The RIT Experience...

Quality Programs for Successful Careers.

Rochester Institute of Technology

We'd like you to know our name, but we also want you to understand what we're all about.

Rochester Institute of Technology is an alive, vibrant, and dynamic place. It's full of people who are always learning—including students, professors, staff members, and administrators. More important, though, is the fact that many of these people are learning about the world of work. They're learning in business and industry throughout Rochester and as far away as California and Florida. They're learning through modern laboratories and equipment in graphic arts, photography, science, and engineering and through simulated cases set up in the classroom. They're learning in workshops on careers and career planning and through discussions with professionals in the forefronts of their fields.

Because we at RIT take careers seriously, we take our studies seriously, too. We strive to make certain our academic programs are rigorous, with high standards, top-notch faculty, and excellent facilities. We want these programs to be worth your time and enjoyable, because we want you to stick with them. We also include exciting and worthwhile programs out of the classroom—off-campus activities, speakers, independent study, research and close work with faculty.

If you'd like to study in this kind of environment, take time to find out about Rochester Institute of Technology. RIT is for people who want quality programs to prepare for successful careers.

We'd like you to be one of those people.

Academics

What is it like to study at Rochester Institute of Technology? You'll find it challenging, demanding, and varied, sometimes tough, but always exciting. RIT is not known for being an "easy" school—but we are recognized for producing well-prepared, well-paid graduates.

The main ingredients of an RIT education are high standards, excellent facilities, close work with faculty, and a seemingly infinite number of special learning options.

Let's begin by talking about our academic standards. At RIT you'll be expected to give your best—in the classroom, in research projects, on tests, in field experiences, in independent study. That's an approach to education we've chosen deliberately, because we think it's the strongest way to learn. RIT faculty support this concern with rigorous study, so they'll continually challenge you and encourage you to challenge them.

RIT's high standards have one primary benefit: they prepare you for the high standards of the working world. If a job demands that you do research until you get results, you'll have that background from RIT. Your career may require detailed knowledge of a particular field—RIT will see that you receive that knowledge. We're enthusiastic and wholehearted about learning, and it shows in all of our academic programs.

Naturally, if you're expected to produce, you must have resources. With its excellent facilities RIT provides the kind of environment you need for in-depth study. It's good to know that your education will be complete with modern equipment and other resources—resources that are on campus, accessible, and meant to be used by you.

Are you considering study in the sciences at RIT? The biology area alone has four research laboratories, four general purpose labs, and teaching laboratories in microbiology—biochemistry, clinical biology and instrumentation, and transmission electron microscopy. You'll also have access to three greenhouses, an animal suite, a growth chamber, two walk-in cold rooms, and culture transfer rooms. The 125,000-square-foot Chester Carlson Memorial Building houses these science facilities.

RIT's College of Graphic Arts and Photography is well known throughout the world for its programs. As a leader in the graphic arts field, the college's facilities reflect great sophistication in this area. The college is housed in a building specifically designed for instruction in photography and printing.

Several color and black-and-white darkrooms, specialized laboratories, and a variety of equipment make our facilities the most complete of any institution that grants degrees in these fields. In the School of Printing, for example, you'll use equipment in flexographic printing, computerized type-setting, newspaper production, screen printing, lithographic printing, and bindery operation.

Computers are central to RIT's School of Computer Science and Technology, and they're also useful tools for many other programs. At RIT, you may have access to a Honeywell Sigma-9 system and an IBM 3031 system with more than 100 time-sharing terminals on campus. The school is also equipped with two PDP 11/45s, two IBM 360/30F's, an IBM 1500 CAI, Interdata 7/16, and other computer systems, mini-computers, and microcomputers.

Programs in art, design, professional crafts—whatever resources you require in these areas, you'll find at RIT. The College of Fine and Applied Arts has outstanding facilities to support your studies. The Crafts Village, part of the School for American Craftsmen, features a number of ceramic kilns, glass furnaces, a blacksmithing area, and space for sculpture. The college's Bevier Gallery brings to campus the work of regional and national artists, in addition to exhibiting student work. As a communication design student, you'll make use of a well-equipped media center for photography, offset printing, typesetting, letterpress, and multimedia presentations.

If you're an engineering student, the James E. Gleason Memorial Building gives you plenty of opportunities to work with up-to-date equipment in the computer, electrical, industrial, or mechanical areas of the field. You'll have access to electronic testing devices, oscilloscopes, microprocessors, microwave

Academics

communication systems, motors and generators, electronic optic devices, and many other examples of modern technology.

Whatever your program, RIT's Wallace Memorial Library will be a constant source of information. In addition to books, magazines, newspapers, and pamphlets, you'll find research material in the form of motion pictures, slides, videocassettes, microfilm, filmstrips, microfiche, and slidetapes. A special media resource center contains many of these materials and audiovisual equipment you're free to use on your own. The three

floors of the library have more than 900 student study stations, including individual study carrels and convenient group study rooms.

What do these facilities mean to you? You'll become familiar with the tools and equipment used in your career field today. You will have access to information that's fresh and current. You may have an opportunity to work on advanced research projects with faculty in a laboratory setting. Meeting the challenges of study at RIT can be an exciting experience with such facilities at hand.

Complementary Education

Some schools offer special out-of-class learning activities. But few colleges have a complementary education program like RIT's. What is complementary education? Our catalog calls it "experiences that complete and enhance the traditional academic activities of the Institute." Our students think of it as getting actively involved in their education.

What makes complementary education at RIT so unique is its creative spirit. Faculty members design special learning activities for students—activities you won't find in a traditional academic course listing. Some of these are short-term, informal events. Others may involve earning academic credit.

As a complementary education project, the Department of Clinical Sciences sponsored a one-credit course featuring health care professionals who spoke on interesting aspects of their professions. A faculty member in the College of General Studies organized a series of classical music concerts, which students critiqued. RIT's Learning Development Center conducted a best-seller paperback book seminar for students and faculty as a complementary education event.

The term may be new, but complementary education has existed at RIT for a long time. Now that it's a permanent program, you can be sure that exciting learning will always be part of your RIT experience.

Although they're not part of any formal program, there are many other special study options at RIT. These opportunities are just part of the energy of the RIT community.

As a senior in the School of Printing, you'll attend a seminar where lecturers from the printing industry update you on the latest

developments of the trade. In the School of Photographic Arts and Sciences, you may produce slide shows and other visual presentations for the Rochester Museum and Science Center. The environmental design program involves intensive studio work and individual projects—you may devote an entire academic quarter to designing a major interior environment including lighting, acoustics, space, furniture, and color.

In the engineering area, two industrial engineering students recently developed a system to monitor caseworker utilization for the Salvation Army of Rochester. Mechanical engineering students spent an academic quarter coming up with ideas to make a city playground accessible to handicapped youngsters.

How will you keep current on new ideas in your field? At RIT you can discuss and exchange viewpoints with distinguished scholars and experts. The College of Business spotlights a prominent representative from the business world each year at the William D. Gasser Distinguished Lecture in Business. The William A. Reedy Memorial Lecture Series brings some of the country's leading photographers and art directors to the RIT campus.

RIT's Institute Forum has featured such guest speakers as former senators Eugene McCarthy and Sam Ervin; journalist Shana Alexander; publisher William Rusher; Karen DeCrow, past president of the National Organization for Women; Supreme Court Justice William Rehnquist; and key officials of the Federal Trade Commission and Department of Energy. Guest speakers often appear in the classroom, too, adding interest to your studies at RIT.

General Education at RIT

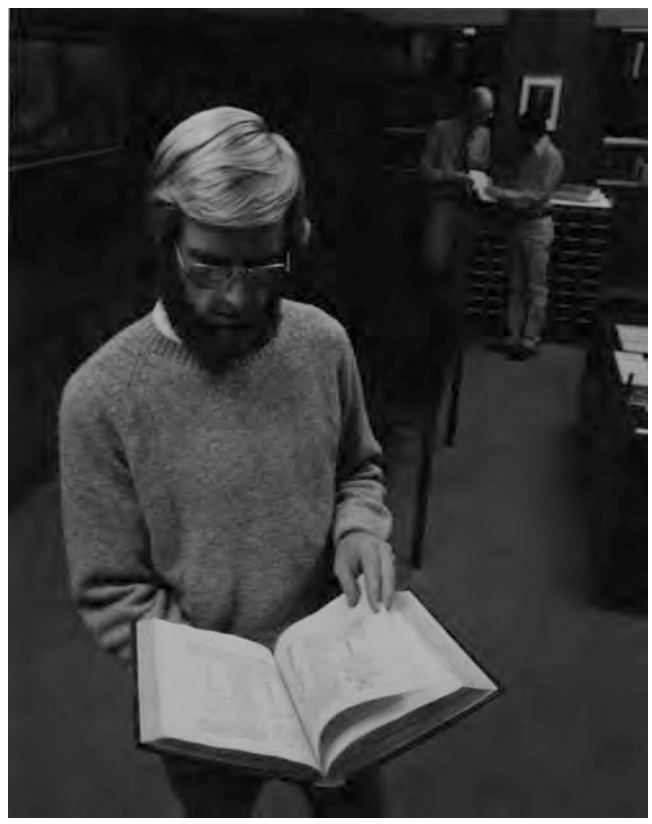
In addition to offering technical and professional programs that specialize in major career fields and aim at professional competence and career preparation, the degree programs of RIT include general education. All colleges of RIT contribute in varying ways to the general educational goals of the Institute, which are concerned with enabling students to view their specialization and themselves in broad and meaningful contexts. Thus RIT provides students with understandings and skills essential for the development of the whole person. These include the knowledge and attitudes necessary for lifelong learning, the satisfying enjoyment of leisure time, and active, productive participation in society. In particular, the College of General Studies offers a four-year curriculum of general education based on the goal of giving each student varied opportunities for study in the humanities and social sciences.

In today's world, we assume that the past, the present, and the future are interrelated. Without an understanding of one's culture and intellectual heritage, it is impossible to take the measure of the present or to plan constructively for a better future. Moreover, the value and utility of specific technologies cannot be properly assessed independent of their ethical, social, and ecological consequences, and many pressing human problems can be understood only within a global

context. Therefore, an educated person must be prepared to comprehend the broad significance of facts, concepts and arguments. Further, without developed skills in critical analysis, the range of human and social choices cannot be perceived and independent, rational judgment cannot be exercised. An RIT student must also be prepared to deal with ethical and other normative issues; to value creative imagination and to bring its enrichment to human life; and to bring multi-disciplinary insights to the solving of problems.

The College of General Studies provides the opportunity for such liberal education. Courses are taught by over sixty experienced faculty committed to introducing students to the ideals and standards of excellence, of creative endeavor, and of scholarship through study and research in the humanities and social sciences. The variety of teaching methods employed includes lectures, discussions, seminars, and personalized self-instruction.

Dean Mary Sullivan says: "The faculty of the College of General Studies are eager to welcome new students to RIT. Our college building is in the center of the academic campus. This location symbolizes our hope that we can enable RIT students to integrate their education into a full understanding of what it means to be well-rounded individuals pursuing their careers in this world with all its joys and difficulties."



Faculty

Variety Is undeniably the "spice"of the RIT faculty. From scientists and engineers to sociologists and graphic arts experts, they make up a lively community of professionals. They come from many walks of life and bring with them a host of experiences and new ideas. Learning from RIT faculty is fast-paced and designed to be a challenge. They'll keep you on your toes intellectually. They also will be there when you need a word of encouragement or a pat on the back.

Take time to meet just a few faculty representatives of the RIT "family":

Robert A. Johnston, dean of the College of Fine and Applied Arts, is one of four paleoceramists in the world. His craft involves scientific analysis of ceramic and glass pieces found in archeological digs. Johnston's colleague, Assistant Professor ***Bernadette Merkel,*** has been selected as one of "100 of Tomorrow's Top Illustrators" by a jury of the country's top six illustrators and a New York City gallery.

Sea ***Nettles,*** assistant professor in RIT's School of Photographic Arts and Sciences, has had photographs published in ***Modern Photography, Saturday Review, Crafts Horizons,*** and the ***New York Times.*** She has had 18 one-person shows, and her photos appear in such collections as the National Gallery of Canada, Metropolitan Museum of

New York City, Museum of Fine Arts at Houston, and Baltimore Museum of Art.

Jasper Shealy, professor of industrial engineering, conducts safety research for the Eastman Kodak Company and the National Ski Area Operators Association.

Dr. Harold J. Raphael, director of the Department of Packaging Science, was one of six persons in the country named Distinguished Members of the College of Fellows by the Packaging Institute/USA. The honor was bestowed "in recognition of outstanding service in the advancement of packaging professionalism." The Packaging Institute represents the nation's top experts in the packaging field.

Herbert J. Mossien, the J. Warren McClure Professor of Marketing, is a former corporate vice president of Bausch & Lomb Inc. and was recently named "Marketing Man of the Year" by the Rochester Chapter of The American Marketing Association.

From a student's perspective, you can easily see the benefits of working with RIT faculty. No matter what the subject, you'll be learning from pioneers and professionals. Do you have a question about a problem in your field? Your professor may already be doing research on it—or may offer to help you do your own investigating. RIT faculty ask questions, seek answers, solve problems. They'll teach you to do the same.

Experiential Learning

"Experiential learning is really an essential element in contemporary higher education," says Dennis C. Nystrom, dean of RIT's Institute College. "There's no better way to learn about responsibility than to be out there in the field. You have to stand on your own feet and work effectively with co-workers. It shows you what it means to work and to achieve. Experiential learning turns vague ideas about a career field into something very concrete.

"We are developing or currently offer several basic types of experiential learning at RIT: internships, apprenticeships, field experiences, and cooperative education are but a few. An internship is usually a one-time experience, lasting from an academic quarter to six months. You'll try to match up with an employer on the basis of work interests, and the experience may or may not be paid.

"An apprenticeship might link a student with a craftsperson or artisan. Apprenticeships usually last a year and are international in scope. Field experiences, on the other hand, are often arranged locally. They're set up with social service agencies, community based organizations, or similar agencies, last one quarter to a full year, and aren't normally paid positions. During a field placement, you'll spend one day a week on the RIT campus for class sessions.

"Cooperative education is a very important part of many of RIT's academic programs. Co-op experiences are one quarter in length. They're usually rotated with quarters on campus in regular studies. Some RIT colleges require co-op, and it typically occurs within the junior and senior years."

What's the thinking behind experiential learning? It's really quite simple: you learn best by being a contributing member of an organization while observing the entire system in operation. There are skills and values you can gain in the working world that you just can't practice in the classroom. Supervising the food services of a Rochester community hospital or nearby motor inn can take you far beyond a food administration textbook. Can you apply the laws of mathematics and science to a technical problem in industry today? A co-op in electrical engineering will let you do just that.

Work experience has other benefits, too. You'll make professional contacts in the field. And you can see, firsthand, if a particular job area actually fits your interests. Do you enjoy working independently or in a group? Do you need immediate or long-term rewards? What types of problems do you solve best? Experiential learning at RIT can show you the answers.

Once you have experience, you'll be better prepared for your first job after graduation. Experience may allow you to command a higher salary. And it certainly will give you greater self-confidence as you enter your new profession.

Hundreds of RIT students participate in experiential learning each year, and the variety and number of settings are enormous.

The further you progress in your academic program, the more you'll appreciate experiential learning. It will keep you moving toward your career goals, and it may be the highlight of your RIT experience.

Career Education

One of the rewards of attending a larger school is the number of academic support services available to you. RIT is no exception. Over the past few years, one of the related academic areas we've worked hardest to advance is the Division of Career Education.

How do the Division of Career Education faculty and staff assist you? Their top priority is helping you learn about the world of work and find a successful place in it.

Like many students who enroll at RIT, you may have made an initial decision about a career field. But it's not unusual to change a career goal or to investigate other professions. The career and academic advising system puts you in touch with a faculty member who can help you in this process. Throughout your studies, your advisor will assist you in setting realistic career goals and in planning an educational program. You'll be encouraged to relate personal strengths and abilities to your developing career interests.

Professional career counseling is available through members of the Career Education Division staff. They can help you assess your interests, identify employment options, begin a job search, and evaluate past work-related experiences. In addition, RIT's Counseling Center has a computer-based guidance system designed to help you make informed career decisions. A resource library provides information about various organizations and professions.

RIT's Central Placement Services offers you help in finding part-time and summer jobs, co-op positions, and permanent employment after graduation. Judith Vollmer-Miller, director of Central Placement, explains: "Placement doesn't 'place' people. Our function is to provide guidance and information for planning a career. If a student makes optimum use of our services while he or she is here, it will make future job hunts easier. All of us in Central Placement are involved daily with contacts in business and industry in order to maintain RIT's visibility and market RIT graduates."

Central Placement Services offers seminars and workshops on assessing the labor market, effective interviewing techniques, and resume preparation. It sponsors employer forums and career days and has an extensive library on prospective employers. In addition, employment recruiters are invited to campus to interview students for permanent and co-op positions. During the 1979-80 academic year, more than 600 companies visited RIT and conducted approximately 7,000 interviews with students.

Personal Development

Personal growth can add a new dimension to your education. It may be the sudden realization that making decisions has become easier for you or that you're getting better at solving people-related problems. Perhaps you're more aware of current events and issues than you were before.

RIT wants to encourage those kinds of changes in you. We'd like the very environment on campus to help you mature and grow, get to know yourself, and feel good about your future.

Some of this personal growth will undoubtedly occur in academic life. RIT courses will teach you such skills as planning, organizing, and meeting deadlines. Working closely with faculty members can teach you about problem solving and communication skills.

There are also more structured resources for personal growth. RIT's Learning Development Center can help you improve your reading efficiency, study techniques, vocabulary, mathematical and writing skills, and critical thinking abilities. The center regularly offers courses in reading, writing, listening, and math skills, along with special workshops built around student requests.

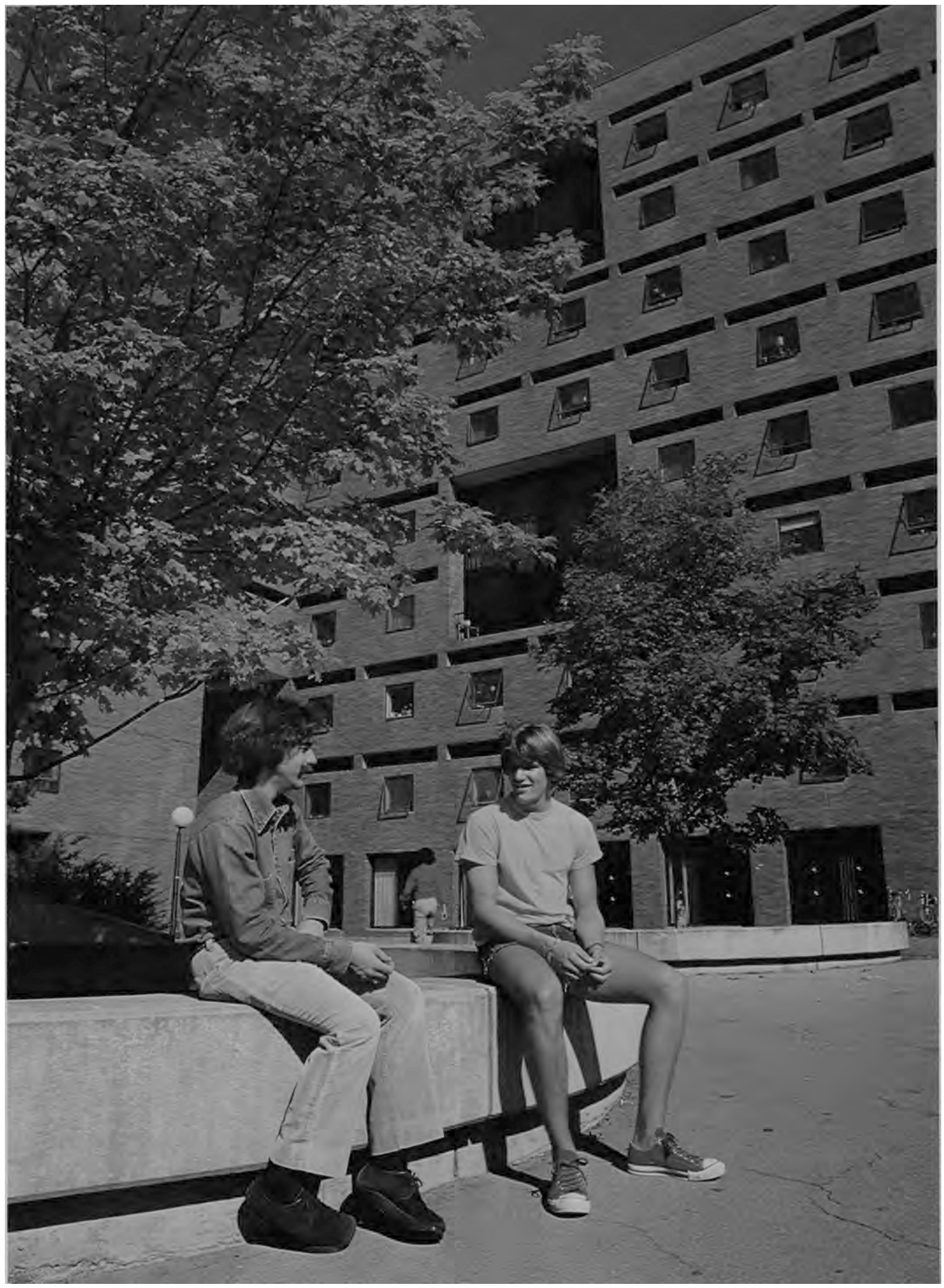
Throughout the year, RIT's Counseling Center offers a series of workshops,

seminars, and non-credit courses on many aspects of individual development. Workshop subjects might include assertiveness training, relaxation techniques, a personal growth group, or consumer education. Personal counseling and testing on an individual basis are also available.

Many complementary education events address both personal and academic development. One annual event involves some engineering students in the design and construction of a race car. Their inevitable frustration, hard work, and final achievement are aspects of the complementary education experience. A dance professional from New York city recently conducted a seminar called “Holistic Approach to Aesthetics.” Participating in these events can expand your horizons outside the classroom.

The on-going “Insights on the Institute” program helps you become acquainted with RIT’s support services. The Insights sessions feature staff members from such areas as the library, financial aid, learning development, and counseling to explain the assistance that’s available to you.

In a sense, the growth you experience in college is up to you. Yet, at RIT, we provide the setting and the opportunities for it to happen.



The Colleges

RIT is composed of 10 colleges: Business, Continuing Education, Eisenhower College, Engineering, Fine and Applied Arts, General Studies, Graphic Arts and Photography, Institute College, Science, and the federally funded National Technical Institute for the Deaf. The various colleges offer a total of 200 degree programs.

The degrees offered are 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 (MA), Master of Science in Teaching (MST), and, at Eisenhower College, Bachelor of Arts (BA).

The past few years have proved to be a turning point for the business professions. Opportunities are expanded, salaries are good, and new theories with business applications are continually being developed. The need for creative people who can apply new theories has also increased.

In the College of Business at RIT there's a strong interest in these new developments. We remain open to change and work to keep pace with the increasingly complex business world. For you as a student, that means learning to deal with contemporary problems and issues in your field.

There are six undergraduate programs of study in the College: accounting, business administration, retailing, food service administration (which includes the hotel/tourist industries management option), dietetics, and photographic marketing management. The business administration program offers concentrations in accounting, finance, management, and marketing. The college also offers MBA and MS degrees.

Like all colleges at RIT, the business area is highly career-oriented. RIT business faculty are in tune with the fact as Dr. Andrew J. DuBrin

explains: "Teaching at the RIT College of Business presents a unique set of challenges to us as faculty. Our students demand information and experiences that are relevant to finding and holding a job and improving their chances for success. It's our task to provide that kind of education."

Cooperative work opportunities abound for College of Business students. A food administration student was recently employed as a farm products inspector for the United States Department of Agriculture. A business administration major worked in marketing communications for Bausch and Lomb. An accounting co-op was employed in the accounting department of Union Carbide. Management training for Sears Roebuck was part of a retailing student's experience. Each year, hundreds of RIT students are placed in business-related co-op positions, and we work to find positions directly in line with specific career interests.

When you choose a co-op experience, it can help you develop judgment, initiative, and a keener understanding of your major field. In fact, by the time you graduate, you may have accumulated a full year of experience before reporting for your first permanent job. Cooperative employment is a required part of most programs in the College of Business. Dr. Julian Yudelson, director of the School of Retailing talks about co-op's benefits: "A co-op experience gives you an edge in the job market. Retailing, for example, has some unusual aspects. At the end of the day you know if you've made your sales goals or not. There is a lot of direct contact with people, and there is constant feedback and stress. Co-op gives you experience in handling these demands."

You can be confident of the quality of each RIT business program. For example, the Department of Food Administration program in dietetics is recognized by the American Dietetic Association. The School of Retailing is a member of the American Collegiate Retailing Association, an organization to promote and maintain high standards of education for the retail profession. The public accounting curriculum allows you to meet the educational requirements for the Certified Public Accountant examination.

