and Director of Complementary Education

Campus Ministries

Sr. Shirley Pilot—Director; Catholic Campus Minister

Rev. James Sauers—Catholic Campus Minister

Rev. Kenneth H. Carlson—Lutheran Pastor; Protestant Campus Minister

Deacon Patrick Graybill—Catholic Campus Minister, NTID

Rabbi Alan Morse—Hillel Director, RIT/NTID

Rev. Daniel Finch—Methodist Campus Minister, NTID P.T.

Rev. Lawrence Mothersell—Episcopal Campus Minister, NTID P.T.

Mrs. Sally Taylor—Baptist Campus Minister, NTID P.T.

Rev. Jack Cleeton—Assembly of God Campus Minister, NTID P.T.

Mr. Emory Divley—Assembly of God Campus Minister, NTID P.T.

Rev. Mark Seeger—Lutheran Campus Minister, NTID P.T.

Mr. David Spaulding—Intervarsity Christian Fellowship P.T.

Rabbi Nechemia Vogel—Jewish Campus Minister P.T.

Rev. Maggie Boyd—Genesee Area Campus Minister P.T.

Rev. Randall Burkhart—Christian Church & Church of Christ, NTID P.T.

Dr. Paul Thayne—Church of Jesus Christ, Latter Day Saints, NTID P.T.

Complementary Education

Elaine M. Spaul, BA, George Washington University; MA, Georgetown University, Ph.D. (ABD), SUNY, Buffalo—Director

Joeann M. Humbert, BA, Villa Maria College—Coordinator of Community Services Projects

Helen H. McCabe, BS, SUC, Cortland; MA, Goddard College—Program Director, Community Services

Mary Ann McCarthy, AS, American College, Lucerne, Switzerland—Program Director, Educational Travel

Debra R. Wahl, AA, Broome Community College; BA, Colorado State University—Assistant Program Director, Outdoor Experiential Education

William K. Winchester, BS, University of Oregon; MA, Gallaudet College—Program Director, Outdoor Experiential Education

Counseling Center

Catherine Steel, BA, University of Western Ontario; MA.Ed., Washington University; Ph.D., University of Missouri—Director (Associate Professor)

Gaillard Ashley, BS, University of Connecticut; Ph.D., Syracuse University—Counselor (Associate Professor)

Carolyn Buntlich, BS, SUC at Brockport—Psychometrist

Laura Cann, BA, Smith; MS, SUC at Brockport—Coordinator of Developmental Programs (Assistant Professor)

Carolyn DeHority, BA, Earlham College—Career Counselor

Jean Donahue, Psychometrist

Linda Garfinkel, BS, Purdue University, MA, SUC at Brockport—Psychometrist

Mahlon Gebhardt, AB, Albright; M.Ed., Lehigh University—Counselor (Associate Professor)

Joseph Hauser, BA, University of Rochester; MA, Catholic University—Coordinator of Community Services (Associate Professor)

Peter Hayman, BA, SUNY at Stony Brook; M.Ed., Pennsylvania State University, Ph.D., University of Missouri - Columbia—Assistant Director (Associate Professor)

Joyce Herman, BA, University of Rochester; MS, Rochester Institute of Technology—Counselor (Associate Professor) - on professional leave

William Holmquist, BA, Northwestern University, M. Minn. McCormick Theological Seminary, Ed.M., University of Rochester—Counselor (Associate Professor)

Geneva Miller, AA, Monroe Community College, BS, University of Rochester, MA, SUC at Brockport—Counselor (Assistant Professor)

Higher Education Opportunity Program

Barbara Chambers-Ekpo, BA, Daemon College; MS (two) SUNY, Brockport—Director

Rajkumarie Bachun-Kleckley, BA, MS, SUNY at Brockport—Counselor

Michael Jordan, BS, M.Ed., SUNY at Brockport—Senior Counselor

Angela Moody, BA, Colgate University; MSW, Syracuse University—Academic Coordinator

Horton Child Care Center

Lita Boudakian, BA, Queens College; MA, Southern Connecticut State College—Director

John Perriello, BS, University of Rochester—Teacher

Joroyce Robinson, BS, University of North Carolina, Appalachian State College—Teacher

International Student Affairs

Barbara Letvin, BS, Ohio State University; MS, SUNY at Brockport—Director

Nancy Buckett, BA, Adelphi University—Assistant Director

Carolyn B. DeHority, BA, Earlham College—Coordinator, Special Programs

Department of Intercollegiate Athletics and Department of Physical Education, Intramurals and Recreation

Bruce E. Proper, BS, Ithaca—Director, Department of Physical Education, Intramurals and Recreation

Louis W. Spiotti, Jr., BS, Ithaca; MS, Ed., SUNY at Brockport—Director, Department of Athletics (Assistant Professor)