It's the content of the business programs that contributes most to their quality. For example, all business programs have a basic foundation of courses on subjects common to every management discipline. These include, among others, accounting, economics, computers, math, law, statistics, behavioral science, and operations management. These courses help build a sound basis for a business career and give your education added flexibility.

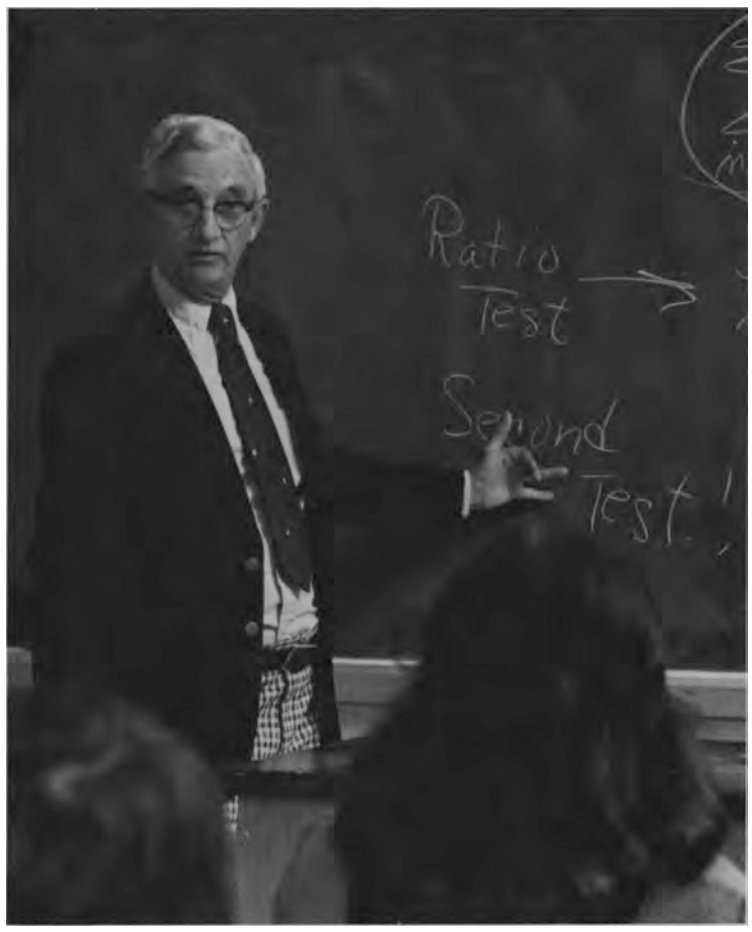
The great range of course selection in business is also a plus. You might participate in a seminar that covers current management problems or choose from such advanced finance topics as securities analysis and portfolio management. The hotel and tourist industries concentration offers such diverse course subjects as food science, ski resort management, marketing for hotel and tourism industries, tourist consumption analysis, sanitation and safety in food operations, and maintenance and operation of tourist resort properties. This variety means that you can choose interesting courses that reflect your goals.

Throughout the College of Business there is a concern with career preparation. It's seen not only in co-op, but also in classroom studies. In a series of retailing seminars, for example, your personal career objectives and opportunities are examined; this is an integral part of the major. The hotel

and tourist industries area also offers a career seminar to help develop your goals and evaluate employment possibilities. Visiting executives and career specialists from a variety of industries participate in a career-directed course in management.

What happens outside the classroom? As you may know, there's plenty going on at RIT. Rochester area businesses provide resources for field trips, guest speakers, and special projects. A group of RIT students, under the guidance of marketing professor Dr. Philip Tyler, developed a market research study for the United Community Chest of Greater Rochester to determine public perceptions. RIT's "Students in Free Enterprise" group worked with local business and industry leaders to promote a better understanding of the free enterprise system. The hotel and tourist industries management students recently helped form a chapter of the Hotel Sales Management Association, a group of sales-minded hotel/motel executives. Four marketing students won the 1978-79 Small Business Institute National Award for a marketing report prepared for a local restaurant.

In the School of Retailing, a student club associated with the Distributive Education Clubs of America (DECA) provides both social and learning experiences on and off campus. Entire classes have visited the New York City fashion markets. Gail Vollersten, a retailing student, comments: "By working on outside projects and co-op, we have additional learning experiences that can't be duplicated in the classroom. Faculty members encourage independent work, such as a recent DECA fashion show, which was a tremendous experience in organization and business."



Program Choices
Accounting
Business Administration
Dietetics/Nutritional Care
Food Service Administration (including Hotel/Tourist Industries Management option)
Photographic Marketing Management
Retailing

"In many ways, says Dr. Richard A. Kenyon, dean of RIT's College of Engineering, "no one has better described engineering than did the Engineers' Council for Professional Development in the statement, 'Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience and practice is applied with judgment to develop ways to utilize, economically, the materials and forces of nature for the benefit of mankind.' The engineer uses a strong background in science and liberal arts to define society's technological needs and to create what is necessary to satisfy that need.

"We take for granted that you enjoy and excel in science and mathematics," he continues. "Equally important is that you have a similar affinity for the humanities and social sciences since engineering is a people related profession. In many ways, it might be said that an engineering college experience is the liberal education for an increasingly complex technological world.

"The engineering college curriculum is very demanding of time, talent and energy," he explains. "It takes special talent, high motivation and commitment to hard work to achieve success."

As an engineering college student at RIT, you will select one of the four, five-year cooperative education programs leading to a bachelor of science degree. The Departments of Computer, Electrical, Industrial and Mechanical Engineering maintain extensive laboratory facilities in RIT's James E. Gleason Memorial Building. The departments also make extensive use of the many and varied computer facilities at RIT.

You will, of course, have ample opportunity to work with specialized and sophisticated equipment in the laboratory. In order for you to be exposed to new developments in engineering, RIT replaces and adds equipment regularly.

RIT's College of Engineering is unique in New York State as the only program requiring cooperative education. The five-year co-op program includes four years of academic work and five academic quarters, or 15 months, of paid work in the field. Although RIT is a large and growing institution, its engineering college with approximately 1,200 students is small enough to allow a very close faculty-student relationship. You'll get to know your professors, and they will help lessen the pressure you'll feel as a new student in an unfamiliar environment.

Teaching is important to faculty members in the College of Engineering, but they also are professionally involved. In addition to their primary roles as classroom instructors, they are widely recognized for their individual contributions in research, consulting, professional societies and publications. This work enhances a faculty member's ability and helps him or her stay abreast of a constantly growing field.

"I think students need practical problems as well as homework problems to solve," says Dr. Alan Nye, assistant professor of mechanical engineering. "Coursework is usually theoretical and leads to a straightforward solution. Life is not like that." As one way to give his students real life experience, Dr. Nye was the faculty sponsor for RIT's team entry in the Mini-Baja East. For the competition about 20 mechanical engineering students built a one-passenger all-terrain vehicle. The RIT team finished second in 1980 in competition with 27 other schools from the eastern United States. According to Dr. Nye, "Students design, construct, road and water test the vehicle. The students are presented with and must resolve numerous unexpected problems without textbook solutions."

Dr. Jasper (Jake) Shealy, associate professor of industrial engineering, teaches human factors engineering. Human factors engineering educates designers and engineers to what people can and can't do. "Take a stove," says Dr. Shealy, "the burners are usually in a square configuration. The controls are in a line. You can look at the stove and figure out which controls are for the left and which for the right, but it's hard to know which are for the front and which are for the back. Having a box configuration for the controls helps the person using them." Dr. Shealy says, "Mechanical engineers plan how something will work. Electrical engineers plan the wiring. But industrial engineers or designers plan the overall appearance, deciding where the knobs and dials will go and how easy they will be to operate." Dr. Shealy is considered an expert witness in product liability cases. He also has a special interest in the design and function of skiing equipment. "We're dealing with the man-machine interface. It's important that people be able to use the products engineers create," he believes.

The RIT College of Engineering uses a combination of academic study and work experience in its programs. The cooperative education format allows you the opportunity to apply classroom theories to on-

the-job situations and to learn new skills and methods. This method not only brings what you've learned into industry, but also brings the real world into the academic world. Dr. Harvey Rhody, head of the department of electrical engineering, offers this view of cooperative education: "Through co-op, students have more than hearsay evidence about what engineering is like in the field. It's good for the faculty, too. If we're not up to date, the students know it, so we stay current."

All RIT engineering students take part in the co-op program. During your last three years at RIT, you will alternate academic quarters with industrial work quarters year-round. RIT's Central Placement Services and the College of Engineering will assist you in developing job opportunities. Central Placement Services maintains co-op relationships with more than 250 companies in the Rochester area and throughout the country including Eastman Kodak, Gleason Works, Carrier Corp., Bausch & Lomb Inc., Xerox Corp. and Burroughs Corp.

A sampling of recent co-op assignments reflects the respect that industry holds for our students. Students usually begin their co-op assignments at the end of their second academic year as either an engineering aide or a technician. Duties include drafting, data gathering, and trouble shooting mechanical problems for an engineering aide and testing, assembling, and repairing for a technician. Students start with the basics and move up.

During the fifth academic year, students are capable of Performing in positions of entry level responsibility. For example, a computer engineering student in the fifth year might work on designing, implementing, documenting, and evaluating

testing equipment. The students work with products that are controlled by computer or have computers in them. They are able to design the circuitry and write the programming to control these products.

A fifth-year electrical engineering student might work on the design and manufacture of integrated circuits, the testing of circuit prototypes, or the design of an electrical distribution system in a manufacturing plant.

In industrial engineering, fifth-year students have completed such projects as layout of new and existing work areas, design and implementation of an informational system, programming computers for pricing policies, and blending problems and truck scheduling.

Mechanical engineering students in their fifth year have worked on the manufacture of machines, doing the final analysis to determine what kinds of stresses will be endured by the machinery and how to keep the machinery accurate. They also have worked on the design of automotive radiators and a combustion chamber for a gas turbine.

Most RIT students receive job offers for a permanent position from their last co-op employer, and a majority of the students accept these offers—another indication of industry's respect for RIT students and our programs.

Co-op not only provides learning experiences in your chosen field, but also allows you the chance to identify precise career goals. It gives you a head start in finding employment after graduation and allows you to earn as you learn. As an engineering student, you frequently can expect to earn between $3,700 to $5,300 in the six months of co-op employment each year.

Career opportunities in the field of engineering are excellent. Never has there been a greater need for engineers and other technically trained people to work on the solution of complex people-oriented problems. Work opportunities can be found in design and development of equipment and systems, research and experimental work, supervision of technical projects, and managerial positions in industry.

Indicative of the demand for new engineering talent is the continually increasing starting salary. For the 1980 graduate, the average starting salary was in excess of $20,000 a year.

If you have the motivation necessary to succeed in your engineering studies, your job opportunities are endless and financially attractive.

In addition to the four/five-year programs leading to the bachelor of science degree in electrical, computer, industrial or mechanical engineering, there are programs leading to the master of science degrees in both the electrical and mechanical engineering departments. If your engineering interest is diverse, a post baccalaureate professional program leading to a master of engineering degree is also offered.

In addition to the bachelor of science and master of science degree programs, a combination BS/MS degree program in mechanical engineering is also available. Admission to this five-year program is considered during the student's second year and is based on cumulative grade point average and personal and faculty recommendations. If you're academically gifted and interested in mechanical engineering, you may want to investigate this program.

Program Choices

Computer Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering
Undeclared Engineering

College of Fme& Applied Arts

One of a kind: that is how we at RIT describe our College of Fine and Applied Arts. The college is undoubtedly a lively, creative, and stimulating center on the RIT campus.

What are the arts doing at an institute of technology? It's that very characteristic that makes the College of Fine and Applied Arts so distinctive. Dr. Robert Johnston, dean, explains: "The beauty of our location is that the artist and the technically oriented student are brought in close contact. It encourages our students to be able to both think and do. There's a strong sense of intellectual curiosity here, and the interaction of the arts and technology contributes to that.

"The College of Fine and Applied Arts works well with other Institute colleges," Dean Johnston continues. "There's little isolation. We've worked with the packaging people, for instance, on the results of crushing different materials. The College of Science offers a 'Physics in the Arts' course that looks at how physical laws affect art forms. There's a small business management course available to artists and craftsmen. Our students use the School of Photographic Arts and Sciences extensively. So, you see, there's a continual exchange of resources and ideas."

There are two schools within the College of Fine and Applied Arts: the School of Art and Design and the School for American Craftsmen. Concentrations in the School of Art and Design are offered in communication design, environmental design, medical illustration, painting, and printmaking. In the School for American Craftsmen, concentrations are offered in ceramics and ceramic sculpture, glass, metalcrafts and jewelry, weaving and textile design, and woodworking and furniture design.

The College of Fine and Applied Arts is well known for its programs, and its reputation has been built on the quality and rigor of its studies. There's an appreciation for professionalism, and you'll be expected to advance your creative and technical abilities to the maximum. The success of this approach is demonstrated by the college's graduates, who are practicing craftsmen, graphic and environmental designers, and teachers or administrators of art and crafts programs.

When you turn your attention to individual work, you'll appreciate the college's facilities. The School for American Craftsmen features five well-equipped studio areas. In addition, the Crafts Village, a compound of three buildings next to the main college facility, has a variety of ceramic kilns, glass furnaces, a blacksmithing area, and space for sculpture. A Scandinavian wood-drying shed is used by woodworking students.

The communication design facilities include a media center equipped and staffed to allow you to implement your ideas in photography, letterpress, computers, offset printing, screen printing, typesetting, and multi-media presentations. Spacious studios, workshops, equipment, and exhibition space are located nearby. The Wallace Memorial Library has an extensive collection of contemporary magazines in the arts and crafts for reading and research.

Nearly every month, you can look forward to shows in Bevier Gallery located on the second floor of the college. These shows bring the work of regional and national artists to campus and often give you the opportunity to talk informally with fellow artists. For three shows each year, student work is selected for exhibition, giving you a chance to be part of a major show.

The Rochester area is also rich in resources. There are several notable galleries and museums such as the Memorial Art Gallery of the University of Rochester, known for its historical collection; the Albright-Knox Art Gallery in Buffalo, with an outstanding collection of contemporary art, and the I.M. Pei-designed Everson

Museum in Syracuse. Many crafts people have settled in Rochester and surrounding counties, making the area an active center for crafts and design.

Is there experiential learning in the College of Fine and Applied Arts?
Certainly. The college's design students, for instance, have worked on projects with several Rochester corporations and social agencies. A student-designed system to place information booths in downtown Rochester has been implemented by the city. Graphics for the dedication of a new city hall were created by an art and design student.

The environmental design department was recently selected to compete in the Armco Project, a national competition involving design for teaching. RIT was one of only four institutions in the nation chosen by the Armco Steel Corporation to work on new health care concepts.

As a student in the School for American Craftsmen, you'll combine your academic program with an apprenticeship in one of five craft studios. The apprenticeship involves working closely with a college faculty member, in addition, seminars, lectures, exhibitions, and films add to the excitement of your studies throughout the year.

The school also offers, in cooperation with the Scandinavian Seminars, a junior year abroad in the field of crafts. If you qualify, this program allows you to spend your third year of study in a Scandinavian country. You'll return to RIT for your final year of study. Full credit for a year of satisfactory work overseas will be granted toward your degree.

The faculty in the College of Fine and Applied Arts are continually productive in their fields. The honors and prizes they have won are reflections of the prestige they enjoy as artists and craftspeople. They are looking for excellence in their own work—and in yours. You'll also find them to be interested and concerned teachers and advisors.

Some programs award an associate's degree after two years of study. The college awards the bachelor of fine arts degree for a four-year program. If you wish to continue your education, the college also offers the master of fine arts (MFA) degree and the master of science for teachers (MST) degree. Admission to the college is based on prior achievement in high school or college. A portfolio of original art, submitted on slides, is required with your application.

All programs of study in the 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.

Program Choices

Ceramics & Ceramic Sculpture
Communication Design
Environmental Design
Fine Arts (Painting, Printmaking, or Medical Illustration)
Glass
Metalcrafts & Jewelry
Weaving & Textile Design
Woodworking & Furniture Design

College of General Studies

In addition to providing the liberal education program for students enrolled in RIT programs on the Rochester campus, the College of General Studies offers two programs leading to the bachelor of science degree. These specific areas of concentration in the college are social work and criminal justice.

The social work program will prepare you to assist individuals, groups, and communities to identify and solve human problems.

Arnold Berman, director of the social work program, describes social work students as "people who are interested in helping others, are concerned with the quality of life, and have a strong commitment to helping people lead fulfilling lives."

Your education in social work will help you understand the cultural differences that exist in our society. You will learn how to meet the needs of those who seek your help in a tolerant and accepting manner, recognizing and respecting the values and attitudes of those you help.

Your social work program at RIT is designed to encourage specialization to meet the needs of specific social service areas. For example, you may want to concentrate your educational efforts on issues affecting the handicapped or the management of human service agencies or in the areas of substance abuse or services to families and children. This recent trend toward specialization receives support among social work employers and the National Association of Social Workers.

Your initial studies will include a sequence of methods courses that will teach you the interventive skills needed to solve social problems and resolve conflict. Methods courses include general systems theory, problem identification, methods of intervention, observation, planning and goal setting, relationship development, and other essential skills.

Professional elective courses will allow you to investigate such areas as deafness, alcoholism, families and children, rural services, women, self-awareness, and the special needs of the aged. Knowledge of each area will help you decide exactly where your interests lie. Courses from the departments of business and criminal justice will also be helpful to you as a social worker.

Your education at RIT will go beyond the classroom. A unique feature of RIT's social work program is its 600 hours of full-time agency field instruction, usually completed in your junior year. You will spend two quarters of field work in a public or private agency under the close supervision of a skilled practitioner. The social work department of the College of General Studies works with more than 100 agencies, so you can select a setting most in keeping with your goals.

Before advancing to a field placement, you will have met specific knowledge, attitudinal, and skill criteria. Your field experience will combine your classroom theory with professional practice to give you an overview of social service from the inside. This experience will also prove extremely valuable when you seek permanent employment following graduation.

A special link exists between the Department of Social Work and the National Technical Institute for the Deaf (NTID), also part of the RIT campus. This link will enable you to obtain an unsurpassed education in work with the deaf. An NTID support team within the department works closely with faculty in curriculum planning, admissions, and the development of teaching and practice skills for the deaf.

The second degree program offered by the College of General Studies is criminal justice. Career opportunities in this field 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. You will find career opportunities in police work, courts, prisons, probation departments, parole, half-way houses, community treatment centers, retail and industrial security, customs, narcotics control, drug treatment, data processing, youth service programs, counseling, crime control planning and research.

"We have a forward looking approach," says Elizabeth Croft, director of the program. "We're here to investigate ways of improving the system, not just to study how it works." The curriculum is designed to prepare you for entrance into the criminal justice system, and to provide continuing education for those already pursuing criminal justice careers. If you hope to enter graduate school in the future, this program also serves as excellent foundation for further study in criminal justice, law, public administration, human services, criminology, or sociology.

Through your required professional courses, you will gain a thorough understanding of the criminal justice field. Your elective courses will enable you to specialize in any particular area within the field. Concentrations in the form of courses in business, social work, photography, and computer science will also be available. You will receive careful academic guidance in designing a well-balanced program of study leading to professional competence and breadth in personal development.

You won't be limited to the classroom as a criminal justice student at RIT. During your junior or senior year, you will spend 22 weeks working in one of a variety of agencies in criminal justice. This internship will give you the chance to witness and participate in the activities of an established criminal justice agency. You will experience directly the realities of working within the system.

Some of the traditional agencies that you might be exposed to during an internship include state and local law enforcement, probation and parole offices, state and local correctional institutions, half-way houses, adult and juvenile counseling programs, the public defenders' or district attorneys' offices, and retail and corporate security.

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. Your professors are a source of guidance as well as instruction. They can assist you in identifying your specific interests in criminal justice and provide advice on career planning.

Both the criminal justice and social work programs allow you the chance to participate in independent study for academic credit, if you are doing well in your regular studies. Independent study will build confidence and develop initiative. Projects may vary from one quarter credit hour to ten quarter credit hours. This credit may be used to replace criminal justice or social work upper division electives.

Program Choices
Criminal Justice
Social Work

College of Graphic Arts & Photography

We have the most up-to-date printing program of any place in the world," says Dr. Lothar K. Engelmann, dean of the College of Graphic Arts and Photography. "That is accomplished to a large degree by close work and cooperation with the leaders of industry. We have a practical outlook—our orientation to the field is an aggressive and flexible one.

"We don't just sit on our academic credentials at RIT. Our faculty are at the forefront of printing through their research efforts. We've analyzed the needs of the field and provided them with competent graduates. By doing so, RIT has shaped the direction of the printing profession."

Though these remarks were made by one of the college's most ardent fans, they aren't uncommon to hear. RIT's College of Graphic Arts and Photography has an international reputation for its distinctive, top-notch programs. Printing is a field that has increased dramatically in sophistication over the past three decades, and RIT is a leader in educating for the field's newest career areas.

The College of Graphic Arts and Photography includes the School of Photographic Arts and Sciences, the School of Printing, and the Graphic Arts Research Center.

Programs offered within the College are not commonly found at other institutions. The photographic science and instrumentation area, for example, is the only one of its kind in the country. Its focus is the special applications of physics and chemistry to the field of photography. The photographic processing and finishing management program is a relatively new study area, preparing you for a rapidly growing industry. The specialized biomedical photographic communications program prepares you for a media production career in the health care setting.

Film and television, the newest program, was especially formulated to keep pace with the ever-changing media field.

Other concentrations include photographic illustration, professional photography, printing, newspaper production management, and printing systems management, which combines printing technology and industrial engineering. The newspaper production management area has a strong need for qualified professionals and offers especially good job opportunities.

Keeping pace with industry is a goal of the College of Graphic Arts and Photography. To insure that our programs will meet the needs of the printing industry, the School of Printing works with an industry advisory committee. Its 25 members represent leading printing, supply, and equipment firms throughout the United States and Canada.

The college's Graphic Arts Research Center (GARC), with its own full-time staff, conducts research in various fields of the graphic arts. GARC's facilities are often used in conjunction with lectures, seminars, and demonstrations. The professional staff may serve as lecturers and undergraduate or graduate thesis advisors in printing and photography. GARC provides a vital link with the printing and graphic communications industry, contributing to the strength of the college's programs.

What kind of faculty will you work with? The college's faculty members have been carefully selected on the basis of their teaching effectiveness and ability to relate well with students. They are individuals who are qualified educationally and who have had extensive professional experience and training in the graphic arts industries.

Education and experience, of course, are the signs of quality, but it's personal attention you'll appreciate most from RIT faculty. Werner Rebsamen, associate professor in the School of Printing, says: "As a faculty member, I thoroughly enjoy giving advice and helping students get jobs. There's a good relationship between faculty and students because of the many activities we share—picnics, the fraternity, and a spring banquet. I also help out on individual student projects."

Physical resources also complement your studies. The College of Graphic Arts and Photography has extensive laboratory facilities and modern equipment. Film and television courses, for example, give you hands-on experience with camera and sound equipment and all phases of production. The photography-plate-press division has all the necessary materials for learning camerawork, platemaking, stripping, presswork, inks, substrates, and finishing.

The RIT library is rich in resources for both photography and the graphic arts. In addition, the cooperation of the George Eastman International Museum of Photography and the library of the Kodak Research Laboratories makes available some of the largest collections of reference materials for these fields to be found anywhere. Two special libraries are housed in the college itself: the Graphic Arts Research 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 history of fine printing.

As the world center of research and development in Photography and a center of research in the graphic arts, the city of Rochester is an ideal environment for study. Through guest lectures, field trips, and meetings of scientific and professional organizations, you can personally meet many leaders in research and development in your field.

Special activities can help the "facts" of your education fall in place. For example, the School of Printing offers a senior seminar each year that brings to campus 15 to 20 industry people who discuss new developments in the graphic arts. Speakers and field trips are common in the School of Photographic Arts and Sciences, and participation in summer study courses in Europe is encouraged. Upperclass students in professional photography with high grade-point standings can work with a "master" on a one-to-one basis through independent studies. A voluntary cooperative program in printing is open to you after completing your first two years of study.

Some programs in 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 you and approved by your advisor. Your thesis might involve extensive reading of current literature. Or you may do laboratory research and gain experience in designing experiments, conducting research, and writing technical reports. A number of these reports have been presented at scientific meetings and published in professional journals.

Walter A. Campbell, associate professor in the School of Printing, sums up the strengths of the College of Graphic Arts and Photography: "There's a big advantage in coming to RIT for study. Our college undoubledly has the finest laboratories, facilities, and faculty in the world for our field. You start out with a strong, broad base of courses. After that, there's a large selection of electives so you can delve into your specialty. We find that our students are capable, sincere, and serious about a career in industry."

Program Choices

Biomedical Photographic Communications
Film & Television
Newspaper Production Management
Photographic Illustration
Photographic Processing & Finishing Management
Photographic Science & Instrumentation
Printing
Printing Systems Management
Professional Photography

Institute College

Institute College is one of the most interesting divisions of Rochester Institute of Technology. It is one of the newest of RIT's 10 colleges and contains quite a variety of academic programs. Institute College is geared toward programs of practical application, from computer systems to packaging science. The college's concentrations are strongly career oriented and offered in areas where there is growing demand for qualified professionals.

Institute College builds on new degree areas and concentrates on where the jobs are. The School of Computer Science and Technology, for example, focuses on career areas that are predicted to grow amazingly over the next ten to twenty years. As for the college as a whole, it's more than doubled its enrollment in the last five years. Institute College includes 1) the School of Engineering Technology, 2) the School of Computer Science and Technology, 3) the Department of Packaging Science, 4) the Center for Community/Junior College Relations, 5) the Department of Instructional Technology, and 6) Career Education. The School of Engineering Technology and the Department of Instructional Technology function as upper-division units, accepting only transfer students with appropriate associate degrees from other institutions.

Programs of undergraduate study include computer technology (with options in computer systems and systems software science), computer science (with an option in applied software science), computer engineering (jointly with Department of Electrical Engineering), packaging science, civil engineering technology, electrical engineering technology, mechanical engineering technology, audiovisual communication, and manufacturing technology.

Some of the finest facilities and equipment available are a part of Institute College. These include modern packaging science laboratories, computer science facilities, and the latest in multi-image presentation equipment. The School of Engineering Technology shares facilities with the College of Engineering, allowing maximum access to modern and sophisticated equipment for research and study. The main Sigma 9 computer system at RIT has more than 100 time-sharing terminals on campus, assuring maximum use of the computer in your studies.

Modern equipment is just one indication of the up-to-date nature of Institute College's programs. There is other evidence as well. The packaging science program, for example, established in 1972, was developed because of a close and well-established relationship between the packaging industry and RIT over many years. Its content was created with the assistance of the Rochester Area Packaging Association, consultants from the packaging industry, and educational specialists.

It is designed to meet the needs of the $50 billion packaging industry and is one of only three packaging science programs in the United States. There are three options to choose from within the packaging science program: 1) technology (science and engineering interest); 2) design (science and art interest); and 3) management (science and business interest).

RIT was a pioneer in the development of engineering technology programs, a relatively new field in higher education. All engineering technology curricula have been designed with the aid and consultation of professionals in the field. Most of the bachelor of technology degree programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. Associate professor of civil engineering technology Robert E. McGrath notes: RIT stresses career education with a state-of-the-art focus. We teach students current methods so that they are ready to enter the field immediately."

Keeping in touch with industry is another factor that gives Institute College its vitality. The college has an active system of advisory committees consisting of representatives from many companies.

Since the college's programs are current and practical, co-op plays an important role. There are many factors that may affect your career

decisions—size of a company, type of work, geographic location, skill requirements, industry characteristics. Co-op can provide a good trial ground for your Institute College education.

Co-op employers for the School of Computer Science and Technology have included the Environmental Protection Agency, New York City; Sybron/Taylor, Rochester; CIA, Washington, D.C.; GTE Sylvania, Batavia, New York; Blue Cross/Blue Shield, Rochester; IBM, San Jose, California; and the Xerox Corporation, Rochester. Other programs offer equally diverse co-op opportunities.

If you're a civil engineering technology student, your co-op job might involve work for a consulting engineer. Your duties could include inspection of construction, surveying, and drafting. Or you might work in a water treatment plant, operating control panels, performing laboratory tests, and doing routine maintenance work. Other possible co-op sites include town engineering departments, state agencies, construction companies, industrial construction departments, and testing agencies.

With all its variety, Institute College has much to offer. And it can be best described by some of those who know it firsthand:

"Institute College and RIT are structured to meet the needs of students. Courses are reviewed often and revised when necessary to reflect the needs of the industrial world. The faculty all have good backgrounds in engineering technology and make excellent classroom presentations. And RIT's Central Placement Services helps out by placing students in jobs."

—Gary Reimondo, electrical engineering technology student

"You won't find a wider range of subjects to work with than in Institute College. In our program, there's everything from media production to instructional design. There is a tremendous ease of access to materials, equipment, and faculty. The faculty has a diverse background, and the college as a whole is exceptionally strong."

— Thomas Clasper, instructional technology

"RIT is practical and flexible —we can bend enough to adapt to student needs. I think it's this practicality and interaction that make Institute College strong. We can let students do things here that they won't have an opportunity to do, even in the real world, for a long time. We don't just talk about things, we provide experience."

—Clint Wallington, professor of instructional technology

"We have a lot of academic freedom here to explore new approaches in education, to try out new concepts and programs. RIT is very dynamic and forward looking, interested in new technologies and in educating our students as whole persons. At the same time, the central theme of training graduates for careers is never overlooked and constantly reinforced."

—Harold Raphael, director, packaging science department

Program Choices
Audiovisual Communications*
Civil Engineering Technology (Construction or Environmental)*
Computer Science & Technology
Electrical Engineering Technology*
Manufacturing Technology*
Mechanical Engineering Technology*
Packaging Science
*Associate degree required

Are you interested in chemistry or mathematics? Do you want to learn more about biology or pharmacy? Perhaps medical technology, nuclear medicine technology, chemical technology, or biomedical computing intrigues you. If so, you should know that the College of Science offers a variety of degree programs in all of these areas. Wherever your interest is focused, RIT's College of Science will provide you with current programs, a professional faculty, and a stimulating environment to enhance your educational experience. (If you want to work in the sciences or in mathematics but are not sure which field is exactly right for you, the College of Science has an undeclared science option that allows you to sample a variety of areas and postpone your decision for up to a year.)

Your science studies at RIT will be centered in a well-equipped building, completed in 1968, which houses the College of Science. This attractive and functional facility contains, in addition to classrooms and lecture halls, 29 undergraduate laboratories and 10 additional research laboratories. When the college moved into the new building, close to a million dollars in federal funds permitted the purchase of a wide variety of technical instrumentation. This sophisticated equipment is available to you as an undergraduate student.

The College of Science is small enough to allow close student-teacher relationships—especially important to you in your freshman year. It is large enough, however, to allow students and faculty to pursue many interests. Most of the college's 60 faculty members hold doctoral degrees in a broad range of scientific specialty areas, and they understand and appreciate your need for personal guidance.

"I try to instill in the students some of the enthusiasm I find in the field," says Dr. David Glocker, a physics department faculty member who received RIT's Eisenhart Award for Outstanding Teaching in 1979-80. "I teach because I can combine the best of both worlds—physics and talking with people."

RIT's College of Science places primary emphasis on teaching but also provides students with exposure to methods of undertaking a research project. You may also enjoy participating in on-going research in the college. This research experience will prepare you for the practical aspects of science, including graduate study and applications in industry and government.

Valuable experience is gained through your interaction with your professors. You will develop initiative, acquire leadership skills, and gain confidence in your scientific knowledge and abilities. Don Palmer, a recent graduate of the mathematics program, worked on an independent research project under the supervision of Dr. George Georgantas of the Mathematics Department. Don's work was of such a caliber that the results of his research were presented at a regional meeting of the Mathematical Association of America. When the time came for Don to apply to graduate schools, the work that he had done with the encouragement of his professor not only helped him get accepted by several prestigious graduate schools but also resulted in a number of very substantial scholarship offers.

The chance to assist in research is rewarding and exciting. "The fun part is not quite knowing where you're going," says Dr. Joseph Lippert, associate professor of chemistry. The discovery process in experimentation is its own reward, but, in addition, the results of many projects completed throughout the year are published in scientific literature for review and study.

Another of the college's qualities that you'll want to know about is the strong advisory role the faculty takes. In general, you and your solid preparation for the future are the predominant focus of faculty activities. For example, in addition to the out-of-class help that you can expect to have from your professors, the College of Science will offer you one of the best advising systems anywhere. Your faculty advisor, who is assigned to you before you come to campus, will assist you in a much more substantial way than simply telling you "what course to take next." All you have to do is ask for it, and your advisor will help you review your progress, seek ways to improve your performance, examine alternatives for a possible career upon graduation, and, in general, find answers to questions that bother you.

Biology professor Margaret D'Ambruso says: "In terms of the broader meaning of education, I find my out-of-class discussions with my students as important as my presentations in the classroom and the laboratory.

One of the most immediate benefits of your education at RIT is the opportunity to earn as you learn. The cooperative education plan is a work/study program that enables you to work in a professional setting at a salary that helps you meet educational costs. You may work in such areas as an industrial setting, a government agency, or a research laboratory.

Dr. David Strack, a former RIT student who is now a marketing specialist for a chemical equipment manufacturer, has a great deal of enthusiasm for the co-op program. "It was crucial. It

made all the difference. In fact, co-op made college possible for me. Without it, I couldn't have afforded a private education."

Combining work and study has many major long-term advantages. You'll learn to understand the importance of your field and how it relates to your world today. You'll also be exposed to the problems experienced in practical application of science and how to handle them. On-the-job experience will help you understand and incorporate your classroom instruction. You'll feel a part of your field from the very beginning. "I chose RIT totally because of co-op," said Patricia Tyminski, a 1978 graduate of RIT's chemistry department. "I wanted to get right into chemistry. Out of the textbook things seem cut and dried, but it doesn't always happen that way in the lab. When you're working in industry, you have to sit down and figure out what happened." Through co-op you'll have practicing professionals to help you solve your problems, but you will also learn to accomplish on your own. Accomplishment breeds confidence, and confidence breeds success.

Co-op eases your transition from student to the working community, and you'll have greater confidence when beginning a new job. You will work alongside professionals of all ages who share your interests and goals. Your social skills will also mature in this supportive atmosphere.

You will learn to interview for jobs by the time you become a sophomore. Your co-op employers will also have a good idea of your potential, and the professional relationships you establish frequently provide important contacts for future career employment. Your experience will give you some appreciation of the problems facing industry.

Your work/study experience in the College of Science begins in your second or third year, depending on your area of interest. The school year is divided into four 11-week quarters. The co-op program allows you to alternate a quarter of your classroom study with one quarter of job experience. This interchange continues throughout the remainder of your undergraduate years.

Similar to co-op are the internships that are associated with certain programs in the clinical sciences department. If you choose medical technology or nuclear medicine technology, you will spend your last year of studies in an affiliated hospital where you will not only continue your course work but also apply your classroom knowledge to real-life situations.

The best way to evaluate the College of Science is the success of our graduates. Our alumni have been very successful in industry, government, private enterprise, and graduate schools. We have found, for example, that they are doing extremely

well in passing Ph.D. qualifying exams early in their graduate program. In terms of career success, employers report that our graduates not only have good training but also, because of their work experience, immediately fit into the work setting with a high degree of initiative and seriousness of purpose.

Commenting on study in the college, Ira Hoffman, a physics student from Syracuse, N.Y., concludes: "I've gained more and grown more as a individual than I thought was possible. A challenging curriculum, co-op experience, dedicated teachers—and relationships between them and the students—have all contributed to this. I'm looking forward to even more exciting things in the future, thanks to my experience at RIT."

Program Choices

Biology (Biology/Pharmacy program also possible)
Biomedical Computing
Chemical Technology (AAS degree offered)
Chemistry (Chemistry/Pharmacy program also possible)
Computational Mathematics
Mathematics
Medical Technology
Nuclear Medicine Technology
Physics
Undeclared Science

National Technical Institute for the Deaf

The National Technical Institute for the Deaf (NTID) at RIT is unique among RIT's 10 colleges. It is, in fact, the only technical college for deaf people in the entire world. It also represents the first large-scale effort to educate those who are deaf on a campus planned primarily for hearing students. Created in the fall of 1969, NTID at RIT today enrolls approximately 1,000 students from across the United States.

If you are a deaf student, NTID's programs and services will be an exciting discovery for you. The college's major objective is to provide you with a technical education in science, business, technology, or applied arts that will lead to a well paying and satisfying job. Degrees are offered in 38 program areas, including engineering technology, science, optical finishing, business, data processing, art, printing, and photography.

A three-building complex houses the National Technical Institute for the Deaf on the main RIT campus. The largest structure is an academic facility that contains classrooms, laboratories and shops, administrative offices, a research and training center, theatre, a speech and hearing center, and a student development area. The nearby dining hall/commons building provides regular food service, and the residence hall contains dormitory rooms, project and study areas, and conference rooms.

As a deaf RIT student, you'll benefit from special support services. Interpreter services are available when needed for any class in which deaf students are in attendance. In many classes for baccalaureate programs, hearing students—on a voluntary basis—take notes on special notetaking pads and give copies to deaf students.

In addition, counseling and speech and hearing services are conducted on an individual basis for each deaf student. Services to assist in career planning and social and cultural development are an important part of the total NTID program. All special support services are geared toward helping you gain the maximum benefit from your educational experiences at NTID—experiences that will lead to meaningful employment.

If you qualify, you may take selected courses or enroll in programs offered by other RIT colleges. To enroll in another RIT college, you must discuss the possibility with your counselor, academic advisor, and a member of the educational support team assigned to the college of your choice. The final decision on admission is left to the college.

The Summer Vestibule program prepares you for college-level study. During the summer program, you and other new students have the opportunity to explore the various programs of study available through NTID at RIT. At the same time, faculty members will have a chance to work with you to evaluate your abilities and interests.

A staff of counselors will help you understand your potential more fully through discussion of your background experiences, work values, and interest tests. This will allow you to select an academic program at NTID that bests suits your needs. The counseling staff can also help you adjust to college life and improve interpersonal relationship skills. In addition, the Summer Vestibule program includes a series of specially designed living arrangements and self-governance

experiences. You'll find it to be not only an interesting and informative, but also an enjoyable, way to learn about college life and about yourself.

Once you're a part of RIT, you'll enjoy participating in student life. Athletics, the student newspaper, student government, and organizations offer opportunities for recreation and leadership. Many deaf students have an interest in sports and may be members of RIT intercollegiate varsity teams.

NTID students annually elect a member to the RIT Policy Council, and the NTID Student Congress operates as a subsidiary to the RIT Student Association.

Co-op employment is available. Co-op—temporary on-the-job placement—is one way to gain experience in business or industry. Like other RIT students, you may alternate employment in your field with classroom studies as you complete your degree. With this job experience, a good academic record, and a professionally written resume, your chances of finding a job after graduation are excellent.

NTID at RIT also has a highly individualized placement program when you're seeking permanent employment. Placement specialists help new graduates find places in business and industry nationwide. In addition, RIT job development personnel for NTID pave the way for future placements by acquainting prospective employers with deafness and the technical capabilities of RIT's deaf graduates.

Program Choices
Business
Engineering and Technology
Science
Social Science
Visual Communications

Eisenhower College

How is Eisenhower College related to Rochester Institute of Technology? That's a common question for newcomers to RIT. With its comparatively small campus in Seneca Falls, an hour's drive southeast of Rochester, Eisenhower College certainly presents a lifestyle and atmosphere quite different from the suburban Rochester campus.

The Eisenhower-RIT link began in 1979 when the boards of trustees of both institutions resolved to have Eisenhower become the tenth college of RIT. Eisenhower was originally chartered in 1965 and opened in 1968 as the national memorial to former President Dwight David Eisenhower.

The college is located on the west shore of Cayuga Lake in Seneca Falls, a community of approximately 9,000. Eisenhower's 286-acre campus includes 18 buildings, athletic field, tennis courts, a golf course, and a memorial park. The campus is within an hour's drive of the cities of Syracuse, Ithaca, and Rochester.

In addition to the numerous programs available through other RIT colleges, Eisenhower offers career-oriented liberal arts programs in the humanities, social sciences, and math and sciences. A core of courses called "World Studies" provides a general education foundation for the liberal arts curriculum at Eisenhower. World Studies, which is incorporated in the freshman through junior years, helps you to study the world from interdisciplinary viewpoints and to gain a global perspective for your own life.

Some of the newest and most popular areas at Eisenhower are interdisciplinary programs.
Community studies, for example, offers career tracks in gerontology, health care, and management. An applied field-work period is included in requirements for the program. The international relations program combines course work in political science, economics, and history and builds on the college's World Studies general education course. Other interdisciplinary programs include environmental studies, science, economics, humanities, and public policy.

In addition to single discipline and interdisciplinary programs, Eisenhower offers pre-professional preparation for admission to graduate study in such areas as medicine, business, dentistry, law, theology, and education.

A new option that can strengthen any program you choose is a choice of elective "cores" in language, management, and writing. Cores of four to six courses in each of these subjects provide blocks of knowledge and skills in career-related areas. The management core emphasizes successful managerial decision-making; the modern language core provides a working knowledge of a language to be used in business or industry; and the writing core stresses skills in essay, technical, creative, and news writing.

The National Endowment for the Humanities is funding the development of introductory courses in a core of Women's Studies. Course work, readings, and other experiences will educate men and women about women's role in human development; women's status throughout history and prehistory; and career and personal opportunities for women.

Internships and field work may also be a part of your Eisenhower education. An internship involves an off-campus learning experience supervised by a faculty member or another individual. Your work experience helps you develop skills, career awareness, and a sense of responsibility and independence. Recent internships and similar off-campus experiences for Eisenhower students have been completed with:

- The White House
- The Supreme Court of the United States
- The United Nations
- The New York State Supreme Court
- Office of the Governor, Commonwealth of Massachusetts
- International Paper Company
- American Can Company
- GTE-Sylvania
- Fair Campaign Practices Commission (Washington, D.C.)
- Worcester Art Museum
- Syracuse Symphony Orchestra
- Woods Hole Marine Biological Laboratory
- Syracuse University Botany Laboratory
- Regional Office, New York State Planning Department
- Tioga County Planning Department
- New York State Agricultural Experimental Station
- Clinton Correctional Facility
- Rural Resources Study Center (Vermont)
- Tryon Youth Rehabilitation Center
- District Attorney, Orange County

Eisenhower's January Interim Study Term, JIST, provides some exciting study opportunities.
This one-month session, which falls between semesters, offers four weeks of concentrated study in special academic areas. JIST Coordinator Dr. Kenneth Nelson says, "JIST adds a new element to the rhythm of academic life. It's stimulating, for both students and faculty, to undertake a different type of study in the middle of the academic year. Because of JIST's selective focus, students often find that they learn as much about a subject as they would expect to learn during a full semester."

Here are some interesting examples of recent January Interim Study Term experiences:

Seven Eisenhower students studied and travelled in India during the JIST program "Living with an Indian Family." The students toured several cities and historical sites, including Agra, site of the Taj Mahal; Varanasi, a pilgrim city of the major religions in India; Delhi, both the modern and ancient sections; and Bombay, home of Mahatma Gandhi.

Glenn Routhouska, a science major spent a term at Woods Hole Marine Biological Laboratory in Massachusetts. He participated in a neuro-biology course taught by prominent researchers in the field. He was able to use the research facility's excellent resources for much of his laboratory work with marine animals.

An archaelogical study of American culture focused on Arizona's Hohokam Indians. Highlights of the trip included visits to Arizona State Museum, the Mission San Xavier del Bac, Mt. Lemon, Arizona State University, the Sonora Desert Museum, and sites in Mexico.

International relations major Mary McCarthy created her own study project for the January Term. Her research focused on the role of the Palestine Liberation Organization (PLO) in the Middle East.

One JIST class investigated examples of 19th century architectural styles in the upstate New York area. In addition to numerous field trips and tours, the course included an individual student project in architecture, antiques, or restoration.

The Career Decision Program gives first-year students an opportunity to explore several career fields before making a decision about a particular career objective. Students in the program sample introductory and foundation courses related to clusters of occupations and explore specific occupations experientially. They gain an understanding of the nature and variety of careers in several cluster areas and an understanding of themselves in relation to career decision making. Upon completion of their year in the Career Decision Program, students are expected to select one of the many degree programs offered at the Rochester and Eisenhower campuses.

The Eisenhower campus provides an ideal setting for this kind of study. The small, intimate atmosphere allows students the opportunity to explore one or more specialized career fields, obtain a year of college credit, and receive individual professional career guidance.

There's much more to be said about Eisenhower, and in a very real sense, it has a story of its own as an RIT college. If Eisenhower's distinctive nature appeals to you, we suggest you spend more time investigating what it has to offer.

Program Choices
Career Decision
Community Studies
Economics
Environmental Studies
Humanities
Interdisciplinary Science
International Relations
Public Policy

College of Continuing Education

Continuing education has always been a part of the philosophy of Rochester Institute of Technology. Since its inception the Institute has been concerned with adult learners who wish to develop themselves personally or to enhance their occupational competencies.

For many people the College of Continuing Education (CCE) provides an alternative to full-time study inasmuch as personal commitments, work schedules or other obligations are accommodated through part-time study at night, on weekends, or during the day. Working closely with the other nine colleges of the Institute, as well as with industry and the community, the College of Continuing Education develops convenient educational opportunities for continuing learners.

Class hours and course offerings are scheduled to meet the specific needs of employers, employees, and non-working people alike. As a result, many people have been able to attain educational goals not otherwise available.

The college aims to provide higher educational experiences for all who desire them. Under the CCE Open Admission Policy, students are free to take any course or to pursue any degree for which they have sufficient background. Academic advisors are available throughout the year to answer questions regarding course or program choices.

For students who choose to follow a specific program of study, a variety of options is available in fields as diverse as management and photography, manufacturing technology, and general education.

The college confers the diploma of the Institute in thirteen fields, as well as a certificate in management.

Twenty-one options lead to the associate in applied science, and the associate in arts degree is offered in general education.

Thirteen programs lead to the bachelor of science. Programs designed primarily for transfer students with associate degrees are offered, leading to the bachelor of technology degree in electrical or mechanical technology.

For graduate students the master of science degree is offered in applied and mathematical statistics.

Recently the college has opened its new School of Applied Industrial Studies (SAIS) at RIT's City Center in downtown Rochester.

SAIS offers training in such skill areas as machining, drafting, electromechanical technology and a new packaging option.

Graduates of the 12-month program receive a certificate of completion and credits towards a comparable technical degree program at RIT. Course work includes blueprint reading, production machinery, mathematics, communications and extensive hands-on training in the school's spacious machine shop.

In addition to credit courses, the college offers workshops, seminars, and short courses to meet specific needs of community groups, professional organizations, agencies, industries, business and government. 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 field personnel.

Another alternative offered through CCE is the RIT Summer Session. Along with the opportunity for RIT students to continue work in chosen academic programs, 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.

Student Life
Financial Aid
Admissions
RIT Profile

Student Life

You probably don't need to be told that there's more to college than books and professors. For possibly the first time in your life, you will be away from home with few restrictions on your personal activities. RIT is as much concerned with your life out of the classroom as within. To help you structure your free time constructively, there are many activities, organizations, and entertainment options available to you.

As a new student to RIT, you will be welcomed to the campus in a week-long orientation program. Orientation is designed to introduce you to RIT, the community, and its services. Your schedule will include department meetings, registration, tours, seminars, lectures, and various social events that will help you adjust to campus life.

If this is your first year at RIT, you will live in an on-campus residence hall unless you choose to remain at home with your family. Because your interests and living needs may differ from those of other students, a variety of housing options are available to you. Many residence areas are coeducational; men and women living in separate rooms are housed on the same floor. As a new student, you won't be assigned to a coeducational area unless you specifically request it.

Residence hall life can be another component of your education and growth. You'll meet and live with people who will have different experiences, attitudes, and expectations. There will be discussions, plenty of laughs, squabbles to settle, long friendships begun.

The residence halls include recreation rooms with pool tables and ping-pong tables and lounge areas with televisions. You won't want to miss the Cellar in the basement of Nathaniel Rochester Hall, either. It's a popular meeting place for snacks and relaxation.

The College-Alumni Union is the focal point of the academic plaza and is the center for events for the entire campus community—students, faculty, administrative groups, alumni, and guests. With the exception of your academic college, you will probably find yourself in the CAU more often than any other building.

This three-level facility features the 525-seat Ingle Auditorium; a self-service bookstore; a bowling alley; a complete game room for billiards, pinball, foos ball, and table tennis; a unisex hair-styling salon; a candy and tobacco counter; three separate dining areas comprised of the main cafeteria, the Ritskeller (a cafeteria-pub), and the Clark Dining Room; meeting rooms and lounges. In addition to offices for the staff, there are also offices of student and administrative organizations.

If you live in the residence halls, the Residence Halls Association (RHA) is one of the first organizations you will become acquainted with at RIT. The RHA is a student-run organization that provides representation to the administration; resident services; and opportunities for intellectual, cultural, and

social development. The organization includes a government set up for each of the four living areas at RIT. This body of residents discusses improvements in the living areas, develops programs, and votes on all legislation that affects you as a resident.