Fred Bleiler, BS, MS, Ithaca College—Associate Director, PER & I (Associate Professor)

Gary B. Smith, BS, Ohio University; MS, Western Illinois University—Assistant Director for Business Affairs, Department of Athletics

Louis A. Alexander, Jr., BS, University of Rochester—Coordinator of Special Projects (Professor)

Janet J. Assenheimer, BS, MS, SUNY at Brockport—Head Coach, Softball and Volleyball; (instructor) Department of Intercollegiate Athletics

Raymond C. Bell,—Trainer; (Instructor) Department of Intercollegiate Athletics

John P. Buckholtz, Jr., BS, SUNY at Cortland—Men's Swim Coach; (Assistant Professor)

Earl W. Fuller, BS, Waynesburg State College; M.Ed., Pittsburgh—Wrestling Coach; (Professor)

Neil A. Kromer, BA, Eisenhower College—Coordinator of Operations, Department of Intercollegiate Athletics

Brian Mason, BS, Clarkson College—Men's Hockey Coach; Department of Intercollegiate Athletics

Douglas J. May, BS, SUNY at Brockport; MS, University of North Carolina at Chapel Hill—Soccer Coach; (Assistant Professor)

Gregory Moss, BS, SUNY at Oneonta—Director, Equipment Room

Ann Nealon—Women's Tennis Coach; (Instructor)

Kathy Robords, BS, SUNY at Cortland—Women's Swim Coach; (Instructor)

Helen F. Smith—Assistant Director of Athletics; (Associate Professor)

Daryl C. Sullivan, BS, Rochester Institute of Technology—Coordinator of Intramurals; (Assistant Professor)

William G. Tierney, BS, SUNY at Cortland; MS, Adelphi University—Lacrosse Coach; (Instructor)

Peter J. Todd, BS, SUNY at Cortland—Track and Cross Country Coach; (Assistant Professor)

Office of Minority Student Affairs

Cynthia McGill, BA, University of Rochester; MS, Rochester Institute of Technology—Director

Office of Special Services

Marie Giardino, BA, Nazareth College; Middlebury College—Director

David L. Watson, BA, MA, University of Montana—Counselor

Orientation and Special Programs

Joseph T. Nairn, BA, Thiel College; M.Ed., University of Vermont—Director

Residence Life

H. Preston Herring, BA, West Virginia Wesleyan College, M.Ed., University of Vermont, Ph.D., Michigan State University—Director, Residence Life

Michael D'Arcangelo, BA, Westminster College, MA, Student Personnel, Bowling Green—Area Complex Director

Jeanne M. Ferranti, BA, University of Northern Colorado, Ms, Career/Human Resource Development, Rochester Institute of Technology—Assistant Director, Administrative Services

Joseph Germonto, Assistant Director, Building Services

Anne Kingston, BA, Bates College, M.Ed., University of Rochester—Area Complex Director

Paul Montinieri, BA, St. Michael's College, M.Ed., University of Vermont—Area Complex Director

Carol Rosa, BA, Ladycliff College, M.Ed University of Southern Maine—Assistant Director, Student Development

William VanderClock, BA, University of Maine, M.Ed., University of Maine—Coordinator of Assignments/Computer Operations

John Weas, BA, MS, Indiana, University—Director of Off Campus and Apartment Life

Student Health Services

E. Cassandra Jordan, BA, Clark College; BS, Meharry Medical College; MS, SUNY at Geneseo—Director

Igor Mihajlov, MD, Faculty of Medicine, Zagreb University—Medical Director

Martin Zinaman, MD, Downstate Medical Center—Staff Physician

W. Patrick Bernal, MD, University of Virginia—Part-time Physician

Joseph Kutchukian, MD, Lausanne Medical University—Part-time Physician

Richard Perimutter, MD, University of Pennsylvania Medical School—Part-time Physician

Karen Ekstrom, BA, Albion College; BS, University of Rochester School of Nursing—Nurse Practitioner

Julie Leonardo, BS, University of Rochester School of Nursing; MS, University of Rochester School of Nursing—Nurse Practitioner

Robert McCann, BS, Tufts University; MS, Pace University—Nurse Practitioner

Julia Shattuck, RN, Highland Hospital School of Nursing; MSN, University of Rochester School of Nursing—Nurse Practitioner

Julia Steigbigel, BS, University of Rochester School of Nursing; MS, University of Rochester School of Nursing—Nurse Practitioner

Mary Hansen, RN, Genesee Hospital School of Nursing; BS, University of Rochester School of Nursing; MS, University of Rochester—Head Nurse