Are you interested in joining a fraternity or sorority? You'll be happy to know that the Greek system of campus living is alive and well at RIT. Three national sororities and six national fraternities have chapters at RIT. These organizations offer social activities and promote high scholastic and social standards among members. Any house having more than 12 active members belongs to the Greek Council. This governing body attempts to unify the houses, coordinate their activities, plan events and act as a single voice for all member houses. It also strives to make the Greek system useful and active on the RIT campus.

You will be a welcome member of any number of student clubs and professional organizations at RIT.

Computer-for-fun enthusiasts comprise the RITCUS club. If you're inclined toward professional organizations, you can join such national clubs as the American Civil Engineering Technologists Association or the American Society of Mechanical Engineers. These organizations sponsor both social activities and professional programs.

For exercise and fun, you can learn to throw a frisbee "professionally" by joining the Frisbee Club. You can do a little deep sea diving as a member of the Scuba Club. If you are particularly fond of skiing, the Ski Club sponsors many outings during the winter season.

As you choose your activities, you won't want to overlook the media organizations that actively seek your involvement. RIT students produce some of the most professional collegiate publications in the country. The weekly *Reporter* is published entirely by students and serves the campus community as a news magazine. It is both informative and entertaining. *Techmila,* the student yearbook, contains a student-edited pictorial and written description of student life at the Institute during the year.

Your television station on campus is S.T.S., Student Television Systems, Channel 6. S.T.S produces programs relating to sports, education, entertainment, and news. You can obtain firsthand experience in the various operations of a television station including photography, art, business management, producing and directing, computer programming, and video and audio engineering.

WITR AM and FM are non-commercial, student-run radio stations located in the College-Alumni Union. The AM station broadcasts only to the RIT campus and is used mainly as a training ground for FM. Both stations are highly progressive in format, featuring artists who go almost unnoticed by other competitive stations. WITR is constantly seeking dedicated people for a variety of positions at the station. You may want to stop by and offer your assistance. You'll learn as well as enjoy.

Athletic activities are a popular method of filling free time. If you enjoy sports, RIT's intramural program will interest you. There's a good array of individual and team sports including basketball, volleyball, golf, softball, ice hockey, and swimming, to name just a few.

If you're interested in inter-collegiate team play, RIT has 19 teams, and 17 of them finished with winning records in 1979-80. Among the teams are soccer, lacrosse, basket-ball, swimming, track, hockey, tennis and cross country.

All indoor and outdoor recreational facilities are available to you for informal, leisure time activities throughout each academic quarter. The indoor facilities include a 25-yard swimming pool, wrestling and martial arts room, ice rink, bowling alleys, two gymnasiums, and a fitness and exercise room. Outdoors, you'll find 12 tennis courts, an all-weather running track, softball fields, and numerous other play areas for flag football, field hockey, and lacrosse.

You needn't stay on campus when you're looking for something to do. The Rochester community offers a wealth of entertainment options. Beaches, golf courses, movies, theatres, parks, lounges, and restau-rants are abundant, and bus and cab service are available for transportation.

If you're looking for intel-lectual stimulation, you'll also find those in Rochester. The Rochester Museum and Science Center includes the Strasenburgh Planetarium and also offers lectures, travel exhibits, mini-courses, films, and the Hall of Human Biology. There are many galleries that exhibit a wide variety of creative works. The largest collection of contemporary and historical photography equipment in the world can be found at the International Museum of Photography in the George Eastman House.

If you're a commuter student, you won't be left out of the various festivities and organizations on campus. The Commuter Association (CA) strives to satisfy the needs of the commuting student and is constantly working for beneficial interaction between commuters and residents. The Host Program, sponsored by the CA, gives you the opportunity to live on campus for a few days during the winter quarter. In the spring, the tables are turned, and you have the chance to entertain a resident in your home for the weekend. A roller skating party, game room Olympics, and dances are a few of the social activities sponsored by the CA.

Student life will be a new experience for you if you're married. There are a number of married, full-time, day students at RIT who have undergone the same transi-tion that you will experience. The Married Student Organi-zation (MSO) is a service, social,and action group that will help you and your family adjust to married student life, RIT, and the Rochester community. The MSO was established by a group of students who believed that married students needed an organization or club that would provide them with group representation to the Institute and at the same time offer social activities oriented to married students and their families. If you decide to become involved in this organization, you will meet many others who share your interests, goals and concerns.

Financial Aid

How can I afford to attend college? That's a pretty basic question. It's also one you'll need to answer as you plan your education. It's good to know that financial aid programs have made it possible for you to receive a quality education—in spite of the fact that your income might not normally be able to meet the costs. Today, scholarship potential exists at every level of our social structure. Recognition of this potential, and concern for how it can help you, is what financial aid is all about.

If you are seeking assistance, there are programs to meet your need. The total amount of financial assistance distributed by RIT over the past 10 years has risen dramatically. For the school year 1979-80, RIT students received over $18 million in aid, compared to $2.5 million in 1970-71. Although the rising cost of education has contributed to this increase, the major portion can be attributed to a greater awareness of financial aid programs. Other students like yourself have made the pleasant discovery that, with a little help, a college education is not out of reach. Your search for financial aid begins with two basic requirements: you must be matriculated (enrolled in a degree program at least

half time—six or more credits per quarter) and must be able to demonstrate financial need.

Financial need is the difference between the cost of an education and the amount you and your family can afford to pay toward meeting that cost. Assistance programs are designed to supplement yours and your family's contributions. If you're not able to pay any of your own expenses, however, it is still possible for you to attend college. It is important to note that attending college with assistance does not limit you to a less expensive school that might not offer a program reflecting your educational interests. That is true because your need is based on the cost of the institution that you choose to attend.

Your financial need is determined by the standard Financial Aid Form (FAF). Your family will be asked to fill out this form disclosing income, assets, indebtedness, family size (including other children in college), and special circumstances that affect your financial situation. After completing the FAF, you will send it to the College Scholarship Service (CSS), an independent, nonprofit agency. The CSS processes your FAF and applies a formula that fairly and accurately evaluates your family's total financial situation. After CSS has determined what is a reasonable contribution by you and your family, the report of its findings is sent to RIT and other institutions to which you have applied.

At RIT there are four general categories of financial aid: scholarships, grants, loans, and employment. When you apply for financial aid, you are automatically considered for all categories and may be

offered a combination of two or three of them. This combination results in an aid "package." The exact composition of this package depends on your academic record, the availability of specific funds, the extent of your need, and your ability to meet application filing deadlines.

Following is a brief explanation of each category of financial assistance at RIT:

Scholarships are generally awarded on the basis of academic record, financial need, and personal recommendations. RIT awards many such scholarships each year. Other typical scholarship sources are competitions, corporations, private donors, foundations, fraternal organizations, unions, and local and state governments. Repayment is not necessary.

Grants are outright gifts of financial assistance, which are awarded on the basis of demonstrated need. RIT awards institutional grants that vary anywhere from $100-$1500 for the academic year. RIT also awards grants to students with exceptional need under the federally funded Supplemental Education Opportunity Grant (SEOG) program.

Loans are a lien on future earnings. The money you receive on loan is a formal financial obligation that must be repaid. You need to be aware of the interest charges, the method of repayment after graduation, and the effect that additional loans will have on your ability to meet all of your later financial obligations. Loans are not repaid until after graduation or termination of study, and interest does not begin to accumulate until then. Interest rates on student loans are usually low.

Whether or not you seek financial aid, you may choose to defray some of your expenses by part-time employment while attending college. As part of a financial aid package at RIT, you may be eligible for the option of meeting part of your need through college work-study administered by the Institute. Work opportunities for RIT students are generally located on campus.

Eligibility for entitlements can be based on financial need or on special characteristics as a recipient. Entitlements based on need include the federal government's BEOG program and various state grant programs (for example, the New York Tuition Assistance Program). Examples of entitlements based on your special qualifications are the G.l. Bill, Social Security benefits, and vocational rehabilitation benefits. Entitlements need not be repaid.

You should begin the process of applying for aid during the month of January in the year you wish to enroll. In order to receive full consideration, it is vitally important that your FAF be received at College Scholarship Services by March 1, prior to your entrance. Applications received after March 1 receive secondary consideration. Since funds are limited, the earlier you file after January 1, the better are your chances of receiving your total amount of needed assistance. Although applications for assistance are not processed until you're accepted for enrollment, you shouldn't wait to apply until you've received your acceptance notification.

Each year, you will reapply for financial aid. If you are progressing satisfactorily, you'll find this procedure routine. As an upperclass student, your renewal award may be increased or decreased according to need and may be offered in a different package combination.

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 1980-81 academic year expenses:

Tuition	$3,879
Fees	42
Room	1,189*
Board	1,179*
Books	300
Personal	461
Travel	250
Total	$7,300**

*Based on double occupancy and a 20-meal-per-week plan
**Tuition and room and board charges subject to change without notice.

We hope that this brief discussion has answered a few of your questions concerning financial aid. Because of the number and variety of assistance programs, your initial attempt to understand the complexities of financial aid may raise some additional questions. We urge you to obtain more specific information by contacting:

Student Financial Aid Office
Rochester Institute of Technology
One Lomb Memorial Drive
Rochester, N.Y. 14623

(716) 475-2186

Admissions

There are a few things you should know about applying to Rochester Institute of Technology. First, RIT accepts students on a "rolling admission" 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 considering 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 your advantage to apply as early as possible for admission.

To apply as a freshman student, you must submit your completed undergraduate application and nonrefundable $25 fee, official high school transcript, and entrance examination scores. Submit results of either the Scholastic Aptitude Test (SAT) or the American College Test (ACT) to satisfy the entrance examination requirement. International applicants whose first language is other than English are required to submit results of the Test of English as a Foreign Language (TOEFL), administered by the College Board.

When applying for admission to RIT, you will seek to register in a degree program of one of the individual colleges. However, there is opportunity for electing courses in other colleges as they meet your personal goal objectives, and some programs are purposely designed for interdisciplinary experience.

Your high school or previous college record is usually the best predictor of success at

RIT. However, other information, including rank in class, standardized test results, recommendations, portfolio evaluation (for certain specified programs), and your statement of objectives, is weighed carefully by the Admissions Committee when reviewing applications for admission.

Because our many degree programs require different abilities and interests from their students, we suggest you consult your guidance counselor or arrange an appointment with an RIT admissions officer to discuss your background and interests and to see if they appear to fit the program of interest to you.

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

1. Acceptance or denial of application for admission to your program of study If you are a transfer student, you also will receive an evaluation showing transfer 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 When vacancies occur, students judged to be the strongest candidates are selected from the waiting list. The probability of vacancies 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 Admission to RIT is competitive, based on our prediction for the likelihood of probable success in the program to which you have applied. Sometimes more information about candidates must be requested before a final decision can be reached.

The $200 nonrefundable 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.

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

To apply as a transfer student, you must 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 coming to RIT.

3. If your earlier study was outside New York State, send descriptive catalog(s) of previous study to our Admissions Office with your name on inside cover(s), so we may give you full credit.

4. If you've already earned 16 or more college credits, submission of SAT or ACT test scores is optional.

5. 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.

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

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 on 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.

As a high school student, you may qualify for early admission. Occasionally students 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 an instance, you may seek admission to RIT under the Early Admissions Program, without certification of high school graduation. If admitted, you must fulfill the senior year high school course and first year college course concurrently. Upon successful completion of the course, you are then certified for graduation by your high school.

We encourage you to visit the RIT campus. You may have a personal interview with an admissions counselor and take a tour of our modern, 1,300-acre campus and facilities. A campus visit can provide answers to questions you may have and give you a better understanding of the Institute. To arrange for either a tour or admissions interview, or both, call the Admissions Office, (716) 475-6631, Monday through Friday between 9 a.m. and 4:30 p.m.

The Institute: Founded in 1829, Rochester Institute of Technology is a privately endowed, coeducational institution of higher education emphasizing career preparation and practical work experience.

Location: The main campus is located in suburban Rochester, New York. The greater Rochester area has a population of about 700,000.

The Institute maintains its City Center in downtown Rochester, and the Eisenhower College campus is located in Seneca Falls, New York, about 50 miles southeast of Rochester. The National Technical Institute for the Deaf (NTID) is located on the main campus and is one of RIT's 10 colleges.

Campus: RIT's modern Rochester campus occupies 400 acres on a 1,300-acre site. The academic and administrative complex consists of 13 buildings arranged in three adjacent quadrangles. The residential complex of 16 interconnected buildings is reached by a quarter-mile mall past tennis courts and playing fields.

Enrollment: The RIT student body consists of approximately 8,500 full-time undergraduate and 1,300 graduate students. They come from almost every state and many foreign countries.

Colleges: RIT is composed of 10 colleges: Business, Continuing Education, Eisenhower College, Engineering, Fine and Applied Arts, General Studies, Graphic Arts and Photography, Institute College, Science, and the federally funded National Technical Institute for the Deaf. The various colleges offer a total of 200 career option programs.

Degrees: The degrees offered are 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 (MA), Master of Science for Teachers (MST), and, at Eisenhower College, Bachelor of Arts (BA).

Calendar: The Institute, except for Eisenhower College, operates on the quarter plan: each quarter is 11 weeks in duration. Many classes are also offered during the summer session.

Library: RIT's Wallace Memorial Library has, in addition to books, of course, the largest microfilm collection and most extensive collections of videocassettes, slides, filmstrips, microfiche, motion pictures, Super 8 cartridges, and recordings of any area college library. The library is regularly open 86 hours each week, with extended hours during final exams.

Housing: Many of RIT's full-time day students live in the Institute-operated residence halls. Other students reside in rooms or apartments located throughout the area. A number of on-campus apartments and town houses are available for married students and others who prefer not to live in the residence halls.

Student Activities: Major social events on the activities calendar include Homecoming and Brick Day, along with dances, parties, speakers and events sponsored by the College Activities Board, the Residence Hall Association, the Greek Council, and special interest clubs of many kinds.

Three national sororities and six national fraternities offer social activities and promote high scholastic and social standards among members.

A number of national technical associations have student affiliate chapters on the RIT campus.

Athletics: Indoor and outdoor sports facilities at RIT include two gymnasiums, ice arena, Olympic-size swimming pool, fencing, weight and wrestling rooms, one of the best baseball fields in the region, 12 tennis courts, an all-weather track and recently installed fields for soccer and lacrosse.

Women's intercollegiate competition is offered in volleyball, softball, tennis, hockey, bowling, and swimming. Men compete on an intercollegiate basis in soccer, cross country, tennis, golf, baseball, basketball, bowling, hockey, rifle, swimming, lacrosse, wrestling, and track.

Five sports are offered on an intramural basis. These include touch football, basketball, hockey, softball and coed volleyball.

Placement: The Institute makes every effort to help students find employment during school and after graduation.
As a liaison between employers and those students seeking positions. Central Placement Services acts in four principal areas: part-time jobs on campus and within the community, summer work, cooperative employment, and senior and alumni placement.

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 Discriminates Act. The compliance officer is James Papero.

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 the Undergraduate Bulletin was published. Course and curriculum changes, modifications of tuition, fee, 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.

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General Information and Undergraduate Study 1980/81

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
Rochester, NY 14623
(716) 475-6631

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RIT Official Bulletin

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RIT at a Glance

Location
Main campus in suburban Rochester, New York. The Rochester metropolitan area has a population of about 700,000; City Center in downtown (urban) Rochester proper, and the Eisenhower College campus in rural Seneca Falls, New York.

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, 1979 was 9,140 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 Official Institute Calendar, inside the front cover of this 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); Bachelor of Arts (BA) at Eisenhower College.

Housing
Residence halls for single students, with on-campus apartments and townhouses for married 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
37,000 in all 50 states and worldwide

Placement
The Institute makes every effort to help students find employment, both during school and after graduation. The Placement Office acts in four principal areas as a liaison between employers and those students seeking positions. These areas include: part-time jobs on campus and within the community, summer work, cooperative employment, senior and alumni placement.

What Is RIT?

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

RIT is composed of 10 colleges: Business, Continuing Education, Eisenhower College, Engineering, Fine and Applied Arts, General Studies, Graphic Arts and Photography, Science, the federally-funded National Technical Institute for the Deaf, and Institute College (engineering technologies, computer science, packaging science and other career fields).

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-mentioned 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 epitomizes the Institute's "learn by doing" philosophy. During the past academic year, nearly 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 are comprising 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 37,000 in every state and worldwide.

RIT's main 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, completed in 1974.

Many of the Institute's full-time day students live in Institute-operated residence halls. Three apartment villages with a total of 579 units house married students and upperclassmen.

With its comparatively small campus in Seneca Falls, RIT's Eisenhower College offers students a rural life-style distinctly different from the other Institute facilities. Chartered in 1965 and opened in 1968 as the national memorial to former President Dwight D. Eisenhower, the College is situated on the west shore of Cayuga Lake, on the southeastern side of the upper New York State village. The community of approximately 9,000 persons is near the Montezuma National Wildlife Refuge and within an hour's driving distance of Syracuse, Ithaca and Rochester.

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. 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 for 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 one 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 Business					
Accounting		5002		0502	
Business Administration		5001		0506	
Food Service Administration		5404		1307	
General Dietetics & Nutritional Care		5404		1306	
Photographic Marketing Management		5004		0509	
Retailing		5004		0509	
College of Engineering					
Computer Engineering+				0999	
Electrical Engineering				0909	
Industrial Engineering				0913	
Mechanical Engineering				0910	
College of Fine and Applied Arts					
Ceramics and Ceramic Sculpture		5012	1009		
Communication Design		5012	1009		
Double Craft Major			1009		
Environmental Design		5012	0201		
Fine Arts - Painting, Printmaking		5012	1002		
Fine Arts - Medical Illustration			1299		
Glass		5012	1009		
Metal Crafts and Jewelry		5012	1009		
Weaving and Textile Design		5012	1009		
Woodworking and Furniture Design		5012	1009		
College of General Studies					
Criminal Justice				2105	
Social Work				2104	
College of Graphic Arts and Photography					
Biomedical Photographic Communications		5299		1217	
Film and Television		5007		1010	
Newspaper Production Management				0699	
Photographic Illustration		5007	1011		
Photographic Processing & Finishing Management		5007		0599	
Photographic Science & Instrumentation		5007		0999	
Professional Photography		5007		1011	
Printing		5009		0699	
Printing Systems Management				0699	
Institute College					
Audiovisual Communications				0605	
Computer Science		5101		0701	
Computer Technology		5101			0701
Civil Engineering Technology					0925
Electrical Engineering Technology					0925
Manufacturing Technology					0925
Mechanical Engineering Technology					0925
Packaging Science				4999	
College of Science					
Biology	0401			0401	
Biomedical Computing	**			1217	
Chemical Technology		5305			
Chemistry	1905			1905	
Computational Mathematics				1703	
Mathematics	1701			1701	
Medical Technology	**			1223	
Nuclear Medicine Technology	**			1299	
Physics	1902			1902	

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

**Higher Education General Information Survey*
+Joint program - Engineering and Computer Science and Technology
***Students in these programs receive an AS in General Science (HEGIS 4902) upon the successful completion of the first two years.*

NOTE: For information on offerings of the **College of Continuing Education, Eisenhower College** 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 different things to different people", says Dr. M. Richard Rose, the Institute's seventh president. "For those of us who work and study here, it's a progressive academic citadel that always has been willing to take those extra steps necessary to maintain relevant educational programs.

"For its alumni, RIT hopefully has provided an opportunity to improve themselves and their families educationally, professionally, financially and socially.

"And, we hope, RIT also is something special to that vast majority in the Greater Rochester community who have never studied or worked at any of our facilities. It's a special pride in having the main campus of the Institute here.

"For, in many ways, it symbolizes much of what we find so desirable about our community, particularly through its attractive blend of tradition and innovation.

"RIT is progressive and relevant. It always has been willing to take chances if chances were necessary to further its unique approach to higher 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.

"It is this link with Greater Rochester's history and growth that makes RIT a special place for the entire community, we believe. It's a link of which we're very proud. We hope you will share in the pride."

Career Education Division Supports Strong Links With 'Working World'

Established in 1977, the Division of Career Education at RIT exists to provide leadership and service to students and academic units of the Institute regarding career education activities. Generally speaking, the division supports programming and services that strengthen the linkages between the employment sector and the Institute. Its primary objective is to help students learn about the reality opportunities and limitations of the world of work. This is accomplished through four basic program activities including:

1. Career and Academic Advisement
2. Experiential Education
3. Career Education Research
4. Central Placement Services

Career and Academic Advisement

The role of career and academic advisement is to assist the entering and continuing student with the development of career goals and academic plans. While the student assumes responsibility for maintaining a record of his or her academic performance, the faculty advisor uses professional expertise in assisting the student to set realistic career goals and to plan a compatible educational program.

Each student is given a folder with forms to explain degree requirements, to record courses completed and grades achieved, to plan a program of study, and to assist with career decision making. The student must have these forms up to date before an advisor will discuss academic planning.

Faculty advisors strive to increase the student's awareness of his or her abilities and talents as they relate to emerging career goals. The advisor also helps the student focus a career goal and plan a program of study in accordance with degree requirements. In addition, the advisor has information about Institute policies, procedures and campus resources. When appropriate the advisor may facilitate the referral of a student to other campus resources including the Counseling Center, Learning Development Center, Student Health, registrar, and financial aid.

Individuals with questions about the advising system are encouraged to contact the coordinator of advising in their respective department or college. Donald Baker, director of counseling and career education program development, is the Institute coordinator of advising and may be contacted at 475-2261.

Experiential Education

Experiential education provides the RIT student with experience related to personal career planning. A complement to the academic course work, internships, co-ops, apprenticeships, and other forms of experiential education provide an environment for testing academics in career related situations. Through combined efforts of students, RIT faculty, the Division of Career Education, and representatives of specific career fields, the student gains firsthand experience relative to his or her career interests.

Experiential learning promotes learning beyond the classroom. It is designed to let the student know what it means to work in the field.

Experiential education denotes RIT's philosophy of preparedness for a working society and offers students opportunities to develop further expertise in chosen career fields. During a typical off-campus working experience, the student learns through actual career-field employment.

The experiential opportunities encourage students to seek further learning or employment in geographic areas that they prefer for permanent employment and in areas that represent the growth of that particular job market. In many instances, the opportunity leads to career possibilities upon graduation. Both the student and the employer have a chance to learn what each has to offer the other.

Experiential learning happens in many forms. The most commonly known is that of cooperative education. Other forms of experiential learning are available through various RIT college programs. Like co-op, internships, apprenticeships, and field experiences are designed to provide a closer linkage between the realities of the classroom and the realities of the workplace.

Career Education Research

Action-oriented career education research is constantly being conducted by RIT faculty, staff, and various business and industry advisory groups. However, thanks to a two-year grant from the Mobil Oil Foundation, the Division of Career Education is developing a centralized career education research system. The career education research function will provide basic research information so necessary for a career education institution.

Why is career education research important to you? Basically because it deals with questions that are vitally important to your own career development:

- What kind of work will a particular program prepare me for?
- How successful are RIT graduates in finding jobs?
- What skills and attitudes are important in a particular career?
- How successful are RIT graduates?
- Where are the good jobs?
- What expectations do companies have of recent graduates?

These and other questions will be investigated, and the answers will help guide your decisions in one of the most important phases of your life.

Central Placement Services

- career placement for seniors
- co-op placement for students in cooperative education programs
- assistance for students in locating part-time and summer positions
- alumni job information newsletters

Students and Alumni are assisted through:

individual counseling sessions with placement staff
workshops, seminars, group meetings, and employer forums
an employer/career library
campus interviews with employers
employer job listings
credential/recommendation services

Judith Vollmer-Miller, director of Central Placement Services, says her office "encourages students to come in even before they enroll. Sometimes a student's first acquaintance may be as a freshman, when looking for help in finding a part-time or summer job."

"We see most students for the first time when they're ready for a co-op position." Looking for a co-op job can be excellent preparation for the real thing. The Placement Office provides leads, shows students how to write a resume and to use the office's resource library, and trains them in interviewing techniques. Often the office refers students directly to companies who have requested students to work on a co-op basis.

Placement helps students find positions related to their major field of study so they can utilize their course work on the job. As the student advances, the Placement Office advises the employers in the development of more complex and challenging tasks for each successive co-op assignment.

But Ms. Vollmer-Miller stresses the fact that the effort is a joint responsibility. "Placement doesn't 'place' people," she explains. "Our function is to provide guidance and information for planning a career. The student has to do just as much work as we do-probably much more-to land a job."

The same is true when it comes to looking for a permanent position during the senior year. Central Placement Services provides the same kind of guidance, including individualized counseling, to any student who seeks it. "We also have a job bank, and invite recruiters to interview seniors right here on campus. And opportunities have been excellent. During 1979-80, over 500 employers visited RIT to conduct interviews with graduates. Information which Central Placement Services collected from 57 percent of the 1978-79 graduates indicated that more than 80 percent secured employment in their chosen career field or entrance into graduate school soon after graduation.