Helen Brabant, RN, University of Rochester School of Nursing—Staff Nurse

Lucia Shealy, RN, Mercy Hospital School of Nursing—Staff Nurse

Susan Syracuse, RN, SUNY at Pittsburgh; BS, SUNY at Pittsburgh—Staff Nurse

Charlyn Feeney, RN, Genesee Hospital School of Nursing; BS, Nazareth College—Health Education Coordinator

Student Activities and Union Services

Margaret A. Chapa, BA, Michigan State University; MA, Michigan State University—Director

Helene K. Manglaris, BS and MS SU College at Brockport

Michael T. D'Arcangelo, BA, Westminster College; MA, Bowling Green State University—Coordinator of Greek Affairs

Marta L. Stephens, BA, University of Missouri; MS, University of Missouri

Faculty and Staff Emeriti

Robert C. Baker, Professor Emeritus, Engineering

Hans J. Barschel, Professor Emeritus, Art and Design

Harold J. Brennan, Dean Emeritus, College of Fine and Applied Arts

Harold J. Brodie, Professor Emeritus, Mechanical Engineering

Mary E. Burnet, Professor Emeritus, Business Administration

Frank A. Clement, Professor Emeritus, General Studies

Silvio DeCrisofaro, Professor Emeritus, College of Continuing Education

Mark Ellingson, Professor Emeritus, Mathematics

Albert Erskine, Professor Emeritus, Mathematics

Loy Golladay, Professor Emeritus, National Technical Institute for the Deaf

Ruth E. Gutfrucht, Professor Emeritus, Art and Design

Mykola Hadsinsky, Professor Emeritus, Physics
Sherman Hagberg, Professor Emeritus, Mechanical Engineering
Frances H. Hamblin, Professor Emeritus, General Studies
William J. Hayles, Professor Emeritus, Chemistry
Edwin O. Hennlck, Associate Professor Emeritus, General Studies
Edwlna B. Hogadone, Dean Emeritus, College of Business
Clayton E. Hughes, Professor Emeritus, General Studies
Charles W. Hunt, Associate Professor Emeritus, Printing

Harold Kentner, Professor Emeritus, Continuing Education

Marion L'Amoreaux, Associate Professor Emeritus, Reading and Study Clinic

Alexander S. Lawson, Professor Emeritus, Printing

George H. Lecain, Professor Emeritus, Mechanical Engineering

Douglas LytUe, Professor Emeritus, Photographic Arts and Sciences

Douglas M. Marshall, Associate Professor Emeritus, Mechanical Engineering

Herbert J. Mosslen, Professor Emeritus, College of Business

Russell A. Norton, Professor Emeritus, College of Continuing Education

Egidlo Papa, Associate Professor Emeritus, General Studies

Robert D. Pease, Dean Emeritus, College of Continuing Education

Daniel Petruzzi, Professor Emeritus, Eisenhower College

Harold Raphael, Professor Emeritus, Packaging Science

George W. Reed, Professor Emeritus, Electrical Engineering

Albert D. Rickmers, Professor Emeritus, Photographic Arts and Sciences

Donald L. Ritchie, Professor Emeritus, Printing

Donald C. Robinson, Department Head Emeritus, Electrical Engineering

Nina M. Sandberg, Associate Professor Emeritus, Chemistry

Julian Sallsnjak, Professor Emeritus, General Studies

Roy I. Satre, Jr., Vice President for Academic Affairs Emeritus

Paul Schuleshko, Professor Emeritus, Mechanical Engineering

Gerhard Schumann, Professor Emeritus, Photographic Arts and Sciences

Leo F. Smith, Vice President Emeritus, Academic Administration

Amok) Sovari, Professor Emeritus, Photographic Arts and Sciences

G. Hollster Spencer, Professor Emeritus, Administration Business

Hector Sutherland, Professor Emeritus, Printing

Vernon R. Titus, Professor Emeritus, Management

Hollis N. Todd, Professor Emeritus, Photographic Arts and Sciences

Arden L. Travis, Professor Emeritus, College of Business

Clarence E. Tuites, Professor Emeritus, Electrical Engineering

Norman J. Weinreber, Associate Professor Emeritus, Institute College

Mason E. Wescott, Professor Emeritus, Statistics

Helen W. Wheeler, Associate Professor Emeritus, Reading and Study Clinic

Edwin M. Wilson, Professor Emeritus, Photographic Arts and Sciences

Viola M. Wilson, Associate Professor Emeritus, Food Administration

Stanley H. Witmeyer, Professor Emeritus, College of Fine and Applied Arts

INDEX

- Academic Degrees. see specific programs
 Academic Probation and Suspension Policy. 16
 Academic Services. 27
 Academic Standards and Regulations. 16
 Accountancy (MS). see Graduate Bulletin
 Accounting (AAS, BS). 53
 Accounting. 53
 Accounting and Finance, Department of
 Accounting, Certified Public (CPA). 53
 Accounting Major. 53
 Accreditation. 2
 Achievement Awards Program. 19
 Activities Calendar. 22
 Admission at a Glance:
 College of Applied Science and Technology. 29
 College of Business. 51
 College of Engineering. 62
 College of Fine and Applied Arts. 71
 College of Graphic Arts and Photography. 78
 College of Liberal Arts. 99
 College of Science. 105
 Admission Deposit. 14
 Admission, Early. 14
 Admission, How to Apply:
 Freshmen. 13
 Transfer Students. 13
 Admission Information (General). 13
 Admission, International Student. 14
 Admission, NTID. 119
 Admissions Staff. 6
 Aid, Financial. 8-12
 Alcohol and Drug Abuse. 6
 Alumni Association. 25
 Alumni Fund. 25
 Alumni News. 25
 Ambulance. 20
 American Craftsmen, School for. 75
 Apartment Housing. 21
 Appeals Process, Refunds. 8
 Applications, Action on. 13
 Applied Mathematical Statistics (MS). see Graduate Bulletin
 Applied Industrial Studies, School of. 3, 59
 Applied Mathematics. 112
 Applied Photography, Department of. 80
 Applied Science and Technology, College of. 29
 Art and Design, School of. 72
 Art Education (MST). see Graduate Bulletin
 Associate Degree Programs. 17
 Athenaeum, Rochester. 3
 Athletic Eligibility. 24
 Athletics, Intercollegiate. 24
 Attendance in Classes. 17
 Audiovisual Communications. 31
 Audiovisual Distribution Services. 27
 Audiovisual Production Electives. 32
 Automobile Registration. 24

 Baccalaureate Degrees. 17
 Bachelor's Degree Programs. 17
 Basic Educational Opportunity Grants (BEOG). see Pell Grants
 Bevier Gallery. 69
 Billing. 7
 Biochemistry Option. 111
 Biological Research. 108
 Biology (AS, BS). 108
 Biology Specialization Track. 108
 Biomedical Computing (BS). 115
 Biomedical Photographic Communications (AAS, BS). 83
 Biotechnology. 109
 Black Awareness Coordinating Committee. 22
 Board of Trustees. 125
 Boarding (Meal) Plans. 8
 Book Design and Book Production. 91
 Books and Supplies. 7, 24
 Bookstore. 24
 Business Administration. 52
 Business Administration (MBA). see Graduate Bulletin
 Business Administration, School of. 53
 Business, College of. 50
 Business Core Curriculum. 52
 Business Management. 54
 Business Programs:
 Accounting. 50
 Business Management. 54
 Finance. 54
 Marketing. 55
 Management. 55
 Photographic Marketing Management — 58
 Retailing. 55
 Business Technology (MS). see Graduate Bulletin

 Calendar. Inside front cover
 Campus Map. Inside back cover
 Campus Safety. 24
 Campus Visits. 13
 Career Counseling. 19
 Career Decision Program. 19
 Career Education. 4
 Career Information (MS). see Graduate Bulletin
 Career Resource Center. 19
 Career Services. 4
 Cary Library. 76
 Center for Cooperative Education and Career Services. 4
 Ceramics and Ceramic Sculpture (AAS, BFA). 75
 Certificates and Diplomas. 17
 Certification for Degree. 17
 Certified Public Accounting (CPA). 53
 Chemical Technology. 110
 Chemistry (AS, BS). 110
 Chemistry Department. 110
 Chemistry Library. 28
 Chemistry (MS). see Graduate Bulletin
 City Center. 3
 Civil Engineering Technology (B.Tech.). 37
 Civil Engineering Technology (Construction Option). 38
 Civil Engineering Technology (Environmental Option). 37
 Class Attendance. 17
 Clinical Chemistry (MS). see Graduate Bulletin
 College Activities Board. 22
 College Anticipation Program. 26
 College of Applied Science and Technology. 29
 College of Business. 50
 College of Continuing Education. 59
 College of Engineering. 60
 College of Fine and Applied Arts. 69
 College of Graphic Arts and Photography. 76
 College of Liberal Arts. 96
 College of Science. 104
 College Restoration Program. 26
 College-Alumni Union. 21
 Colony Manor. 21
 Commencement. 17
 Community Living Resources. 24
 Complementary Education. 17
 Composing Room Procedure. 91
 Computational Mathematics. 113
 Computer Applications in Printing Management. 91
 Computer Career Guidance System (SIGI). 19
 Computer Engineering (BS). 63
 Computer Science (BS). 32, 33
 Computer Science and Technology, School of. 32
 Computer Systems Management (MS). see Graduate Bulletin
 Computer Systems. 34
 Computer Systems Software Science. 35
 Computer Technology. 33, 40
 Conduct Policies. 5
 Construction Option, Civil Engineering Technology. 38
 Continuing Education, College of. 59
 Cooperative Education. 4
 (see also individual programs)
 Coordinated Dietetics (CUP). 46
 Costs. 7
 Counseling Center. 18
 Course Descriptions. refer to Course Catalog
 Craft Majors. 75
 Crafts Electives. 75
 Credit by Examination. 13
 Credit for Non-Traditional Learning. 13
 Criminal Justice (BS) Program. 99
 Criminal Justice Electives. 100
 Cross Registration NTID/RIT. 119
 Curriculum Design. 28