But then, RIT has an edge on the competition, according to Ms. Vollmer-Miller. "It's a known fact that employers are actively seeking RIT grads, for a number of reasons. They're career oriented, and their education has been developed around current needs of business and industry. And they are more specific about their career objectives."

Placement's continuum goes on after a student graduates. Alumni are welcome to use the Placement Office. And the guidance and training that a student receives during his or her school years will also serve when it's time for a job change.

"Five years from now, there won't be anyone right there to help," Ms. Vollmer-Miller says. "If a student makes optimum use of our service while he or she is here, it will make future job hunts easier."

Ms. Vollmer-Miller's responsibilities include managing a staff of 18, coordinating the four different functions (part-time and summer work, cooperative employment, senior and alumni placement), and counseling students herself. "I think it's critical for me to keep in contact with students so that I can keep abreast of their expectations, goals, and competencies."

"And all of us are involved daily with contacts in business and industry, in order to maintain RIT's visibility and market RIT graduates."

Career Education is a 'Very Old New Idea' at RIT

RIT's particular philosophy of education is called career education.

And today, a lot of institutions of higher education are trying to convince you it's the hottest-and newest-thing down the educational pike in a long time.

Nonsense!

An interest in career education has characterized RIT from its beginnings. With the establishment in 1885 of the Mechanics Institute, a predecessor of RIT, evening courses were offered for workingmen who wanted to upgrade their skills in the booming post-Civil War economy. In 1891, Mechanics Institute and the Rochester Athenaeum were consolidated, and over the next decade developed and taught five three-year courses-mechanics, architecture, design, art and teaching. There were evening classes for employed persons and day classes available to homemakers.

When we started career education in the 1880's, we called it common sense. Our goal then was to prepare graduates for "the making of a living and the living of a life." And over the years, we've developed that philosophy of career education into a science.

What's career education?

In simplest terms, it's an education that prepares a student to find success and happiness in a chosen career field.

At RIT, it's an education in engineering or fine arts or science or social work or any of the other multitude of programs offered through the 10 day and evening colleges.

But it's an education with a difference.

At RIT, it means our graduates can go directly from here to where they want to be- in the professional world, doing professional work. Or they can choose further study and research in graduate programs.

It means our students develop a technical competence that means something both within and outside the academic world.

And it means we recognize that many people already have careers-but want to further their knowledge. So we have programs and courses of study designed to accommodate these special needs.

Career education a new idea?

Maybe some places.

But at RIT, where we've made a career out of career education, it's the oldest young idea around.

Experiential education promotes career development

Experiential learning offers the RIT student the best of two worlds-the world of classroom and laboratory as well as the world of work. These two elements combine to provide an education well recognized for its benefits.

RIT has been a leader in experiential learning through cooperative education since 1912. Working with all colleges and departments at the Institute, the new Division of Career Education encourages further types of experiential education which help the student in academic studies, at

the same time refining personal career goals.

A further potential benefit is the student's opportunity to earn part of the tuition expense from off-campus employment. In addition, a positive track record with one or more employers can be of real assistance to the student entering the job market after graduation.

Faculty and staff assist the student in identifying the types of experiences related to the chosen discipline which will encourage career development. Application procedures are taught and referrals are made to employment opportunities as they develop. Geographic mobility is strongly recommended to applicants in order to take advantage of the best openings on a nationwide basis.

Nearly 3,000 students will participate in the various experiential education programs this year. Many field experiences are developed by RIT counselors and faculty members alike, but the students must compete for positions. They are encouraged to use the Central Placement Services as well as initiate contacts on their own with the professionals in the field of interest.

Experiential learning in the form of cooperative education is scheduled in quarter-long work blocks. Students participate in these work blocks in the upper division (third, fourth, and fifth) years with the exception of chemistry which starts in the second year.

Most upperclassmen in the Colleges of Business, Engineering, Science, and Institute College follow the pattern of alternating between single blocks of full-time study and full-time work. A double block arrangement (six consecutive months) is sometimes feasible if convenient for the employer and the class scheduling of the student.

Several variations are followed in other departments: The Department of Clinical Sciences uses a one-year internship mode; social work and criminal justice include a junior year field experience component. The School of Printing and Department of Packaging Science offer optional co-op plans.

Experiential learning through cooperative education, internships, apprenticeships, field experiences, as well as classroom simulations and practicums, are being developed and refined continuously for all colleges.

These illustrations are not intended to be a complete catalog of possibilities. Applicants should contact the school or department of their choice for further details about the growing opportunities in experiential education.

The RIT Student Body's Only Characteristic Is Diversity

There is no typical RIT student.

And if the student body could be characterized, 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 artists of almost every persuasion go to school with accounting majors; where those interested in a career in social work study with those interested in mechanical engineering.

Students have come from every state in the United States and many foreign countries. They come from widely differing 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" suddenly became a popular expression, RIT stood solidly behind the idea that education for work-for a job-was worthwhile and sound. And over the years it 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 the minimum problems of adjustment. Many programs at the Institute help vets deal with the machinery of the Veteran's 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, a veteran may obtain an application for the Certificate of Eligibility from the Veteran's Affairs Office, located on the first floor of the administration building.

V.A. Form 21E-1995 "Request for Change of Program or School" is used when the veteran wishes to transfer schools.

Transfer students

More than 45 percent of all full-time students attending RIT transferred from another two-year or four-year college. RIT doesn't simply absorb them and ignore their previous experience; RIT thinks it's valuable. So in order to continue building on its excellent relationship with two-year colleges, RIT has established the Center for Community/Junior College Relations. This is an excellent two-way channel for cooperative action. For information on transferring to RIT, see page 15.

Deaf students

The 850 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, they 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. And hearing students 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 107.

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 which..."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. The Institute prepares its students for leadership in their careers and in community life and, therefore, high standards of personal development, as well as academic excellence, are set 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 the permission of the residents, or with authorization from the vice president for Student Affairs, or unless a legal search warrant has been obtained. Exceptions are made in emergency situations such as imminent harm to individuals or serious damage to 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 conduct 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 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

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. 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 judgment 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.

[1]Rochester Institute of Technology, "1980 Master Plan", (March, 1980)

[2]George W. Hoke, *Blazing New Trails* (Rochester, N.Y.: Rochester Anthenaeum and Mechanics Institute, 1937) p.V.

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.

Student Misconduct
RIT believes that other than major felonies, student misconduct can be most effectively handled on campus without going through outside law enforcement agencies. Every student has the right for a hearing before the Student Hearing Board on serious misconduct cases; the Student Hearing Board makes recommendations on appropriate sanctions to the vice president for Student Affairs. Although most students request to have their cases handled by an administrator rather than appearing before the Student Hearing Board, the administration relies upon the Student Hearing Board to resolve the more difficult cases where guilt or innocence is questionable, and to determine appropriate levels of sanctions for different types of misconduct. There are no official mandatory sanctions, but in general the following practices apply:

1. False fire alarms, assault with a weapon, sexual assault, and dealing hard narcotics will lead to immediate suspension and possibly arrest.
2. Theft of any amount will lead to a deferred suspension status (sanction of disciplinary suspension is imposed, but indefinitely deferred pending future conduct) plus compensation in the form of “work hours" at a rate of $3.00 per hour up to the value of the items stolen; this is in addition to return of or restitution for the actual objects stolen.
3. Possession of marijuana results in an initial warning; further incidents could lead to removal from residence halls, disciplinary probation, or suspension from school.
4. Possession of harder drugs, depending upon amount, would lead to removal from residence halls, deferred suspension, possibly arrest and/or actual suspension.
5. Alcohol intoxication leads to an initial warning; further incidents could lead to required counseling, removal from residence halls, and disciplinary action for any acts of misconduct committed while under the influence.
6. Disorderly conduct and disturbing the peace will result in warnings, probation, removal from residence halls, deferred suspension, or actual suspension depending upon seriousness of the incident and previous conduct record; fighting generally results in deferred suspension.
7. Vandalism results in restitution, plus disciplinary action ranging from warning, probation, deferred suspension, or actual suspension and/or arrest, depending upon the extent.

Students who are interested in serving on the Student Hearing Board, or who have questions concerning RIT’s internal judicial process and student rights on campus, should contact Dr. Stanley D. McKenzie, assistant to the vice president for Student Affairs/ Judicial Affairs, in the Student Affairs Office on the mezzanine level of the College Union, telephone extension 2265.

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, middle age students, minorities, international students, commuters and the handicapped are people with individual needs that require support from RIT's student services, according to E. Louis Guard, RIT Director of Admissions.

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

Barbara Bell’s concern is the minority student. “She actively recruits minority students, conducts special career days for prospective students, and acts as their liaison and advisor once they get here,” Guard relates.

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

“Arthur C. Friedel keeps in constant contact with the international students on campus, who are here from as far away as Australia and France.

“A printer from Venezuela 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.

The recent acquisition of Eisenhower College adds a unique liberal arts - World Studies option to compliment RIT’s technical programs, as well as offering the contrast of a rural campus setting,” Guard noted.

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 undertake careers in technical fields, and telling them about the many options open to them,” Guard explains. “We also assist students in locating services they may need on campus-in child care, chaplaincy, counseling, or career development assistance.”

This involvement of the admissions staff allows them to keep in contact with students currently enrolled. Guard points out that although his role as director is primarily managerial, he acts as 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-they’re great for providing regular 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.

Guard explains that the Office of Admissions is more interrelated with other departments. “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 all around. That’s just one of the ways in which we’re trying to make life-and learning-easier for students as they experience the educational process.”

‘Vets Try Harder’ Coordinator Says

“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. And because of the complexities of governmental regulations and benefit payment,” says Clark, “our veterans have become very dependent on our ability to service their needs. They come to the VA Office 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.”

The Veterans’ Affairs Office is open daily from 8:30 a.m. until 7 p.m. Monday through Thursday, and until 4:30 on Friday. The coordinator, secretary, veterans’ administrative reps on campus, and work study staff are constantly handling inquiries and assisting veterans with VA related information. With their assistance a veteran can be sure of a steady transition into and through the educational experience.

“Successful contact with our veterans has proven that problems can be effectively dealt with before they have a negative impact on our vets,” maintains Clark, who is concerned that many veterans, and children of veterans, both deceased and disabled, are not utilizing their benefits. “The rates have been increased and length of eligibility increased to 10 years for program completion,” he says.

Gene is a U.S. Air Force veteran and presently serves as a commissioned artillery officer with the U.S. National Guard. His degree in business administration and his military expertise provide a background enabling him successfully to assist veterans and their dependents.

Costs

Payment Procedure/The Quarterly Billing Statement

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 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 1980-81 school year are as follows:

Fall Qtr.	Aug. 8, 1980
Winter Qtr.	Nov. 3, 1980
Spring Qtr.	Feb. 9, 1981
Summer Qtr.	May 4, 1981

A preregistered student should receive the Quarterly Billing Statement approximately two weeks prior to the quarterly due date. The statement will reflect all projected quarterly charges, all projected financial aid precredits and any balance carried over from the prior quarter. Upon receipt of the balance due the Bursars Office will process the payment and clear the student for registration.

A student who is not preregistered for the quarter will receive a general statement of charges approximately two weeks prior to Open Registration. He/she will be required to attend Open Registration and make payment at that time.

Students whose college costs are paid by the G.I. Benefit Plan or their employer are required to submit the appropriate deferral form in lieu of payment.

All billing information will be mailed to the student’s permanent address, without exception.

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.

Other fees

Students enrolled in chemistry laboratory classes must purchase Breakage Deposit Cards at $5 each. In most cases the total will not exceed $15 for the year. This requirement applies to students of all departments who are enrolled in chemistry courses.

Students enrolled in courses requiring the use of the photography chemistry laboratories are required to make a $10 locker key deposit.

A Residence Halls Association Fee, currently $7, is established by the student governing bodies to be used for the benefit of students in residence. A late registration fee of $25 is charged to any student who fails to register by the designated quarterly Open Registration Day.

Deferred payment plan

For those students who are not able to pay the amount due by the designated due 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 $130-$150; in the arts or crafts, this may be in the neighborhood of $450-$475; 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).

Additional 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 student would have the following academic year expenses:

Tuition	$3,879
Fees	42
Room	1,189
Board	1,179
Books	300
Personal	461
Travel	250
Total	$7,300

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 is found on the following page.

Based on three academic quarters, as freshman resident students†

Department or Major	Tuition	Fees*	Room†† and Board	Total**
Engineering	$3879.	$42	$2361.	$ 6282.
Business Administration, Retailing	3804	42	2361.	6207.
Food Administration	3804.	42	2361.	6207.
Art and Design	3879.	42	2361.	6282.
School for American Craftsmen	3879.	42	2361.	6282.
Printing	3879.	42	2361.	6282.
Photography (including Photographic Science)	3879.	42	2361.	6282.
Biology, Chemistry, Math, Medical Technology Nuclear Medicine Technology, Physics	3879.	42	2361.	6282.
Chemical Technology (2 Quarters)	2586.	28	1574.	4188.
Computer Science & Technology	3879.	42	2361.	6282.
Social Work, Criminal Justice	3879.	42	2361.	6282.
Career Decision Program	3879.	42	2361.	6282.
Packaging Science	3879.	42	2361.	6282.

† Rochester area students who live at home and commute to campus should substitute their own estimates for room and board.

* Does not include $ 58. Orientation Fee.

** It is estimated that an additional $500 should be allowed for clothing, recreation, travel and incidentals.

†† Double Room and Board (20 meals per week).

An Aid To Estimating Tuition, Fees

College.	School or Department	Co-op	Year	Tuition Per Year	Fees†	Total Per Year	Quarterly Payments*		
							1st. Qtr.	2nd. Qtr.	3rd. Qtr.
Business	Bus. Admin., Food Administration or Retailing	Yes	1 2** 3 4	$3804. 3804. 2536. 3804.	$42. 42. 28. 42	$3846. 3846. 2564. 3846.	$1282. 1282. 1282. 1282.	$1282. 1282. 1282. 1282.	$1282. 1282. 1282.
	Photo Marketing	No	Each Year	3804.	42.	3846.	1282.	1282.	1282.
Engineering	Electrical, Mechanical, Industrial, or Computer Engineering	Yes	1 & 2 3,4,5	3879. 2586.	42. 28.	3921 2614.	1307. 1307.	1307. 1307.	1307.
Fine and Applied Arts	Art & Design School for American Craftsmen	No No	Each Year	3879.	42	3921.	1307.	1307.	1307.
Graphic Arts & Photography	Photographic Arts and Sciences Printing	No ***	Each Year	3879	42.	3921.	1307.	1307.	1307.
General Studies	Criminal Justice Social Work	Yes	Each Year	3879.	42.	3921.	1307.	1307.	1307.
Institute College	Computer Science and Technology	Yes	1 & 2 3,4,5	3879. 2586.	42. 28.	3921. 2614.	1307. 1307.	1307. 1307.	1307.
	Engineering Technology	Yes	1 & 2	(Completion of 2 years at another college)					
			3, 4,5	2586.	28.	2614.	1307.	1307.	
	Packaging Science	No	Each Year	3879.	42.	3921.	1307.	1307.	1307.
	Audiovisual Communications	No	1 & 2	(Completion of 2 years at another college)					
			3,4	3879.	42.	3921.	1307.	1307.	1307.
Science	Biology, Mathematics, or Physics	Yes	1 & 2 3,4,5	3879. 2586.	42. 28.	3921. 2614.	1307. 1307.	1307. 1307.	1307.
	Chemistry	Yes	1 2-5	3879. 2586.	42. 28.	3921. 2614.	1307. 1307.	1307. 1307.	1307.
	Health Related Professions involving Clinical Science	No	1, 2, 3	3879.	42.	3921.	1307.	1307.	1307.
			4	(Full-time internship in approved hospital)					
Counseling Center	Career Decision	No	Only 1	3879.	42.	3921.	1307.	1307.	1307.

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 $58 Orientation Fee.
*In cooperative programs, 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 $ 110. 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 $ 110. per quarter credit hour. Student Activity Fee is not accessed.
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.

Refund Policies

Advance deposits are non-refundable.

The acceptable reasons for the 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.

For a partial refund

A partial refund will be made during a quarter if withdrawal 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:

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

A student is not "officially withdrawn" until he or she receives the student's 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 a 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. *Courses dropped after the official Drop Period will not result in a tuition refund.*

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 Mr. Richard B. Schonblom, bursar. Matters which cannot be resolved will be referred for further action to Mr. 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

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

Financial Aid

There are a variety of scholarship, loan, grant, fellowship and other aid programs available to help you pay for your college 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 freshmen, transfer, upperclass, and graduate students) and their parents plan for and meet the costs of attending RIT.

While students and parents are expected to contribute to college expenses as their resources permit, RIT's Student Aid Office can be of special assistance to students whose resources are insufficient to meet the entire cost of attending RIT.

It is RIT's intent that qualified 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 such as New York State Tuition Assistance Program Awards and Regents Scholarships or other state awards. The RIT Scholarship Committee bases its award on scholastic achievement as well as need. The full range of Veterans' Administration benefits are available.

RIT's cooperative programs offer participating students an opportunity to make a very significant contribution to their total college expenses-from 40 to 60 percent during co-op years-in addition to the valuable experience gained on the job.

Additionally, through the Central Placement Office, there are many part-time positions available to help 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.

Scholarships

The RIT Board of Trustees has provided a scholarship fund from which general awards are made to entering freshmen and transfer

students. Other scholarships have been provided by the gifts of the alumni and friends, and the income from permanent funds.

Scholarships from these sources may vary in size from $ 100 to $3,276. The amount of the scholarship and the recipients are determined on the basis of entrance examination data, high school record and the need for financial aid. These scholarships are awarded for one year only. Students receiving scholarship aid may apply for renewal of their scholarship as upperclassmen. Entering freshmen may be eligible for awards if they rank in the upper 20 percent of their high school graduating class, while eligibility for enrolled students and transfers is contingent upon a cumulative grade point average of 3.00 through the Winter Quarter of the year preceding the one for which the award is requested. In each case 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 $4,000.

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.

To apply for aid

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

Although applications for scholarship aid aren't processed until a student has been accepted, a student shouldn't wait until receiving notification of acceptance to file for aid; this should be done when applying to the Institute.

Students are urged to submit all required admission data to the RIT Admissions Office and file a Financial Aid Form with College Scholarship Service no earlier than January 1 of the year prior to entrance. Copies of these forms must be received at the College Scholarship Service no later than March 1; applications received after March 1 will receive secondary consideration.

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 financial aid available 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 colleges' financial aid offices, RIT's Financial Aid Office, or by writing directly to the College Scholarship Service, Box 176, Princeton, New Jersey, 08540.

Notification of awards can be expected two to four weeks after arrival of the necessary financial aid analysis and your admission acceptance.

RIT awards financial assistance largely on the basis of need. Financial need is defined as the difference between the cost of an education and the amount of money an applicant and his or her family can make available from their income and assets to meet the expenses of that education.

Selection and eligibility

To be awarded financial aid, an individual must be admitted as a matriculated student. RIT makes every effort to continue financial assistance to students each year provided they remain in good academic standing and financial need continues to be demonstrated.

A student is in good academic standing and is maintaining satisfactory progress if he/she has been accepted into a program of study (matriculated) and is currently enrolled in this institution.

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.

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 obtain summer employment to assist in financing their education.

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 and qualify through an examination in the senior year of high school.	$250 to $1,000 per year.	N.Y.S. Higher Education Services Corp., Tower Bldg. Empire State Plaza Albany, N.Y. 12223
Tuition Assistance Program (New York State)	New York State residents who show ability to pursue full-time programs.	$ 100 to $ 1,800 per year.	N.Y.S. Higher Education Services Corp., Tower Bldg. Empire State Plaza Albany, N.Y. 12223
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	$450 per year.	N.Y.S. Higher Education Services Corp., Tower Bldg. Empire State Plaza Albany, N.Y. 12223
War Service Scholarship	New York State veterans who qualify through examination in the summer.	$350 per year.	N.Y.S. Higher Education Services Corp., Tower Bldg. Empire State Plaza Albany, N.Y. 12223
Basic Educational Opportunity Grants (Federal)	Undergraduate students who are pursuing their first bachelor's degree, in financial need, attending post-secondary institutions.	$250 to $ 1,800 per year.	File Financial Aid Form requesting submission to basic grant.
Supplemental Educational Opportunity Grants (Federal)	Students of academic promise who are accepted for college study and who are in exceptional financial need.	$200 to $ 1,500 per year or one-half of total aid provided by institution-whichever is less.	Through RIT by use of the Financial Aid Form
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 March 1 (prior to the next year of attendance).
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			
New York State Higher Education Services Corporation Student Loans	New York State residents in full- and part-time degree programs.	Undergraduates, up to $2,500 per year, depending on level of study. Graduates, up to $ 5,000 per year for master's degree students.	Most banks in New York State and N.Y.S. Higher Ed. Services Corp., Tower Bldg. Empire State Plaza Albany, N.Y. 12223
Other State Loans	Eligibility varies.	Usually $1,000 to $2,500 per year.	Consult your state's education department.
National Direct Student Loans	College students in full- and part-time degree programs in financial need.	Up to $2,500 for first 2 years of undergraduate study. Maximum of $5,000 for 4 years of undergraduate study; $5,000 for graduate study.	Through RIT by use of the Financial Aid Form between Jan. 1 and March 1.
Law Enforcement Education Program (LEEP)	In-service law enforcement personnel and preservice students who are prior recipients and are studying criminal justice.	$250 to $2,950 per year depending on tuition.	Through RIT prior to academic quarter.
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 $2.90 to $4.35 per hour.	Through RIT by use of the Financial Aid Form and through the Central Placement Office.
Other college part-time work	Considerable variation in kinds of positions, hours, and wages.		Consult other RIT publications and RIT Central Placement Office.

Admission Procedures and Services

Specific 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 of one of the individual colleges. However, there is opportunity for electing courses in i 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 non-refundable $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 168, Iowa City, Iowa.

To apply as a transfer student

RIT welcomes transfer students. Currently, more than 45 percent of our students began their college 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 coming to RIT.
3. If your earlier study was outside New York State, send descriptive catalog(s) of previous study to the RIT Admissions Office with your name on inside cover(s), so we may give you full credit.
4. If you've already earned 16 or more college credits, submission of SAT or ACT test scores is optional.
5. 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 standing in most programs if you've earned an associate's degree (AA, AS, and 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, art 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 on 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.

Articulation Council

A coordinating council on two-year college/RIT articulation has been established to better serve students transferring from two-year colleges.

This council's responsibilities are:

1) To act as a referral body to solve articulation problems. Although all articulation problems are within the scope of this body, articulation of an academic nature (e.g., transfer of courses, is of primary concern.

2) To make possible sufficient communications between the faculty, staff, and students of community colleges and the faculty, staff, and students at RIT. This communication includes mutual visitations as well as other activities.

3) To serve as a sounding board within the Institute, and elsewhere to identify the implications of RIT-community/junior college relations. The purpose of this objective, again, is to help insure two-year college students of smooth transfer to RIT.

4) To aid in the development and evaluation of research activities relating to two-year colleges.

Membership in the council includes the dean of each of the colleges or the dean's appointed representative. In addition, Admissions, Student Affairs, ROTC, Financial Aid, Records, the Office of the Provost, and other related administrative offices are represented. These members are familiar with the two-year college, its academic, fiscal, and administrative structures, its goals, philosophies, and types of courses and curriculum.

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 student 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 admission" 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 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 non-refundable advance tuition 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 handles International Student Admissions. He assists students from other lands with some of the normal difficulties they are apt to face in the admissions process.

The international community is well represented at RIT, with approximately 70 faculty and nearly 200 students from more than 55 countries.

RITSIA, the International Student Association, was chartered one year ago and is committed to providing support, assistance, and programming to the international students on campus. Working closely with a faculty/staff committee, the student group sponsors a special welcome and orientation, upperclass "brothers and sisters" and activities throughout the academic year. An office designed to assist international students has been newly-created in the Division of Student Affairs so that a centrally-located response will be made to the increasing numbers of students and the concerns they bring with them. The office will be working with immigration, housing, scholarship, orientation, academic and social needs.

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

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

The admission procedures apply in full. In addition, applicants whose native language is not English are required to submit scores from the Test of English as a Foreign Language (T.O.E.F.L.) administered around the world by ETS, Princeton, New Jersey, U.S.A.

If not in English, all documents submitted must be accompanied by certified English translations.

If admitted and the financial statement is satisfactory, the student will be sent Form 1-20 for presentation to the American Consul in application for a "Non-Immigrant, 'F' Student Visa." Foreign applicants must submit applications before April 1 to insure adequate time for processing their request for admission.

Women's opportunities
The Women's Information Center, housed in the Admissions Office, provides prospective women students of all ages with career information and opportunities available at RIT.

Whether you're 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 Women's Information Center is prepared to draw upon the various Institute resources and support services ranging from child care to vocational testing; from counseling services for those just beginning to explore the world of work to placement services for those ready to begin the job search. Through this assistance and referral, the center can give you a better insight into the opportunities and challenges at RIT.