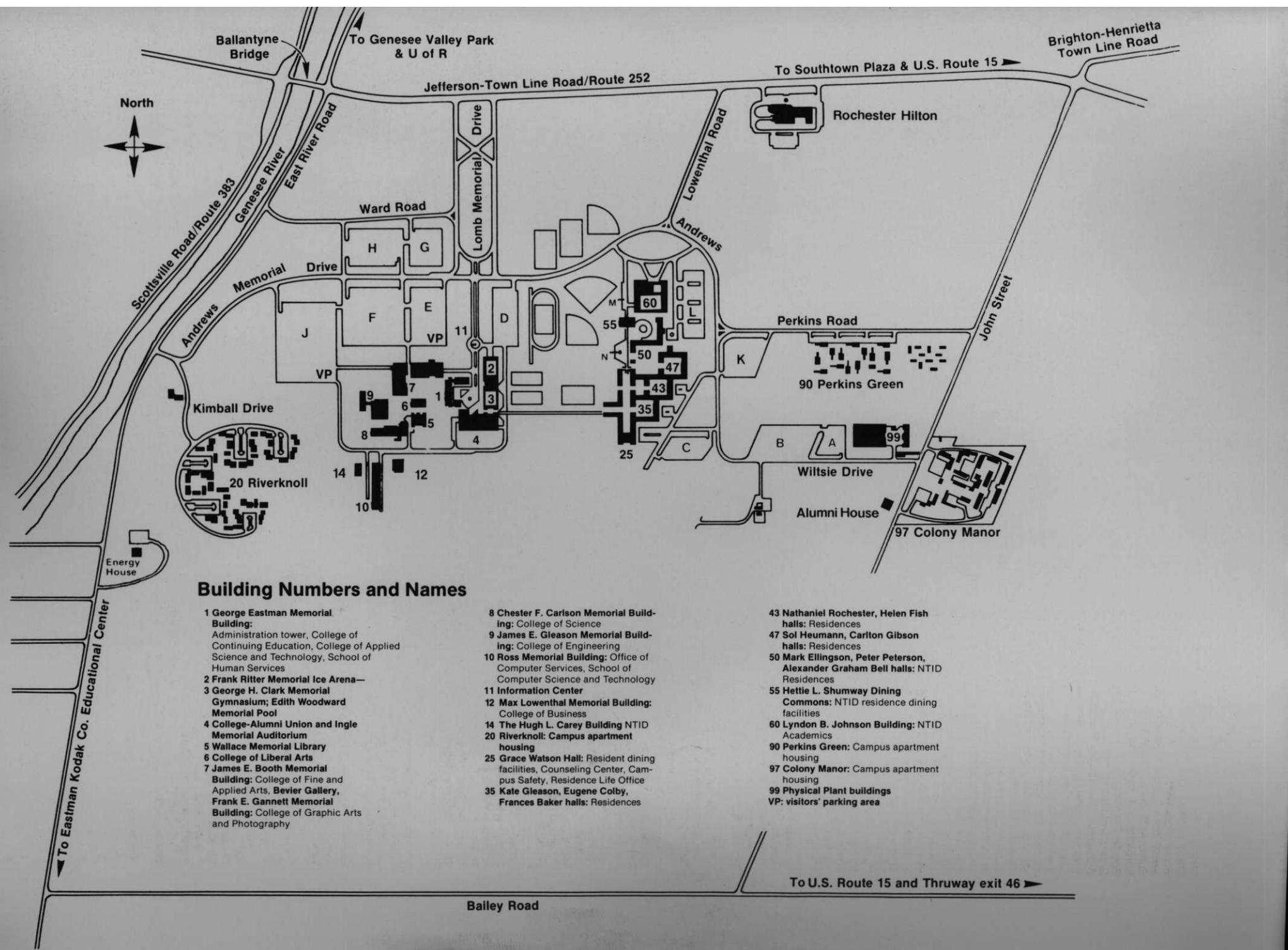
 Day Care Center (Horton). 24
 Deaf Students (see also NTID). 5, 14
 Deans. 130
 Deferred Payment Plan. 7
 Degree Requirements. 17
 Dentistry (pre-professional). 108
 Design and Typography. 91
 Design Composition. 90
 Design, Graphic. 73
 Developmental Programs. 19
 Diagnostic Medical Sonography (Ultrasound). 118
 Dietetics (AAS, BS). 46
 Dietitians. 46
 Diplomas and Certificates. 17
 Disabled Students Guide to RIT. 19
 Disciplinary Probation. 16

 Early Admissions. 14
 Electrical Engineering. 64
 Electrical Engineering AAS Transfer Program. 65
 Electrical Engineering (BS). 64
 Electrical Engineering (MS). see Graduate Bulletin
 Electrical Engineering Technology (B. Tech.). 39
 EM Technician. 108
 Emergencies. 24
 Employment, Student. 12
 Endowed Professorships. 127
 Energy Technology (B. Tech.). 42
 Engineering, College of. 60
 Engineering, Computer. 63
 Engineering, Electrical. 64
 Engineering, Industrial. 66
 Engineering, Mechanical. 67
 Engineering, Microelectronic. 68
 Engineering Science Transfer Program. 65
 Engineering Technology Accreditation. 37
 Engineering Technology, Civil. 37
 Engineering Technology, Electrical. 39
 Engineering Technology, Manufacturing — 43
 Engineering Technology, Mechanical. 41
 Engineering Technology, School of. 36
 Environmental Option, Civil Engineering Technology. 37
 Environmental Science. 108
 Escort Service. 24
 ESOL (English for Speakers of Other Languages). 14, 25, 26
 Estimating. 91
 Expenses. 8

 FACTS. 15, 21
 Faculty and Program Development. 18
 Faculty and Staff. 128
 Fashion Institute of Technology. 57
 Fees. 7
 Fees, NTID. 120
 Film and Television. 84
 Film and Video, Department of. 80
 Finance Major. 54
 Financial Aid. 8-12
 Financial Management, Printing. 91
 Financial Standing. 7
 Fine and Applied Arts
 Portfolio Guidelines. 70
 Fine and Applied Arts Summer Session. 69
 Fine and Applied Arts Transfer Program — 69
 Fine and Applied Arts, College of. 69
 Fine Art Photography, Department of. 80
 Fine Arts, Painting (AAS, BFA). 73