Anyone interested in learning more about RIT's career programs and support services can contact Dorothy Lowe, at the Women's Information Center in the Admissions Office, at (716) 475-6631.

Registration and Student Records Keep Track of You and Your Courses

The Department of Records and Institutional Research operates the systems in which courses are scheduled, students register and student academic records are maintained.

The scheduling process

The development of a quarterly master schedule of courses is coordinated by the Registrar's Office in conjunction with the academic departments. The goal is to produce academic schedules that fulfill curricular requirements and the interests of the student body.

The registration process

To be registered a student must
(1) be scheduled into courses and
(2) make a financial commitment.

Approximately six weeks into the Fall, Winter and Spring Quarters, a preregistration for the following quarter is conducted.
Preregistration for Fall Quarter is held during the Spring Quarter. Preregistration is conducted in the student's academic department. For each quarter the Bursar's Office establishes a due date for payment. The due dates for the 1980-81 academic year are Fall Quarter-Aug. 8, 1980; Winter Quarter-Nov. 3, 1980; Spring Quarter-Feb. 9, 1981; Summer Quarter-May 4, 1981. A student who preregistered ***and*** makes satisfactory financial arrangements by the specified due date is considered registered and will receive a listing of his or her scheduled courses (a program notice) in the mail before open registration. These students will also appear on the first day class lists. If their schedules are complete and correct, it is not necessary for them to attend open registration.

Open registration

Any student who does not receive a program notice in the mail or who wishes to add and/or drop courses listed on his or her program notice must come to open registration. Each entering student will be notified by mail of the date and hour of registration for his or her first quarter. Thereafter, students are responsible for consulting the Institute calendar for registration dates and times.

A student who has successfully completed the registration process by the billing due date will be on the first day class lists. A student who has made schedule adjustments or registered initially at open registration must use his or her copy of the Change in Class Schedule Form as proof of registration for each class listed.

Late and non-matriculated student registration

Late registration and registration for non-matriculated students occur the day following open registration. Students who are not formally accepted into a program register as non-matriculated students. Matriculated students who did not complete both steps in the registration process by the end of open registration must register late. Late registrants are subject to a $25 processing fee. There will be instructions on how to complete non-matriculated/late registration at the start of that registration.

Financial commitment

After registration any student who has added courses but who has not made his or her financial commitment with the Bursar will be dropped from all courses during the second week of the quarter.

The record keeping process

Transcripts

The official academic record of each student is maintained in the Registrar's Office. A transcript of his or her record can usually be obtained by a student within 48 hours after the request is submitted ***in writing.*** All courses registered for and all grades received to date will be shown on the transcript. A student must be in good financial standing with the Institute before a transcript request will be processed.

During exam week and the week following exams, it may take more than 48 hours to prepare a complete transcript. The charge for each copy of a transcript is one dollar.

In most cases, the Family Rights and Privacy Act prohibits the release of information without the specific written consent of the student.

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.

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, 75 percent of first year full-time day students register for their second year; 79 percent of the second year students continue for their third year, and 83 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 Division of Records and Institutional Research.

The Steps Toward Earning Your Degree(s)

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. Eisenhower College offers the bachelor of arts (BA) degree. For information on these programs please refer to the individual college's catalog or bulletin.

Associate degree programs
Upon successful completion of the requirements as indicated in the program outlines of the schools and departments, students can be awarded the associate in science or the associate in applied science degree in some programs.

Two associate's degree programs are designed as terminal degrees. Biomedical Photographic Communications is both a two-year and a four-year program. The associate in applied science is awarded upon completion of two years of study, and graduates may seek employment with this degree or continue in upper division work toward the four-year bachelor of science degree. Chemical Technology is a three-year cooperative program, terminating with the associate in applied science degree.

Bachelor's degree programs
Seven day colleges-Business, Engineering, Fine and Applied Arts, General Studies, Graphic Arts and Photography, Science, and Institute College-offer four- or five-year programs leading to the BS, BFA or B. Tech degrees, depending upon the curriculum. For full descriptions of individual programs see the following sections grouped by colleges. For bachelor's degree programs in the College of Continuing Education please refer to its separate catalog. Programs offered through RIT's Eisenhower College are described in that college's separate Bulletin, which is available from the Office of Admissions.

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

A master's degree may be obtained in: accountancy, chemistry, engineering, electrical engineering, mechanical engineering, business administration, art education, fine and applied arts, applied and mathematical statistics, photographic science and instrumentation, photography, printing technology, printing education, instructional technologies, business technology for community college faculty, career information, and computer science and technology.

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.

Grading system
Grades representing the 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
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.

The grade of T is assigned for transfer credit awarded for courses taken at an accredited institution and receiving a grade of "C" or above, and are deemed applicable to an undergraduate student's program.

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 = Total quality points earned /Total hours

Academic standing*
An RIT student is in good academic standing and maintaining satisfactory progress if he/she has been accepted into a program of study (matriculated) and is currently enrolled at this institution. Institute Policy with respect to suspension affects continuing enrollment, as specified in the following policy.

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

**This definition is currently being considered for revision.*

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* average 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 a 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 having been 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 program 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).

**"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.*

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.

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 students' 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 anytime.

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 quarter quarter 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 final 45 quarter credit 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 communication likely to be placed upon him in his 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 departmental 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 these standards will have to take the appropriate remedial measures recommended by the department. Beginning in September, 1980, students who entered the Institute in Fall 1978 or later 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 masters degrees are expected to attend commencement ceremonies. Candidates may be excused from such attendance with the explicit approval of their dean.

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

Student Affairs Offers Services

For Help In and Out of Classroom

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

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

The Division includes Physical Education, Athletics, Residence Halls, Student Health services, College-Alumni Union, Religious Activities and the Chaplaincy, Counseling Center, Learning Development Center, Higher Education Opportunity Program (HEOP), Orientation and Special Programs, Upward Bound and Special Services.

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 curriculum. It will supplement their curriculum in four broad content areas - personal and social development, learning skill development, civic competence, and aesthetics.

Complementary Education is multi-faceted. 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. Certification also is given to non-funded projects already taking place where students are involved in more 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 in related on-campus programs focusing each year on a different topic dealing with quality of life and our society.

Learning Development Services

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."

Charles Hetzel speaks with pride about RIT's Higher Education Opportunity Program, of which he is director.

"The students in the program not only have financial difficulty, but also have not excelled in school," he 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. And professors are rarely aware that a student is in HEOP.

"We're kind of a mini-student services department," Mr. Hetzel says. "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, which consists of Mr. Hetzel, an assistant director, two counselors and a remedial specialist, maintains an open-door policy. "We have to be especially sensitive to the needs and problems of the disadvantaged student," stresses Mr. Hetzel, who holds master's degrees in urban education and reading. "Each student is assigned a counselor for the duration of their years at RIT. That counselor gets to know each student on a personal level, to be really conversant with the student's problems. And the counselors are always available should an academic or social difficulty arise."

Each student who is admitted to the program as a freshman must enter a five-week pre-freshman program conducted each 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. The instructor also comments on individual behavior, allowing us to pinpoint individual problems, such as poor attendance, or lack of assertiveness."

In the eight years of its existence, HEOP has graduated 100 students, many of whom have landed excellent jobs. Graduates in technical fields have the highest success rate, according to Mr. Hetzel. "It's not quite as easy for a social worker right now. But the fact that these students have graduated from college, considering their initial academic weaknesses, is a tremendous accomplishment."

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, 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.

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 their non-native language. In addition, the center makes arrangements for peer tutoring in most college level courses. Special programs, built around students' 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; a College Restoration Program, 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 admission 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 hopes 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 interactions with students, we guide them to explore their own approaches to learning, evaluate them and develop appropriate strategies for life-long 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 1978-79 school year, the Learning Development Center saw more than 2,400 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 individual 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 or who have been put on probation for academic reasons.

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 the content courses and to 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-motivation, self-discipline, and 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 by the student.

ESOL Program

The Learning Development Center offers three separate packages for full-time study of the English language.

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 Affairs (NAFSA) guidelines and meet immigration requirements for 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
- 8-10 hours class or individual instruction
- 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 475-2281 (Eastman Memorial Building, 2nd floor, north wing).

Counseling Center

Career and personal counseling, developmental programming, consultation, training, testing and research comprise the Counseling Center functions for RIT students, faculty, and staff. "Any student may see a counselor promptly without charge in our facilities in Grace Watson Hall for assistance in solving a personal issue or in clarifying career plans," states Dr. Donald Baker, director of the Counseling Center. Dr. Baker further emphasized that all counseling information is strictly confidential and will be released only when appropriate and when the written permission of the student is obtained.

Counseling—Personal: While at RIT most students encounter personal problems. At times they may feel anxious, depressed, have difficulties with friends, feel concerned about courses or professors, have questions about sex, be concerned about relationships with parents, or simply have a need to talk with someone in confidence. Talking with one of the nine professionally trained college counselors or joining a counseling group can help students deal with such problems.

Counseling—Career:
For any student who is uncertain of his or her career choice, college major, or career goals, the center provides a variety of services and programs. The counselor can help the student explore the relationships between previous experiences, interests, abilities and values in arriving at realistic career goals. Tests of interests, aptitudes and personality are available to provide more data to aid in self-understanding. The **Career Resource Center** contains a microfiche file of all college catalogs, reference books with information describing career fields, information about undergraduate and graduate schools, and self-help materials to assist with decision making. **SIGI,** a computer-based guidance system, is available to help individuals examine career related values, to teach a systematic process for making decisions, to identify occupational fields that match the student's value profile, and to provide accurate, current, national information on approximately 175 different occupational fields.

Approaches Series:
Throughout the academic year the Counseling Center offers a series of workshops and seminars on various aspects of personal and career development. Examples of recent programs include: assertiveness training, stress management, dealing with life transitions, and career explorations.
Announcements and descriptions of specific programs are printed in a pamphlet distributed under the title *Approaches* at the beginning of each quarter. Similar seminars are offered to interested groups within the residence halls, in conjunction with credit courses, and as part of the Institute's Complementary Education programming.

Student Life Research:
For more than 10 years the center has been gathering data about incoming students in such areas as perceptions of college life, personal and social characteristics, self-esteem, and career development. Additional research has focused on the campus environment, residence halls, and the needs of various student populations. Information obtained through these research efforts is communicated throughout the Institute in the publication titled *Inputs.*

Community Services:
Although the Counseling Center's primary effort is focused on the RIT campus, it has been known in the upstate New York area for the career counseling, testing and consulting services offered over the past 40 years to industry and individuals not associated with the Institute.

The center is an accredited member of the International Association of Counseling Services and adheres to the ethics of the American Psychological Association and the American Personnel and Guidance Association.

Special Services—Student Support Program

The "non-traditional" student at RIT may encounter special problems or need special assistance. The goal of Special Services is to provide the necessary academic and non-academic support that will enable students to realize fully their potential and to complete successfully their chosen college program.

Special Services provides individual and group tutoring, study skills development, academic advisement and reading/writing skills development. Also offered are individual and group counseling, some specialized assistance for handicapped students, (i.e., readers, tapers, orientation) advocacy and Mason with other campus and community resources. Some of the activities featured are:

Career Forums—a series of student conducted workshops facilitated by professionals working in fields of study offered at RIT. Program includes site visits to area industries and complexes.

Achievement Awards Program-an annual dinner to give recognition to and award students for academic or social achievement and to honor graduating members of the program.

Leadership Seminar—a summer component of Special Services in which student leadership potential is enhanced and developed through training workshops, mentorship and practical application.

**Students must have permission from departments offering credit courses.*

Special Services is federally funded under the Department of Health, Education and Welfare-Office of Education. Eligibility for the program is determined by financial, academic or cultural need, physical disability or handicap, or limited English speaking skills. Any student who is a citizen of the United States and meets one of the eligibility requirements may become a member of Special Services.

Central to the program is personal concern for and attention to each student enrolled.

For more information about Special Services, call 475-2832.

Student Health Service

The Student Health Service is on campus to help you make decisions concerning your health, to provide counseling regarding health and medical matters, to treat health problems, and to make referrals to consultants in specialized fields, if necessary.

All medical information is strictly confidential and will not be released without your consent. Exceptions to this rule are made only when reports are required by the public health laws of New York State. Students should submit the Medical History and Evaluation form, as current, complete and honest background medical information is important for us to render proper care.

The health team at Student Health Service consists of primary care physicians, nurse practitioners, registered nurses, consulting psychiatrists, a gynecologist and an emergency medical technician. Professional personnel oriented to the needs of the deaf are included on the staff. Students are seen on a walk-in basis between 8:30 a.m. and 4 p.m. Mondays through Fridays. Between 4 and 4:30 p.m. only emergency care will be provided. From 4:30 p.m. to midnight, Monday through Friday, emergency care is provided in the residence halls by an emergency medical technician.

Self-care programs, such as a Cold Care Center, are being instituted. This Center is located in the residence halls, where students can learn about colds and determine proper treatment.

Health insurance

Expenses for hospital care, consultations, X-rays, and laboratory tests are the responsibility of the individual student. Due to the high cost of such services, it is imperative that they be covered by some sort of health insurance.

A brochure describing benefits of an Institute-sponsored plan is mailed to each student prior to registration. All students are automatically enrolled and billed unless a written refusal and proof of alternate insurance is provided to the bursar.

Student Housing

The residence halls

Students cannot be guaranteed accommodations in the residence halls for more than two years due to current demand for housing. Whenever housing projections indicate the need to do so, a limited 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 on-campus RIT apartments or in apartments near the campus.

The residence halls provide a living environment for approximately 3,500 students. The Department of Residence Halls, as an integral 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 residence hall environment has on the social, academic, educational, and total human development of a student. The aim of the Residence Halls Department is to create an environment that promotes 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 employment 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.

RIT realizes that the student body is not homogeneous and that students exhibit diversity in interests, background, experience, needs and maturity. In recognition of this, a variety of living options is available. Many residence areas are coeducational; men and women living in separate rooms are housed on the same floor. New students are not assigned to a coeducational area unless they specifically request it.

Most residence hall units have double rooms only. However, 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 information on residence halls living by the Department of Residence Halls after they are accepted.

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

Apartment housing

Housing for married as well as certain single students, faculty and staff is available in Institute owned apartments and townhouses. A brochure describing the three complexes, Colony Manor, Perkins Green and Riverknoll, is available from the Married Student Housing Office, 113 Kimball Drive, Rochester, NY 14623; (716) 475-1290.

Orientation and Special Programs

Since the Office of Orientation and Special Programs was created, Ann Hayes, director of Orientation and Special Programs, and a number of students have been chipping away at some of the special student's concerns.

In September of each year, RIT provides incoming students with an orientation program to familiarize them with their new environment. This program includes tours, special workshops, department meetings, parents sessions, and social interaction. The entire week's events beginning after Labor Day is planned and implemented by a volunteer student group known as the "SOS Committee."

One of the new dimensions, which was first begun two years ago because of student

recommendations, is the Summer Transfer and Advisement Program. This special option is offered in June prior to student enrollment in the fall. It is also open to students who may be starting the following Winter or Spring Quarters as well. All students planning to transfer to RIT are encouraged to apply early in order to qualify for this program option.

During the orientation process, students also are provided a student handbook known as ***Facts,*** which contains policies, procedures and helpful survival hints about RIT.

Special attention is given commuter students during the fall orientation program by participation in the two-day commuter live-in. This program provides commuters the opportunity to live in the residence halls for two days and attend special workshops geared to meet their needs as commuters.

In addition to the above, special programs have been developed for married students, international students, and resident students.

The Special Programs aspect of the office concentrates its efforts as a resource area for married students, commuters, and transfer students. This function includes working on an ongoing basis with the representative student groups for the population. Half of the RIT student population consists of commuters.

RIT has an active Commuter Association and a Married Student Organization (married students make up one-third of the commuter population) which have achieved some gains in improving the situation for their constituents. A Commuter Advisory Board and Married Students Coordinating Committee act as liaisons between the office, student organizations, and other administrative offices.

Student committees are exploring academic concerns, social activities, resident-commuter relations, transportation, and communications.

The Commuter Association provides a ride board system to help commuters who want to coordinate car pools.

If commuters want to stay on campus for just one or two nights, there are guest rooms in Greek houses to accommodate them.

Lockers have been installed in the lower level of the College-Alumni Union so commuters have a place to put their belongings. They may register for a locker in the Commuter Lounge.

A new dimension is the Commuter Council started in 1978. The members represent constituents from the various geographic areas of Monroe County. Those interested in becoming members are welcome to apply at the commuter lounge.

Married students living in on-campus apartments receive ***News and Events,*** the Institute newsletter, and ***Reporter,*** the student magazine.

The Talisman Film Festival has scheduled special Saturday afternoon matinees for children of married students.

A commuter-married student lounge was created five years ago and is located in the lower level of the College-Alumni Union. The Commuter Association and the Married Student Organization offices are also located in the lounge area.

Many of the activities for residents and commuters aim to bring the two groups together.

"Each group can learn from the other," believes Ms. Hayes. "The commuter student knows the city and can invite the resident into a home occasionally. The resident student may know the campus better." A commuter host program has been started to encourage commuters to invite residents to their homes during holidays and quarter breaks. The Residence Halls Association and the Commuter Association also host a Winter Quarter Live-In as a follow-up to the Orientation Live-In.

New student orientation

All new Fall Quarter students (freshman and transfer) are required to pay the Orientation Fee of $20. Orientation is a four-to-five day schedule designed to welcome the new student to the RIT community and its services. Orientation includes department meetings, registration, tours, seminars, lectures and various social events.

Student Association

The Student Association 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 Judiciary, which provides for the self-discipline of the student body.

All full-time undergraduate students become members of the RIT Student Association through payment of the Student Association Fee. Part-time, non-matriculated, or graduate students may become members of the Student Association, if they wish to participate in student-sponsored activities, by paying the Student Association 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 cocurricular activities, features the 525-seat Ingle Auditorium; a self-service bookstore; a complete gameroom for bowling, billiards, table tennis; a uni-sex hairstyling 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, Student Affairs, Chaplains, College Activities Board, Student Government Association, WITR Radio Station, Student Television Systems, ***Techmila, Reporter,*** and Commuter Association.

The College Activities Board

The College Activities Board, composed of students, faculty and College Union staff representatives, 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 Fall Weekend, Homecoming, Winter Weekend and Spring 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 department and professional associations, such as Alpha Chi Sigma, Delta Lambda Epsilon, Delta Sigma Pi, Phi Gamma Nu, and Sigma Pi Sigma. Three national sororities and six 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 Association 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 staffs-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 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 black students at RIT. Each year the Committee sponsors various social and cultural programs which are designed to achieve these objectives.

Department of Physical Education

The learning experiences provided through the Physical Education curriculum are an integral part of the total educational experiences and student life activities at RIT. The program consists of an array of courses designed and developed to meet the growing needs and interests of students and the current and future activity trends of society. The focus of the curriculum is to help students develop and maintain fitness, to acquire physical skills in a variety of lifetime activities, and to provide principles and elements for utilizing free time in an enjoyable and constructive manner.

The required courses at RIT are built on the premise that good health and fitness are basic elements in the “pursuit of excellence" in many aspects of campus life.

The curriculum is offered during all academic quarters, including the summer. Registration for classes is conducted in the main gymnasium two days following academic registration from 7 a.m. to 3 p.m.

The courses available include:

Archery
Badminton
Ballroom Dance
Basketball
Basketball (Advanced)
Basketball Officiating
Belly Dance
Bicycling
Billiards
Bowling
Care and Prevention of Athletic Injuries
Conditioning (Women)
Cross Country Skiing
CPR-Multi-Media First Aid
Dance for the Deaf
Diving
Fencing
Field Hockey
First Aid (Advanced)
First Aid (Beginning)
Fishing
Fitness for Life
Golf
Golf (Advanced)
Horseback Riding (English)
Horseback Riding (Western)
Horseshoes
Hunting
Hunting (Predator)
Ice Fishing
Ice Hockey
Ice Skating
Jogging
Judo
Juggling
Karate
Kung Fu
Lacrosse
Life Saving
Modern Dance
Outdoor Living
Racquetball
Scuba Diving (Advanced)
Scuba Diving (Beginning)
Self Defense
Skeet and Trap (Advanced)
Skeet and Trap (Beginning)
Skiing (Downhill)
Soccer
Softball
Swimming
Swimming (Advanced)
Swimming for Fitness
Tennis
Touch Football
Volleyball
Volleyball/Softball
Water Polo
Water Safety Instruction
Weight Training
Yoga

A nominal fee is charged in some courses requiring specialized instruction and/or facilities.

Note:

Courses listed represent those offered during the school year. Not all courses are offered every quarter. Consult the Physical Education Office for quarterly courses.

Requirements for Degrees

For the Baccalaureate Degree
All candidates for the baccalaureate degree enrolled through the day colleges must successfully complete six quarters, or the equivalent of two years, of physical education. This requirement is normally met during the first and second year of matriculation, but may be done at any time.

For the Associate's Degree
All candidates for the associate's degree enrolled through the day colleges are required to successfully complete three quarters or the equivalent of one year, of physical education. This requirement is normally met during the first year of matriculation, but may be done anytime.

Transfer students
All students who transfer to RIT from any other college or university also must comply with the physical education requirements for the associate's and baccalaureate degrees, either at RIT or as transferable credit.

Transfer students who have earned an associate's degree from another institution, and who are required to complete a co-op work assignment, are required to complete only three quarters, or the equivalent of one year, of physical education at RIT.

Intramurals and Recreation

The Intramural Program at RIT provides a wide range of individual and team activities designed to meet the structured and competitive needs of students who do not wish to participate in intercollegiate athletics. This program is a vital part of the recreational opportunities and services afforded to all students to help balance academic endeavors with relaxing and enjoyable leisure time activities.

The Intramural Program is attractive and popular. The activities offered in the program include basketball, volleyball, softball, ice hockey, flag football, swimming, and horseshoes. Information relative to the scheduled times and registration dates for these activities will be posted and announced to the student body.

All indoor and outdoor recreational facilities are available to students for informal, leisure time endeavors during scheduled periods throughout the academic year. Indoor facilities include the 25-yard Edith Woodward Memorial Swimming Pool, a wrestling room, the Frank S. Ritter Memorial Ice Arena, 2 gymnasia (the main, George H. Clark Memorial Gymnasium, and an auxiliary gym); bowling alleys, game and billiard room and the exercise and fitness center. Outdoor facilities feature 12 tennis courts, quarter-mile all-weather track, softball fields and numerous other fields for flag football, soccer and field hockey, baseball and lacrosse.

Daily facility hours for recreation are posted in the Physical Education Building and any changes to the schedule will be posted on the Reservation Board in the lobby of the gymnasium.

Locker facilities are available and may be rented upon payment of a locker gym pass fee.

Athletics

The RIT Tigers are members of the National Collegiate Athletic Association (NCAA), Eastern College Athletic Conference (ECAC), Independent College Athletic Conference (ICAC) and New York State Association of Intercollegiate Athletics for Women (NYSAIAW). The ICAC, which RIT joined in 1971, has seven member schools, including Alfred, Clarkson, Hobart, Ithaca, Rensselaer Polytechnic Institute, St. Lawrence and RIT.

Eligibility for intercollegiate athletic competition is governed by NCAA and ECAC rules. A student must be full-time (minimum 12 quarter hours of credit), day-school enrolled and making satisfactory progress toward a baccalaureate degree.

Intercollegiate competition for men is broken into three quarters. In the fall, the men compete in soccer, cross country, tennis, golf and baseball. During the winter quarter the Tigers compete in basketball, bowling, hockey, rifle, swimming and wrestling. In the spring the Tigers are involved in baseball, golf, tennis, lacrosse and track.

Institute teams have won titles in just about every sport and boast numerous All-American athletes.

Women's intercollegiate competition is growing rapidly. Presently the women compete in volleyball and tennis (fall), and hockey, bowling and swimming (winter). The women are governed by NYSAIAW rules.

Resources for RIT Community Living

Day Care
The Horton Child Care Center is a preschool and 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 6-8. It is open all four academic quarters. The summer quarter has a day camp format and is open to children 2 years 9 months through 8. 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
Those students having automobiles on campus must register these vehicles with the Protective Services Department at the time they first register for classes, or upon bringing the automobile onto campus for the first time. Failure to register a vehicle to be parked on campus will result in a $20 fine for the initial parking infraction. Fines are $10 and $20 and if unpaid, or not otherwise reconciled, are automatically charged to students' accounts.

Protective Services department
There is a professional security and safety staff on duty 24 hours a day, all of whom are Institute employees. 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 or through your family insurance program for personal property casualty experiences away from home.

For on-campus emergencies requiring immediate medical, firefighting, or law enforcement attention, call emergency telephone number 475-3333. For routine matters call extension 475-2853.

Textbooks and supplies
Textbooks, school supplies, art and design supplies, and photographic supplies and equipment may be purchased at the RIT bookstore. Also in stock are general reading material and monogrammed 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 10).

Alumni Association

The RIT Alumni Association is an organization of more than 37,000 graduates and former students of the Institute. All graduates are automatically members.

Its objectives are to advance the growth and development of RIT through individual and group endeavor within industry and the community; 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; a bi-monthly publication for alumni; free use of the library and athletic facilities (with ID card); help from the Central Placement Office in locating a job; and many social events, including Homecoming.

There are also many programs within which alumni work with the Institute's various departments. These include admission, placement, and alumni-student interaction programs. Alumni in many metropolitan areas throughout the country are participating 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.

Through the direction of the Alumni Affairs Office, the Alumni Association provides the organization through which alumni may assist the financial development of the Institute. The aid is channeled through the Alumni Annual Fund, which provides support for the operations of the Institute.

The Office of Alumni Relations, located on the fourth floor of the George Eastman Building, 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 clearing house for all alumni activities. Alumni are always welcome at this office.

Educational Support and Development Seeks To Improve Quality of Learning

The Educational Support and Development Division is made up of three areas whose goal it is to improve the quality and effectiveness of learning and instruction at RIT by providing a full scope of media-related resources.

Specific functions of the areas include: instructional, curriculum, and faculty development projects (Office of Instructional Development); provision and production of audiovisual instructional materials and the provision of equipment, facilities and assistance required by faculty and students in their use (Instructional Media Services); and selecting, distributing, and providing bibliographic services for the instructional use of existing printed materials (Wallace Memorial Library).

Instructional Media Services

Reno Antonietti, Director

Instructional Media Services provides a complete range of audio-visual support services to faculty and students. IMS consists of a television center, production services, audio-visual 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. All standard video-tape formats are available ranging from two inch broadcast to half-inch and 3/4 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 video tapes on a wide variety of subjects and has access to video tape libraries throughout the country.

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 cudio.

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 non-print media and audiovisual equipment for individual student use. In addition, the center contains an outstanding collection of over 70,000 slides as well as viewing facilities for the collection of approximately 500 motion picture prints. Videocassette playback equipment is also available for individual use.

Instructional Development works to improve instruction

Lawrence W. Belle, Director

Instructional Development's primary goal is to search out and implement ways of improving the overall process of instruction at RIT. This is approached through cooperative planning, design, implementation, and evaluation of a variety of learning systems appropriate to the Institute.

Through the Institute's Committee on Projects Relating to Productivity, Instructional Development provides support for all approved projects designed to improve the quality of undergraduate instruction. Part of this support includes helping applicants prepare projects before they are funded and assisting in their implementation.

In support of the Committee for Effective Teaching, Instructional Development participates in faculty development programs and also provides academic counseling at the personal request of a faculty member. The office also provides individual consultation to faculty members interested in such areas as: the specification of course objectives, test measurement, evaluation techniques, and visualized instruction.

Wallace Memorial Library

Gary MacMillan, Director

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 microform collection and the greatest use of non-print media of any area college library, reports Gary MacMillan, library director.

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 900 student study stations, including individual study carrells and group study rooms.

During the year student work in art and photography is exhibited in display gallery areas. Outstanding student art work is permanently displayed within the building. And there are several lounge areas throughout.

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. Supplementing the main library is the Graduate Chemistry Library.

The regular hours for the library are: Monday - Friday, 8 a.m.-11 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.

"We're a pretty advanced library, technologically speaking," MacMillan says.

"Books are losing some of their importance and other media are taking over. .. there's a growing awareness here that there are other ways to get information than from the printed word," he emphasizes.

And so, Wallace Library has phased out the traditional card catalog in favor of both a microfiche system and an on-line catalog of its holdings. "The entire card catalog can now be held in a notebook," MacMillan says, "or can be searched from any computer terminal."

"A library doesn't mean just books anymore," he says. "It's a collection of information kept in the way that's easiest to retrieve."

Career Decision

The Career Decision Program has been designed for first-year college students interested in an opportunity to explore several career fields before making a decision about a particular career objective.

Upon graduation from high school, many students feel that it is premature to identify a specific field in which to major in college. Rather, they may see themselves as tending toward a number of occupations, often of a similar nature.

The Career Decision Program has been designed to permit such students to sample introductory and foundation courses related to clusters of occupations, to explore particular occupations experientially, to gain an understanding of the nature of and variety of careers in several cluster areas, and to gain a better understanding of themselves in relation to career decision making.

Upon completion of their year in the Career Decision Program, students will be expected to select a degree program from among the many RIT programs offered at the Rochester and Eisenhower campuses. All students participating in the RIT Career Decision Program will spend the 1980-81 academic year at the Eisenhower campus in Seneca Falls.

The Eisenhower campus provides an ideal setting for this kind of study. The small intimate atmosphere allows students the opportunity of exploring one or more specialized career fields, obtaining a year of college credit, and receiving individual professional career guidance.

In RIT's Career Decision Program, a student who is not yet certain of his or her college major takes special courses for career exploration and, at the same time, gets intensive career counseling. The program's basic objective is to enable a student to make a sound career choice by the end of his or her first year of college.

At the end of the academic year students will be eligible to transfer to degree programs at either the Rochester or Eisenhower campus with a minimum of difficulty. Career Decision builds on the liberal arts tradition of Eisenhower College and the career orientation of RIT.

Program Design

During their year in the Career Decision Program, students will take five courses each semester. Courses to be scheduled will include rhetoric, career decision seminars, general education courses, arid electives chosen from cluster areas (see Table A for a program outline). Additionally, students will be expected to take physical education during the fall and spring terms and to satisfactorily complete the January interim study term.

The four clusters identified in the table of program clusters (Table B: Career Decision Program Clusters) represent occupational fields developed by combining related programs of study currently available at the Rochester and Eisenhower campuses of RIT. Among these cluster areas are:

- Science, Technology, and Engineering
- Business and Management
- Human Services and Community Studies
- Liberal Arts and Pre-Professional

Each student entering the Career Decision Program will identify one of the four clusters to focus his or her exploration. With the assistance of an assigned adviser, the student will select courses each term that relate to the chosen cluster area.

Each student will be required to take Rhetoric 130 in the Fall term and take Rhetoric 140 in the Spring term. Those students in the liberal arts and pre-professional cluster will be required to take the World Studies Core. Those students in the other cluster areas will either take the World Studies core or one or two courses chosen from among those offered in the humanities, social sciences, and natural sciences to fulfill the general education component of their freshman year.

Table A

Proposed Program of Study

Fall Term	January Term**	Spring Term
Career Decision Seminar course (Part I (3 credits)	Special Projects	Career Decision Seminar course Part II (3 credits)
*Rhetoric (3 credits)	Field Experience	*Rhetoric (3 credits)
General Education (3-6 credits) World Studies recommended or 100 and/or 200-level courses selected in consultation with adviser.	Seminars	General Education (3-6 credits) World Studies recommended or 100 and/or 200-level courses selected in consultation with adviser.
Physical Education (0 credits)		Physical Education (0 credits)
Exploratory course work in Cluster areas. (3-9 credits)		Exploratory course work in Cluster areas. (3-9 credits)

Total credit hours per term will be 12-18.
**Required of all students: Examination will determine placement level.*
***Some academic credit may be granted.*

Career Decision Seminar

The Career Decision Seminars are fundamental to the Career Decision Program. Offered in both the Fall and Spring terms the seminars' goals include:

- To increase students' decision-making skills as they relate to career choice.
- To increase students' knowledge and awareness of the nature and variety of career opportunities related to the major career cluster areas.
- To enable students to arrive at a tentative educational/career decision.
- To increase students' communication and observation skills to enhance learning outcomes from their January Interim Study Term (JIST)

To achieve the goals of the seminars, supplemental lectures will be offered. The lectures are designed to increase the students' knowledge and awareness of the nature and variety of career opportunities related to the cluster areas. Weekly lectures will cover such topics as:

- Career decision-making resources on campus
- locating occupational source material
- Career opportunities in the specific fields
- The employment market
- Careerscapes: A look at the 80s
- Resume writing
- Interview strategies
- Creative job search

Table B

Career Decision Program Clusters

Cluster Areas	Suggested Courses	Programs of Study Available*
Science/ Technology/ Engineering	Calculus Biology Chemistry Physics Computers Biochemical science Statistics	Engineering (Electrical, Industrial, Mechanical) Pre-Pharmacy Computer Science & Technology Biology Chemistry Physics Packaging Management and Technology Mathematics Interdisciplinary science** Environmental studies**
Business/ Management	Economics Accounting Math Management Concepts Computers Statistics Political Science	Accounting Business Administration Photo Marketing Retailing Packaging Management Managerial Economics** Public Policy (Political Science)**
Human Services/ Community Studies	Psychology Sociology Social Work Criminal Justice Statistics Supervised Field Studies Anthropology	Social Work Criminal Justice Community Studies***
Liberal Arts/ Pre-Professional	Art History Music Writing Theatre Arts Philosophy Psychology Sociology Anthropology Math Science Foreign Languages	Pre-Pharmacy Pre-Law Pre-Theology Pre-Journalism Pre-Med International Relations Community Studies*** Humanistic Studies (theatre arts, art, history, literature, music, philosophy)

**Check catalog to see if program is available at the Eisenhower or Rochester campus.*
***Also available under liberal arts/pre-professional cluster.*
****Community Studies is comprised chiefly of courses from psychology, sociology and anthropology. Other social science courses may be included as appropriate. Students completing community studies are prepared for entry into community health services, social services and criminal justice fields.*

The January Experience

Eisenhower currently utilizes the January term to permit students to become involved in planned experiences off campus or to participate in seminars on campus. Consequently, Career Decision students will fulfill the experiential component of the program during this January term. The following are among those options available to students during January.

The Field Experience
Within the Career Decision Seminar offered during the fall term the students will be assisted in identifying and securing appropriate field experiences. Typically, a student will work closely with a faculty member and/or an off-campus mentor in a public or private organization. Through the experience, students should gain a better understanding of the work activities in a particular career field and setting.

The Interview Experience
Students may identify a number of individuals to be interviewed concerning the nature of their work, training and background, and other questions of interest to the student.

Seminars
Special seminars may be developed on the Rochester campus, especially in those fields with limited labs and equipment at the Eisenhower campus. Students might work with a faculty mentor in an experiential learning situation.

Application Procedures

Candidates for the Career Decision Program may apply by using either the RIT or Eisenhower College application forms. Applications will be reviewed and notification regarding acceptance will be mailed to all candidates from the Admissions Office at the Eisenhower Campus.

Eisenhower employs a “rolling admission” plan, so decisions regarding acceptance are made as soon as the application for admission, supporting SAT or ACT scores, and appropriate transcripts are received. Candidates are notified as soon as decisions are made.

Since enrollment is limited, early application is advised. Applicants also are urged to plan a campus visit and interview at Eisenhower, which may be arranged by calling or writing

Office of Admissions
Eisenhower College
Seneca Falls, N.Y. 13148
(315) 568-7411

Information may also be obtained from

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

College of Business

Walter F. McCanna, Dean

The College of Business is composed of the School of Business Administration, the School of Retailing, and the Department of Food Administration and Tourist Industries Management. The programs reflect the world of business, which has become increasingly complex, and advance new theories with business application. Ideas that were not even formulated five years ago are viewed as routine today. New knowledge is constantly evolving that must become part of the student's education. While incorporating this new knowledge into the program, it is also important that the student's education have lasting value.

Physical facilities include well-appointed classrooms and laboratories and modern equipment. Student learning is extended further through other facilities, including an up-to-date and complete library of books and periodicals, as well as through use of television, films, professional speakers and field trips, applicable to the various fields of study.

Curricula in the College of Business have been improved significantly during the past decade.

The Institute's business programs now allow greater flexibility; there are many more elective courses from which a student may choose.

The College of Business has 1,660 students and 50 faculty members.

Besides the upgrading of the curricula, there have been other developments during the recent past. Such developments as taking significant steps to revitalize the retailing and food-tourism programs and progress toward establishing a good learning center in the college.

However, along with these new directions, the college is maintaining its commitment to focus on the applied aspects of business subject matter rather than the theoretical only.

Accreditation and professional memberships

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.

Graduates who earn a BS degree with a major in general dietetics in the Department of Food Administration and Tourist Industries Management are qualified to apply for American Dietetic Association internships. Graduates of the coordinated dietetics program meet both the academic and clinical requirements for membership in the American Dietetic Association.

Memberships in professional organizations contribute to the quality of the programs in the College of Business. The School of Business Administration maintains membership in the American Association of Collegiate Schools of Business Assembly and the Middle Atlantic Association of Colleges of Business Administration. Programs in the Department of Food Administration are recognized by the American Dietetic Association. The School of Retailing is a member of the American Collegiate Retailing Association, an organization to promote the profession of retail management and to maintain high standards of education for the retail profession.

The plan of education

Each program within the College of Business includes a "core group" of business subjects in addition to courses in communications, social studies and the humanities. This provides for an understanding of the complex relationships existing within the business organization. The student also concentrates in-depth in a particular subject area, with each successive course built upon accumulated knowledge and skills, providing a challenge equal to the student's capabilities.

Cooperative employment is an integral part of the program in the College of Business. Linder the supervision of the director of cooperative education, each student obtains up to four quarters of practical work experience in varied phases of his or her field of interest, not limited to the local area. Every effort is made to help students find a position that will further their career goals. Since this work experience is related to the student's total career objective, the students gain more stimulation from class work and are prepared to assume some increased responsibility during successive work periods. The students also develop judgment and initiative, keener understanding of their major field and the special phases which interest them, and greater possibility of moving more rapidly toward their goals after graduation.

The cooperative plan

Cooperative employment arrangements for students in BS degree programs are made prior to the summer quarter of the second year. Students are then assigned to A and B Sections; students in Section A work on their cooperative jobs in the Summer Quarter while those in Section B attend classes. The two sections interchange at the beginning of the Fall Quarter of the third year when students in Section A attend classes and those in Section B are cooperatively employed. This interchange of study-work periods continues until the Summer Quarter of the fourth year when both groups attend classes.

Transfer students are required to complete a minimum number of cooperative employment quarters which are determined by evaluation of the individual's record and program.

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 2.0 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 field education assignments for the program.

Transfer programs

Junior standing will be granted to qualified students from accredited institutions who possess an associate's degree or its equivalent and who wish to continue their education for the baccalaureate degree. Students interested in business administration, retailing, or food management may complete all requirements for the BS degree in two years, which includes six academic quarters and two quarters of cooperative employment.

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 two quarters of approved cooperative education assignments.

Cooperative education plan

	Fall	Winter	Spring	Summer
1st year	RIT	RIT	RIT	Vacation
2nd year	RIT	RIT	RIT	RIT
				"A" Work
3rd year	"B" Work	RIT	"B" Work	RIT
	RIT	"A" Work	RIT	"A" Work
4th year	"B" Work	RIT	"B" Work	RIT
	RIT	"A" Work	RIT	RIT

Due to the special requirements of the accounting program and the dietetics program, the amount of transferable credit and the estimated time to complete work for these degrees must be determined by evaluation of each individual's record. In every instance, however, it is the policy of the college to recognize as fully as possible the past academic accomplishments of each student.

Graduate programs

The College of Business offers master's degree programs in business administration and accounting on a part-time and full-time basis.

The programs are professional in nature and acquaint the student with 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 15-16 of this Bulletin.

The major programs in this college are: accounting, business administration, retailing food administration and tourist industries management, and photo marketing.

All faculty in the college have outstanding academic and practical experience. They are aware of the newest theories and application ideas in their areas of expertise. The Co-op program is especially strong. This helps graduates get jobs.

Accounting—Graduates of the public accounting option meet candidacy requirements for the C.P.A. examination. There is a general accounting option for students who desire a broader and more flexible range of accounting and business electives. Degrees granted: AAS-2 year; BS-4 year.

Business Administration—Provides business basics in accounting, management, mathematics, economics, computer science, and behavioral science. Students may select concentrations in finance, management or marketing. Degrees granted: AAS-2 year; BS-4 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 Tourist Industries Management option develops comprehensive managerial skills for the rapidly expanding field of tourism. 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.

Retailing—Prepares students for five broad areas within the retail field: merchandising, operations, finance, personnel, and sales promotion. These competencies will help graduates achieve middle and upper-middle management positions after some years of on-the-job experience. Degrees granted: AAS-2 year; BS-4 year.

Photographic Marketing Management-Designed to provide students with knowledge of the photographic process in combination with the economic, financial, and marketing principles necessary to establish and maintain a photographic wholesale or retail business. Degrees granted: 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 grade point average
Accounting	Elem. Algebra; Inter. Algebra; 1 year any science	Additional mathematics and science		2.0
Business Administration	Elem. Algebra; Inter. Algebra; 1 year any science	Additional mathematics and science	Business administration, marketing, or any associate in arts, science or applied science graduate. This is an excellent opportunity for two-year liberal art graduates to enter a career-focused field.	2.0
Food Administration and Tourist Industries Management	Elem. Algebra; Inter. Algebra; 1 year chemistry preferred	Additional mathematics and science	Food service administration; hotel-motel management or equivalent.	2.0
Dietetics	Elem. Algebra; Inter. Algebra; 1 year chemistry preferred	Biology; additional mathematics	Hospital dietetics or equivalent.	2.0
Retailing	Elem. Algebra; Inter. Algebra; 1 year any science	Business; art and speech courses	Retailing; retail merchandising or equivalent.	2.0
Photographic Marketing Management	Elem. Algebra; Inter. Algebra; 1 year chemistry preferred	Additional mathematics and science	Business administration; marketing or equivalent.	2.0

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.

Business Administration

Objectives

The basic objective of the School of Business Administration is to create and provide experiences which lead to the continuing growth of the individual in achieving his or her occupational, social, and personal goals. The programs offered provide for an understanding of the concepts essential to competence in business management.

To provide an education that will allow the graduate to perform and grow in this dynamic and complex field of business, the programs in the School of Business Administration are designed to: (1) make students aware of the world about them; (2) open and stimulate students' minds to initiate-and welcome-new ideas and techniques; (3) provide mastery in a marketable skill.

Programs of Study

Accounting

The field of accounting provides many opportunities for successful and rewarding careers. The Certified Public Accounting major has been registered with the State Education Department of New York which means that graduates meet the requirements for candidacy for the Certified Public Accountant examination. Additionally, appropriate cooperative work experiences qualify as part of the experience requirement for certification.

Students interested in the Certificate in Management Accounting (CMA) or in careers not requiring the CPA background are advised to choose the General Business Administration program with appropriate elective courses in accounting to meet those special interests.

Certified Public Accounting major

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	BBUA-210 Financial Accounting		4	
	BBUA-211 Managerial Accounting			4
	BBUB-201 Management Concepts	4		
	BBUQ-291, 292 Math I & II	4	4	
	GSEE-301, 302 Economics I & II	4	4	
	ICSS-200 Survey of Computer Science			4
	*General Studies Electives-Lower Division	4	4	8
	‡Physical Education Elective	0	0	0
Second Year †	BBUA-308, 309, 310 Intermediate Accounting I, II, III	4	4	4
	BBUB-301 Business Law I			4
	BBUB-401 Behavioral Science in Management	4		
	BBUM-263 Marketing Principles	4		
	BBUQ-351, 352 Statistics I, II		4	4
	Science Electives		4	4
	*General Studies Electives-Lower Division	4	4	
	‡Physical Education Elective	0	0	0
Third Year		Su/Fall	Wtr/Spr	Su
	BBUA-420 Cost Accounting	4		
	BBUA-422, 424 Tax Accounting I, il	4	4	
	BBUB-320 Business Law II	4		
	BBUF-441 Financial Management		4	
	*General Studies Electives-Upper Division	5	10	
Fourth Year	BBUA-504 Auditing	4		
	BBUA-505, 506 Advanced Accounting I, II		4	4
	BBUB-404 Administrative Policy			4
	BBUF-503 Financial Problems			4
	BBUB-434 Operations Management	4		
	BBUE-405/406 Micro/Macroeconomics		4	
	GLLC-402 Conference Techniques	4		
	Business Elective		4	.
	*General Studies Electives-Upper Division	5	5	5

†Upon successful completion of the second year, the associate in applied science degree is awarded.
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.

Business Administration

The purpose of the business administration program is to create a total experience in which students develop abilities, knowledge, and attitudes which will help them perform as competent and responsible business administrators. The core curriculum is designed to give the student a basic competence in accounting, economics, finance, marketing, behavioral science, production management, and the administrative process. Toward the end of the second year, the student is encouraged to identify an area of concentration - a field in which he or she plans to exercise the administrative skills.

The elective course options allow the student to concentrate study in accounting, economics, finance management or marketing. The extensive offerings in all these fields permit the student to gain in-depth knowledge which will provide a solid foundation for career development.

Additionally, the program permits the student with special career interests to combine the study of business administration with other areas - such as retailing, food administration, hotel and tourist management, computer science or photography, to name just a few. Program counseling is available to assist developing a program designed for such special combined interests.

Business Administration major

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	BBUA-210 Financial Accounting	4		
	BBUA-211 Managerial Accounting		4	
	BBUB-201 Management Concepts			4
	BBUQ-291, 292 Mathematics	4	4	
	BSEE-301, 302 Economics I, II		4	4
	ICSS-200 Survey of Computer Science			4
	*General Studies Electives-Lower Division	8	4	4
	‡Physical Education Elective	0	0	0
Second Year †	BBUQ-351, 352 Statistics I, II		4	4
	BBUB-401 Behavioral Science in Management			4
	BBUE-381 Money and Banking	4		
	BBUM-263 Marketing Principles	4		
	Business Electives		4	8
	*General Studies Electives-Lower Division	4	4	
	Science Electives	4	4	
	‡Physical Education Elective	0	0	0
Third Year		SRorF		WorS
	BBUB-434 Operations Management	4		
	BBUE-405, 406 Micro or Macroeconomics	4		
	BBUF-411 Financial Management			4
	Business Electives	4		8
	*General Studies Electives	5		5
Fourth Year		SR orF	WorS	SR
	BBUB-404 Administrative Policy			4
	BBUB-407 Environment of Business Activity		4	
	Business Electives	4	8	8
	*General Studies electives	10	5	5
	GGLC-402 Conference Techniques	4		

†Upon successful completion of the second year, the associate in applied science degree is awarded.
*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.

Two-year transfer program

Students who have earned an associate's degree in business administration may be considered for the transfer program designed to permit such students to complete the requirements of the BS degree in six academic and two cooperative education quarters.

This program is structured to maximize the opportunity for the transfer student to elect courses that will enhance his or her own individual career interests.

Two-year transfer program: Business Adminstration
(For associate's degree graduates in business)
(A minimum of 102 quarter credit hours must be completed at RIT in order to qualify for the BS degree.

Third Year	BBUE-405, 406 Micro or Macro Economics			4
	BBUF-441 Financial Management			4
	BBUQ-410, 411 Quantitative Methods I, II	4	4	
	Business Electives	4	4	4
	*General Studies Electives-Upper Division	5	5	5
	Science Electives	4	4	
	‡Physical Education Elective	0	0	0
Fourth Year		SRorF	WorS	SR
	BBUB-404 Administrative Policy			4
	BBUB-407 Environment of Business Activity		4	
	BBUB-434 Operations Management	4		
	Business Electives	4	8	8
	*General Studies Electives-Upper Division	5	5	5
	GLLC-402 Conference Techniques	4		

‡See Pg. 27 for Policy on Physical Education.
*A minimum of six upper level General Studies courses (30 quarter credit hours) must be taken at RIT. See Pg. 64 for General Studies requirements.

Note: A minimum of eight quarter credit hours of science must be earned. If science transfer credit is allowed, the student must take a comparable number of hours in either business or general studies. Transfer students with insufficient background in accounting, economics, management and/or marketing will be required to take the following courses in place of business electives: Financial Accounting: BBUA-210, 211; Economics: GSSE-301 and/or 302: Management: BBUB-201; Marketing: BBUM-263.

Business electives
(Each gives 4 Quarter Credit Hours)
The following courses are open to accounting, business administration, retailing and food, hotel, tourist management students having the necessary prerequisite courses.