Fine Arts, Printmaking (AAS, BFA)	73	Locker Facilities	23	Photography (MFA)	see Graduate Bulletin
Flexographic Technology	91	Management, Department of (Business)	54	Photography, Biomedical	83
Food Management (AAS, BS)	44	Management Division (Printing)	91	Photography, Graphic Arts and College of	76
Food, Hotel and Tourism Management, School of	44	Management, Photo	85	Photography-Plate-Press Division (Printing)	91
Fraternities and Sororities	20	Management, Photo Marketing	58	Photography, Reproduction	91
Furniture Design, Woodworking and (AAS, BFA)	75	Management, Retail	55-57	Photography Summer Programs	80
Furniture Design, Woodworking and (MFA, MST)	see Graduate Bulletin	Manufacturing Engineering Technology (B. Tech.)	43	Photography, Technical	88
General Dietetics	46	Marketing, Department of	55	Physical Education, Department of	23
General Education	96	Marketing Major	55	Physical Education Policy	23
Glass (AAS, BFA)	75	Marketing, Photo Management	58	Physical Education Requirements	23
Glass (MFA, MST)	see Graduate Bulletin	Masters Degrees	see Graduate Bulletin	Physical Examination	14
Grade Point Average	16	Mathematics, Applied	112	Physics (AS, BS)	114
Grade Reports	15	Mathematics, Computational	113	Placement	see Career Services
Grading Systems	16	Mechanical Engineering Technology (B. Tech.)	41	Pre-Professional Studies	108
Graduate Degree Programs	see Graduate Bulletin	Mechanical Engineering (BS)	67	Printing (BS)	90
Graduation Requirements	17	Mechanical Engineering (MS)	see Graduate Bulletin	Printing (MS)	see Graduate Bulletin
Grants and Scholarships	10	Media Resource Center	27	Printing and Applied Computer Science (BS)	95
Graphic Arts and Photography, College of	76	Medical Illustration Option	74	Printing Degree Program	90
Graphic Design (AAS, BFA)	73	Medical Imaging Technology (Nuclear Medicine)	117	Printing, Design Composition Division	90
Graphic Design Major	73	Medical Imaging Technology (Ultrasound)	118	Printing Management	91
Greek Council	22	Medical Insurance	7, 20	Printing Sales-Marketing	91
Health Insurance	20	Medical Service (Student Health)	20	Printing, School of	89
Health, Student	20	Medical Technology (BS)	116	Printing Systems	94
HEGIS Code (Higher Education General Information Survey)	3	Medicine (pre-professional)	108	Printing technology Electives	92
HEOP (Higher Education Opportunity Program)	18	Melbert B. Cary, Jr. Graphic Arts Collection	76	Printmaking Major	73
History of RIT	2	Merchandising	55	Printmaking (MFA, MST)	see Graduate Bulletin
Homecoming	25	Metalcrafts and Jewelry (AAS, BFA)	75	Probation, Academic	16
Horton Child Care Center	24	Metalcrafts and Jewelry (MS)	see Graduate Bulletin	Probation, Disciplinary	16
Hospitals	117	Microbiology	108	Production Management, Printing	91
Hotel and Resort Management	44, 45	Microelectronic Engineering (BS)	68	Production Services	27
Housing	20	Military Science	123	Professional Photographic Illustration (AAS, BFA)	82
Human Rights and Dignity	5	National Technical Institute for the Deaf (NTID)	119	Quality of Student Life Research	19
Human Services, School of	99	New Curriculum Implementation, Liberal Arts	98	Quality Points	16
ID (Identification Cards)	24	New Student Orientation	21	Quarterly Billing	7
Imaging and Photographic Science, Department of	80	Newspaper Production Management	91, 93	Racquet Club	21
Imaging and Photographic Science (AAS, BS)	86	Non-Traditional Learning, Credit for	13	Recreation and Sports	23
Imaging and Photographic Science (MS)	87	NTID	119	Recreation	23
Industrial and Interior Design	73	NTID Admission	119	Recreational Facilities	23
Industrial Engineering (BS)	66	NTID Fees	120	Refunds	8
Information Science (MS)	see Graduate Bulletin	NTID Undergraduate Programs	121	Registration and Records	15
Information Systems Program	33	NTID Vestibule Program	120	Registration, Late	15
Institute Forum	18	Nuclear Medicine Technology (BS)	117	Registration, Open	15
Instructional Media Services	27	Nutritional Care, General Dietetics and (AAS, BS)	46	Registration Process	15
Instructional Technology (MS)	see Graduate Bulletin	Off-Campus Housing	21	Religious Activities	22
Instructional Technology, Department of	31	Off-Campus Student Association	21	Reporter Magazine	22
Intercollegiate Athletics	24	Office of Special Services	19	Reproduction Photography	91
Interior Design Management	56	Officers of the Institute	128	Requirements for Admission	13
International Student Scholarship Fund	10	Open Registration	15	Research	19
International Student Emergency Loan Fund	18	Optometric (pre-professional)	108	Reserve Officers' Training Corps (ROTC)	123
International Student Affairs	18	Orientation	21	Residence Halls	20
International Students	14	Packaging Design	74	Resource Center, Career	19
Interpreting for the Deaf (AAS)	122	Packaging Printing	91	Retail Management	55-57
Intramurals	23	Packaging Science, Department of	48	Retail Operations Management	56
Jewelry, Metalcrafts and (AAS, BFA)	75	Packaging Science Management Option (BS)	49	Retailing, School of	55
Jewelry, Metalcrafts and (MS)	see Graduate Bulletin	Packaging Science Technical Option (BS)	48	Retention and Attrition of Students	15
Late Registration	9, 15	Painting Major	73	'RIT at a Glance'	2
Learning Development Center	25	Painting (MFA, MST)	see Graduate Bulletin	Riverknoll	21
Liberal Arts, College of	96	Payment Procedure	8	Rochester Athenaeum	3
Liberal Arts Curriculum	96	Pell Grants	12	Room and Board	8
Liberal Arts Requirements	97	Performing Arts	22	Rose, Dr. M. Richard	4
Liberal Arts Senior Seminar and Project	98	Perkins Green	21	ROTC	123
Liberal Arts Summer Session	98	Personal Conduct	5	Sales-Marketing, Printing	91
Libraries:		Personnel Management, Printing	91	Scheduling	15
Art	28, 69	Personnel, RIT	128	Scholarships	10
Cary (Melbert B. Cary, Jr. Graphic Arts Collection)	76	Photo Marketing Management	58, 80	Scholarships and Grants	10
Chemistry	28	Photographic Arts and Sciences, School of	80	School for American Craftsmen	75
Information Services, T&E Center	76	Photographic Communications, Biomedical	83	School of Applied Industrial Studies	3, 59
Wallace Memorial	27	Photographic Illustration, Professional (AAS, BFA)	82	School of Art and Design	72
Life Support and Safety Programs	23	Photographic Marketing Management	58, 80	School of Business Administration	53
Lithography Technology	91	Photographic Processing and Finishing Management	85	School of Computer Science and Technology	32
Loans, Student	12	Photographic Science, Imaging and	80, 86, 87	School of Engineering Technology	36
		Photographic Technology, Department of	80	School of Food, Hotel and Tourism Management	44
				School of Human Services	99
				School of Photographic Arts and Sciences	80
				School of Printing	89
				School of Retailing	55
				Science (Applied) and Technology, College of	29
				Science, College of	104
				Sexual Behavior and Harassment	6

	19
Social Events	22
Social Work (BS)	101
Social Work Transfer Program (BS)	103
Software Science, Systems	35
Sororities and Fraternities	20
Special Services	19
Sports and Recreation	23
Standard of Satisfactory Progress	11
Statistics, Applied (MS) .. see Graduate Bulletin	
Student Academic Development	25
Student Affairs	17
Student Association, Off-Campus	21
Student Conduct (Institute Standards)	5
Student Directorate	21
Student Employment	12
<i>Student Handbook</i>	22
Student Health Service	20
Student Housing	20
Student Life Quality, Research of	19
Student Loans	12
Student Professional Associations	22
Student Publications	22
Student Records	15
Student Retention	15
Student Services	17
Student Television Systems (STS)	21
Student Union (see College-Alumni Union)	21
Summer Session .. see Summer Session Bulletin	
Summer Vestibule Program (NTID)	120
Supplies and Textbooks	7, 24
Suspension and Academic Probation, Policy on	16
Systems Software Science	35
T & E (Technical & Education) Center	77
TAP (Tuition Assistance Program)	14
<i>Technila</i>	22
Technical Photography (BS)	88
Television Center	27
Television, Film and	84
Testing	19
Textbooks and Supplies	7, 24
Textile Design, Weaving and	75
Textile Design, Weaving and (MS) .. see Graduate Bulletin	
TOFL (Test of English as a Foreign Language)	25
Transcripts	15
Transfer Credit	13
Transfer Students	5, 13, 23
Travel Management	45, 46
Trustees, Board of	125
Tuition	7, 9
Tuition Assistance Program (TAP)	12
Tuition Payment Plans	10
Typography and Design	91
Ultrasound Technology Program	118
Undeclared Science Option	105
Undergraduate Programs	3
Undergraduate Programs, NTID	121
Vestibule Program, Summer (NTID)	120
Veterans	4, 7
Veterinary Science (pre-professional)	108
Wallace Memorial Library	27
Weaving and Textile Design (AAS, BFA)	75
Weaving and Textile Design (MFA, MST) .. see Graduate Bulletin	
WITR Radio	21
Women, Career Opportunities for	6
Woodworking and Furniture Design (AAS, BFA)	75
Woodworking and Furniture Design (MFA, MST) .. see Graduate Bulletin	
Writing Policy	17
Yearbook	22



Building Numbers and Names

- 1 George Eastman Memorial Building:** Administration tower, College of Continuing Education, College of Applied Science and Technology, School of Human Services
- 2 Frank Ritter Memorial Ice Arena—**
- 3 George H. Clark Memorial Gymnasium; Edith Woodward Memorial Pool**
- 4 College-Alumni Union and Ingle Memorial Auditorium**
- 5 Wallace Memorial Library**
- 6 College of Liberal Arts**
- 7 James E. Booth Memorial Building:** College of Fine and Applied Arts, Bevier Gallery, Frank E. Gannett Memorial Building: College of Graphic Arts and Photography

- 8 Chester F. Carlson Memorial Building:** College of Science
- 9 James E. Gleason Memorial Building:** College of Engineering
- 10 Ross Memorial Building:** Office of Computer Services, School of Computer Science and Technology
- 11 Information Center**
- 12 Max Lowenthal Memorial Building:** College of Business
- 14 The Hugh L. Carey Building** NTID
- 20 Riverknoll:** Campus apartment housing
- 25 Grace Watson Hall:** Resident dining facilities, Counseling Center, Campus Safety, Residence Life Office
- 35 Kate Gleason, Eugene Colby, Frances Baker halls:** Residences

- 43 Nathaniel Rochester, Helen Fish halls:** Residences
- 47 Sol Heumann, Carlton Gibson halls:** Residences
- 50 Mark Ellingson, Peter Peterson, Alexander Graham Bell halls:** NTID Residences
- 55 Hettie L. Shumway Dining Commons:** NTID residence dining facilities
- 60 Lyndon B. Johnson Building:** NTID Academics
- 90 Perkins Green:** Campus apartment housing
- 97 Colony Manor:** Campus apartment housing
- 99 Physical Plant buildings**
- VP:** visitors' parking area

To Eastman Kodak Co. Educational Center

To U.S. Route 15 and Thruway exit 46

Bailey Road

Rochester Institute of Technology

**Office of Admissions
One Lomb Memorial Drive
Post Office Box 9887
Rochester, NY 14623**