Business electives

Accounting
- BBUA-420 Cost Accounting
- BBUA-422 Tax Accounting
- BBUA-423 C.P.A. Problems
- BBUA-504 Auditing
- BBUA-505 Advanced
- 506 Accounting I, II
- BBUA-554 Seminar in Accounting

Economics
- BBUE-407 Managerial Economics
- BBUE-408 Business Cycles and Forecasting
- BBUE-443 Recent Economic Policies
- BBUE-509 Advanced Money and Banking
- BBUE-530 Labor Economics
- BBUE-554 Seminar in Economics

Finance
- BBUF-502 Money and Capital Markets
- BBUF-503 Financial Problems
- BBUF-504 International Finance
- BBUF-507 Security Analysis
- BBUF-508 Portfolio Management
- BBUF-510 Financial Institutions
- BBUF-554 Seminar in Finance

Management and Quantitative Methods
- BBUB-450 Multinational Management
- BBUB-531 Labor Relations
- BBUB-534 Purchasing
- BBUB-535 Planning and Decision Making
- BBUB-536 Organization Theory
- BBUB-547 Small Business Administration
- BBUB-554 Seminar in Management
- BBUQ-353 Statistics III
- BBUQ-481 Mathematics

Marketing
- BBUM-420 Consumer Behavior
- BBUM-510 Consumer Services Analysis
- BBUM-550 Marketing Management Problems
- BBUM-551 Marketing Research
- BBUM-552 Advertising
- BBUM-553 Sales Management
- BBUM-554 Seminar in Marketing
- BBUM-555 International Marketing
- BBUM-556 Marketing Logistics
- BBUM-557 Comparative Marketing

Photo Marketing Management
This program of study in photographic marketing is designed to provide students with a thorough knowledge of the photographic process in order that they may have an understanding of how their products work. At the same time, they will be involved in learning the economic, financial and marketing principles necessary to successfully establish and maintain a prosperous photographic wholesale or retail business.

This four-year baccalaureate program is directed towards marketing, merchandising, promotion and personnel management in the photographic dealer industry; however, those choosing to terminate after two years are awarded an AAS degree and should qualify for a store manager's position.

Photographic Marketing Management major

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	PPHM-201, 202, 203 Basic Principles of Photography	4	4	4
	BBUB-201 Management Concepts	4		
	BBUQ-291, 292 Math	4	4	
	BBUA-210 Financial Accounting		4	
	BBUA-211 Managerial Accounting			4
	ICSS-200 Survey of Computer Science			4
	*General Studies (Lower Division)	4	4	4
	‡Physical Education Elective	0	0	0
Second Year †	BRER-211 Retail Organization/Management	4		
	BRER-212 Principles of Merchandising			4
	BRER-410 Retail Sales Promotion		4	
	BBUB-401 Behavioral Science in Management			4
	GSSE-301, 302 Economics I & II	4	4	
	BBUM-263 Marketing			4
	PPHM-320, 321 Mechanics of Hardware I & II	4	4	
	*General Studies (Lower Division)	4	4	4
	‡Physical Education Electives	0	0	0
Third Year	BBUQ-351, 352 Statistics I & II	4	4	
	BBUE-405 or 406 Micro/Macro Economics	4		
	BBUM-420 Consumer Behavior			4
	BBUE-381 Money & Banking		4	
	BBUF-441 Financial Management			4
	PPHM-310 Survey of Production Processing and Finishing		2	
	Professional Electives	4		4
	*General Studies (Upper Division)	5	5	5
Fourth Year	BBUB-434 Operations Management	4		
	BBUM-552 Advertising		4	
	BBUM-553 Sales Management			4
	BBUB-407 Environment of Business Activity	4		
	BBUB-404 Administrative Policy			4
	Professional Electives	4	8	4
	*General Studies (Upper Division)	5	5	5

**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
†Upon successful completion of second year, the associate of applied science degree is awarded.
Total of 196 quarter credit hours is required for the BS degree.
It is recommended that students seeking the baccalaureate degree spend the summer of their junior year in a work block-type program.
Professional electives may be selected from either the College of Business or School of Photographic Arts and Sciences, in consultation with advisor.
Refer to School of Photographic Arts and Sciences for descriptions of photography courses.

Food Administration, Tourist Industries Management Teaches Sophistication and Vital Efficiency

George T. Alley, Director

RIT's Department of Food Administration and Tourist Industries 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 department dictates 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 sophomore and senior years-more than any other four year hospitality management program in the country. The work-study program provides financial assistance, stimulates classroom experience and serves as a preview for determining career direction in the industry.

Objectives

It is the mission of the Department of Food Administration and Tourist Industries Management 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,
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

The Food Service Administration program is designed to prepare persons for managerial positions in restaurants and food service operations of differing types of institutions such as hotels, schools, business firms, and governmental agencies.

The hotel and tourist industries management program option is aimed at developing comprehensive managerial skills for the rapidly expanding and complex field of tourism.

General dietetics is a well defined and structured professional program for persons interested in pursuing a career in the administrative and/or therapeutic aspects of food and nutritional needs in health care facilities.

Food Service Administration

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	BFAM-215 Food Principles	5		
	SSEG-202 Contemporary Science		4	
	BFAM-210 Introduction to Food Management/ Tourist Industries	3		
	BFAM-220 Career Seminar	1		
	BBUQ-291 Mathematics		4	
	SBIG-210 Microbiology in Health and Disease	4		
	BBUB-201 Management Concepts		4	
	BFAD-213 Nutritional Principles			4
	BBUA-210 Financial Accounting			4
	ICSS-200 Survey of Computer Science			4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year†	BFAM-321 Food & Beverage Merchandising	2		
	BBUB-401 Behavioral Science in Management	4		
	BBUQ-351, 352 Statistics I, II	4	4	
	BFAM-331, 332 Food Production Management I, II		5	4
	GSSE-301, 302 Economics I, II		4	4
	BBUM-263 Marketing Principles			4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
		SR/F	w/s	SR
Third Year	BFAM-415 Food Science I	4		
	BBUB-434 Operations Management	4		
	BBUF-441 Financial Management		4	
	BBUB-531 Labor Relations		4	
	GLLC-402 Conference Techniques		4	
	Food/Business Electives	4		
	* General Studies Electives-Upper Division	5	5	
Fourth Year	BBUB-407 Environment of Business Activity	4		
	BFAM-511 Advanced Food Service Operations		4	
	BBUB-404 Administrative Policy			4
	Food/Business Electives	8	8	8
	*General Studies Electives-Upper Division	5	5	10

**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
See Pg. 34 for Policy on Co-op requirements.
†Upon successful completion of the second year, the associate in applied science degree is awarded.

Hotel and Tourist Industries Management Option

The hospitality service industries employ more people than any other industry in the nation. These industries cover the wide scope of public feeding, lodging and tourism. During the first two years, emphasis in the program is upon basic course work which is common to food operations and is directed at those aspiring to managerial positions in restaurants, hotels, motor lodges, resorts, clubs, airlines, colleges and schools, and other types of accommodation businesses. In the third and fourth years, students may elect either the Food Service Administration or Hotel and Tourist Management option according to their career directions.

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 one of those years.

The Hotel and Tourist Industries Management option is a professionally oriented curriculum for students seeking careers involving the development, management, and operation of hotel, tourist 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.

Opportunities
Our nation is now a service economy which means that the majority of employment opportunities will be service oriented. The food service area 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 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 Administration and Hotel/Tourism
Students who possess an associate's degree or its equivalent in related fields from accredited institutions and are interested in continuing their education for the baccalaureate degree in food administration and tourist industries may enter with junior standing and complete the BS degree in two years.

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.

Hotel and Food Options
For Food/Hotel/Tourism majors, concentrations may be developed in Marketing, Accounting and Finance, or Tourist Industries. These concentrations can be created by selecting from the following list of elective courses:

Marketing
BBUM-420 Consumer Behavior
BBUM-510 Consumer Services Analysis
BBUM-551 Marketing Research
BBUM-552 Advertising
BBUM-553 Sales Management
BBUM-555 International Marketing

Accounting & Finance
BBUA-211 Managerial Accounting
BBUA-308, 309, 310 Intermediate Accounting I, II, III
BBUA-503 Financial Problems
BBUF-554 Seminar in Finance

Students may either specialize in or combine areas of food, lodging or resort and recreation management.

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 and 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.

You may become a__

Clinical dietitian
You will be a member of the health care team which may include physicians, dentists, nurses, psychologists,medical social service workers, and others. Hospitals, clinics, and other health care facilities require your professional services. You will assess nutritional needs, develop individualized dietary plans and provide dietary counseling. In an organization that provides foodservice, you cooperate and coordinate activities with the department management team.

Administrative dietitian
You will be a member of the department's management team responsible for the food service systems that provide optimal nutrition and quality food. You will establish and maintain standards of food production and service, sanitation, safety and security. You will administer personnel policies and plan orientation and inservice educational programs. You will develop menu patterns and evaluate their acceptance. You will develop specifications for buying food, equipment and supplies. Your services are sought by hospitals, universities, schools, industries and

other institutions providing group foodservice.

Community dietitian
You will function as a member of the community health care team. Your job is to plan and coordinate the nutritional aspects of improved health and the prevention of disease. You will counsel individuals and/or families in nutritional principles, food selection and economics, and adapt teaching plans to a client's lifestyle. You can work for a variety of community organizations and government agencies which may include day care centers, public health facilities and others.

With additional work experience and/or advanced degrees, you may work as a dietetic consultant, research dietitian or teach in the field of dietetics.

Programs
The Department of Food Administration and Tourist Industries 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.

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 Dietitian (R.D.) need to have an approved clinical experience and pass the qualifying comprehensive examination of the American Dietetic Association.

Hotel and Tourist Industries Management option

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	BFAM-215 Food Principles	5		
	SSEG-202 Contemporary Science		4	
	BFAM-210 Introduction to Food Management Tourist Industries	3		
	BFAM-220 Career Seminar	1		
	BBUQ-291 Mathematics		4	
	SBIG-210 Microbiology in Health and Disease	4		
	BBUB-201 Management Concepts		4	
	BFAD-213 Nutritional Principles			4
	BBUA-210 Financial Accounting			4
	ICSS-200 Survey of Computer Science			4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year†	BFAM-321 Food & Beverage Merchandising	2		
	BBUB-401 Behavioral Science in Management	4		
	BBUQ-351, 352 Statistics I, II	4	4	
	BFAM-331, 332 Food Production Management I, II		5	5
	BSSE-301, 302 Economics I, II		4	4
	BBUM-263 Marketing Principles			4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Third Year		SR orF	W or S	SR
	BFAM-423 Management Systems for Lodging and Tourist Industry	4		
	BBUB-434 Operations Management	4		
	Hotel/Business Elective	4		
	BBUF-441 Financial Management		4	
	GLLC-402 Conference Techniques		4	
	*General Studies Electives-Upper Division	5	10	
Fourth Year	BFAM-450 Marketing for Hotel & Tourist Industries		4	
	BBUB-407 Environment of Business Activity	4		
	BFAM-554 Seminar in Tourist Industries		4	
	BFAM-511 Advanced Food Service Operations		4	
	BBUB-404 Administrative Policy			4
	Hotel/Business Electives	8		8
	*General Studies Electives-Upper Division	5	5	5

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.
See Pg. 34 for Policy on Co-op requirements.
†Upon successful completion of the second year, the associate in applied science degree is awarded.

Tourist Industries

BFAH-400	Tourist Enterprises
BFAH-401	Ski Resort Management
BFAH-402	Marina Management
BFAH-403	Golf Course Management
BFAH-404	Campground Management
BFAH-405	Theme Park Management
BFAH-411	Problem Analysis & Decision-Making for the Tourist Industries
BFAH-412	Maintenance & Operation of Tourist Resort Properties
BFAH-406	Resorts, Clubs and Vacation Communities
BFAH-410	Tourist Consumption Analysis

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 Department of Food Administration 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
- Microbiology
- General and Organic Chemistry
- Biochemistry I
- Physiology
- Management Courses:
  - Mathematics, Accounting and Statistics
  - Economics
- TOTAL of 24 credit hours of General Studies (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 preprofessional 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.

Dietetics and Nutritional Care programs (common curriculum, first two years)

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	BFAM-215 Food Principles	5		
	**SCHG-201 General Chemistry	3		
	**SCHG-211 General Chemistry-Lab	1		
	BBUA-210 Financial Accounting	4		
	BBUQ-291 Mathematics		4	
	**SCHG-202 Organic Chemistry		3	
	"SCHG-212 Organic Chemistry-Lab		1	
	BBUB-201 Management Concepts		4	
	**SCHG-203 Biochemistry			4
	BFAD-213 Nutritional Principles			4
	ICSS-200 Survey of Computer Science			4
	General Studies-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year†	SBIG-210 Human Microbiology/Disease	3		
	SBIG-220 Human Microbiology/Disease-Lab	1		
	BFAM-321 Food & Beverage Merchandising	2		
	BBUB-401 Behavioral Science	4		
	**SCHG-204 Biochemistry	4		
	BBUQ-351, 352 Statistics I, II		4	4
	GSSE-301, 302 Economics I, II		4	4
	**SBIO-305, 306 Anatomy & Physiology		4	4
	*General Studies-Lower Division	4	4	4
	‡ Physical Education Elective	0	0	0

***These courses offered* only *in the quarters listed on the schedule.*
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
†Upon successful completion of the second year, the associate in applied science degree is awarded.

Dietetics and Nutritional Care program (Traditional) (Third and Fourth Years)

Year		Quarter Credit Hours: Fall	Winter	Spring	Summer
Third Year	BFAM-415 Food Service 1	4			
	BFAM-332 Food Production II	4			
	BBUB-434 Operations Management		4	Co-op	Co-op
	† General Studies Elective-Upper Division	10	5		
	BFAM-416 Food Science II		4		
	BFAM-331 Food Production I		5		
Fourth Year	* BFAD-525 Advanced Nutrition/Diet Therapy	5			
	BBUB-407 Legal Environment	4			
	BFAM-511 Advanced Food Service	4			
	† General Studies Elective-Upper Division	5	10		
	* BFAD-552 Geriatric Nutrition		2		
	* BFAD-526 Advanced Nutrition/Diet Therapy		4		
	* BFAD-554 Maternal and Infant Nutrition			2	
	* BFAD-550 Community Nutrition			4	
	* BFAM-314 Food Sanitation & Safety			2	
	* BFAD-519 Educational Principles			4	
	Business Food Elective			4	

These courses offered only in the quarters listed above.
†See Pg. 64 for General Studies requirements.

Dietetics and Nutritional Care Program (Coordinated Undergraduate Program) (Third and Fourth Year)

Year		Quarter Credit Hours: Fall	Winter	Spring
Third Year	BFAD-402 Dietetic Environment	4		
	BFAM-415 Food Science I	4		
	*General Studies Electives-Upper Division	10	5	
	BBUB-407 Legal Environment		4	
	BFAM-416 Food Science II		4	
	BFAM-331 Food Production Management I		5	
	BFAD-314 Sanitation and Safety			4
	BFAD-551 Management of Food Systems			4
	BFAM-332 Food Production Management II			4
	IJCG-704 Communication and Instruc. Technology			4
Fourth Year	BFAD-560, 561 Clinical Dietetics I & II	8		
	*General Studies Electives-Upper Division	10		5
	BFAD-562 Clinical Dietetics III		4	
	BFAD-563 Clinical Dietetics IV		6	
	BFAD-552 Geriatric Nutrition		2	
	BFAD-550 Community Nutrition			4
	BFAM-511 Advanced Food Service Operations			4
	BFAD-554 Maternal and Infant Nutrition			2

See Pg. 64 for General Studies requirements.

School of Retailing

The major objective of the School of Retailing is to educate young men and women to be able to move toward middle and upper middle management positions in the broad dimensions of the retail industry. The student should attain a clear understanding and competency of the entry level expectations of the field that will serve as a springboard for rapid personal and professional growth.

Retailing at RIT enables the students to attain a basic understanding of all aspects of a business enterprise-accounting finance, management and marketing; depth of understanding of the basic concepts of retailing, and their current applications; an introduction to the common tools of management in the forms of computers and statistical analysis; a broad background in the natural and social sciences which shape the retail environment, and the attitudes that will assist the student in setting and attaining personal and professional goals in this area.

Retailing is a broadly defined program and provides a foundation for many careers in addition to the traditional store merchandising function. Students can go into positions in store operations, personnel, branch store management or sales promotion in the traditional retail industry. Others will find a career in working with retailers from the perspective of manufacturers or as specialists in promotion or other aspects of the retail industry.

Merchandising covers primarily the process of planning selecting, buying, and selling; operations deals with the general operations of the retail enterprise and tends to focus on the responsibilities of store managers and independent retailers; personnel is responsible for selection, training, placing, advancement and welfare of all employees; sales promotion is responsible for advertising, display, and the many forms of publicity in which a retailer engages.

Program

The retail program is designed to offer a specialized curriculum that provides an in depth understanding of the retail industry and its tasks, along with a comprehensive foundation in the theory and practice of the management of any enterprise. In addition to the required core of business and retail courses, the student may elect concentrations within the retail offerings.

Merchandising is the heart of the retail program and includes electives in buying and specialized seminars in current topics in merchandising that reflect the ever changing dimensions of the field.

Fashion merchandising is a group of elective courses in the history and trends of fashion. Within merchandising, this area represents one of the most significant classifications within the retail spectrum.

Interior Design is a well developed sequence of elective courses covering topics of basic to advanced design principles. As a field, interior design is equally applicable to planning and creating both home and commercial interiors. The program is integrated into the broad retail perspective through application to home furnishings, store layout and design, and commercial contract design.

Cooperative Education

The cooperative employment component of the program allows the student to explore the realities of a retail career while gaining a full year of actual experience during the junior and senior years. The retailing courses are designed to build on this experience to integrate courses and employment into a unified learning experience. Retail students enjoy a wide range of co-op opportunities in retail establishments in major cities from Chicago to Boston to Atlanta. Depending on the interests of the student, co-op can be developed in a wide range of situations in addition to the traditional retail store environment.

The academic program is designed so that a student may take advantage of an extended cooperative employment opportunity during the Fall Quarter through the Christmas holiday. This is the most ideal period to gain retail experience. The Winter Quarter academic program is specially structured for those students returning to school in January. (See page 34 for other details about co-op.)

Two-year transfer program

Junior standing will be granted to qualified students with an associate's degree or equivalent in a related field from an accredited institution. The bachelor of science degree can normally be completed in six academic and two co-op quarters. The student's program is determined on the basis of his or her previous education and field of interest.

Retailing professional electives (Each carries 4 Quarter Credit Hours)

BRER-511 Textiles (Basic)
BRER-521 Fashion (History)
BRER-524 Fashion (Accessories)
BRER-523 Fashion (Current)
BRER-531 Interior Design (Basic)
BRER-532 Interior Design I
BRER-533 Interior Design II
BRER-534 Interior Design (History)
BRER-535 Interior Design (Advanced)
BRER-545 Color and Design (Display)
BRER-554 Seminar in Retailing

Additional electives may be chosen from the School of Business Administration or approved electives from other colleges of the Institute.

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

Retailing major

Fall		Quarter Credit Hours: Fall	Winter	Spring
First Year	BBUA-210 Financial Accounting	4		
	BBUB-201 Management Concepts	4		
	BBUQ-291 Math I		4	
	BRER-211 Retail Organization & Management	4		
	BRER-212 Principles of Merchandising			1
	GSSE-301, 302 Economics I, II		4	4
	*General Studies Electives	4	4	4
	Science Electives		4	4
	‡Physical Education Elective	0	0	0
Second Year†	BBUB-401 Behavioral Science in Management	4		
	BBUM-263 Marketing Principles		4	
	BBUM-552 Advertising			4
	BBUQ-351, 352 Statistics I, II		4	4
	BRER-300 Retail Career Seminar	1		
	BRER-410 Retail Sales Promotion		4	
	ICSS-200 Survey of Computer Science	4		
	*General Studies Electives	4	4	4
	Retail Electives	4		4
	‡Physical Education Elective	0	0	0
Third Year		SR/F	W/S	
	BBUB-434 Operations Management		4	
	BBUF-441 Financial Management	4		
	BBUM-420 Consumer Behavior		4	
	BRER-415 Retail Seminar I		4	
	*General Studies Electives	10		
	Retail/Business Electives	4	4	
Fourth Year		SR/F	W/S	SR
	BBUB-404 Administrative Policy		4	
	BBUB-407 Environment of Business Activity		4	
	BRER-416 Retail Seminar II		4	
	BRER-435 Advanced Merchandising		4	
	GLLC-402 Conference Techniques	4		
	*General Studies Electives	10		10
	Retail/Business Electives	4		8

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.
†Upon successful completion of the second year, the associate in applied science degree is awarded.

The College of Continuing Education

Robert A. Clark, Dean

Continuing education has always been a part of the philosophy of Rochester Institute of Technology. Since its inception the Institute has been concerned with adult learners who wish to develop themselves personally or to enhance their occupational competencies.

For many people the College of Continuing Education (CCE) provides an alternative to full-time study inasmuch as personal commitments, work schedules or other obligations are accommodated through part-time study at night, on weekends or during the day. Working closely with the other nine colleges of the Institute, as well as with industry and the community, the College of Continuing Education develops convenient educational opportunities for continuing learners.

Class hours and course offerings are scheduled to meet the specific needs of employers, employees and non-working people alike. As a result, many people have been able to attain educational goals not otherwise available.

The college aims to provide higher educational experiences for all who desire them. Under the CCE Open Admission Policy, students are free to take any course or to pursue any degree for which they have sufficient background. Academic advisors are available throughout the year to answer questions regarding course or program choices.

For students who choose to follow a specific program of study, a variety of options is available in fields as diverse as management and photography, machine tool and general education.

The college confers the diploma of the Institute in 13 fields, as well as a certificate in management.

Twenty-one options lead to the associate in applied science, and the associate in arts degree is offered in general education.

Thirteen programs lead to the bachelor of science. Programs designed primarily for transfer students with associate degrees are offered, leading to the bachelor of technology degree in electrical or mechanical engineering technology.

For graduate students the master of science degree is offered in applied and mathematical statistics.

In addition to credit courses, the college offers workshops, seminars, and short courses to meet specific needs of community groups, professional organizations, agencies, industries, business and government. 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 field personnel.

Another alternative offered through CCE is the RIT Summer Session. Along with the opportunity for RIT students to continue work in chosen academic programs, 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.

There's much more to the College of Continuing Education. If you'd like information about courses, programs, Summer Session and special events, write or phone:

Rochester Institute of Technology
College of Continuing Education
One Lomb Memorial Drive
Rochester, New York 14623
(716) 475-2234

Eisenhower Coliege

Thomas R. Plough, Executive Dean

On March 30, 1979, members of the boards of trustees of Eisenhower College and Rochester Institute of Technology resolved to have Eisenhower become the tenth college of RIT.

New options which are to be made available to students by this association of a career oriented institute and a liberal arts college still are unfolding.

With its comparatively small campus in Seneca Falls, Eisenhower College offers students of RIT a life-style distinctly different from that available at the suburban Rochester campus. Chartered in 1965 and opened in 1968, it stands as the national memorial to former President Dwight David Eisenhower.

The College is situated on the west shore of Cayuga Lake, on the southeastern side of Seneca Falls. The community of approximately 9,000 persons is three and a half miles from the Montezuma National Wildlife Refuge and within an hour of Syracuse, Ithaca and Rochester.

Facilities

Eisenhower's 286 acre campus includes 18 buildings, athletic fields, tennis courts, a par-three golf course, ponds, a memorial park, and shoreline property along Cayuga Lake. With the exception of a 140-year-old barn which serves as a student pub, every major building on campus has been completed within the past 12 years. The college is designed with foresight to provide ready access for handicapped persons.

Eisenhower's modern residence halls accommodate 70 to 170 students each, and are staffed by professional residence coordinators and student resident assistants. Nearly all students reside on campus. A variety of living arrangements are available, including private quarters or rooms with a roommate.

Programs

In addition to the numerous programs available through RIT, Eisenhower offers four-year programs structured on the foundation of a World Studies Core.

Attempting to study anything on a global scale is an ambitious undertaking, and Eisenhower's World Studies Core is suited to ambitious students who want to build their lives and careers on a foundation of world understanding.

While the subject matter studied is classic, we feel safe in calling this particular area "one-of-a-kind." It was carefully designed and is being constantly updated to present the most clear and complete overview possible.*

Who should apply, and how?

Students wishing to consider study at the Eisenhower campus may request an application for admission through the RIT or Eisenhower College Admissions Offices.

Eisenhower employs a "rolling admission" plan, so decisions regarding acceptance are made as soon as the application for admission, supporting SAT or ACT scores, and appropriate transcripts are received. Candidates are notified as soon as decisions are made.

Career Decision Program

In RIT's Career Decision Program, a student who is not yet certain of his or her college major takes special courses for career exploration and, at the same time, gets intensive career counseling. The program's basic objective is to enable a student to make a sound career choice by the end of his or her first year of college.

The Eisenhower Campus provides an ideal setting for this kind of study. The small intimate atmosphere allows students the opportunity of exploring one or more specialized career fields, obtaining a year of college credit, and receiving individual professional career guidance (see pp 30-32 for further details).

Extra curricular and co-curricular activities

At Eisenhower you'll find not only an ample number of clubs, teams and projects to accommodate a full range of interests, but also a variety of creative people with interesting ideas who approach extracurricular life with the same intensity as they do their studies.

Student participation in campus affairs is extensive. The Student Senate handles an annual budget of more than $100,000 and oversees all co-curricular activities. A student judiciary serves as a peer review body for student disciplinary cases.

**More detailed information about Eisenhower programs may be obtained by requesting the Eisenhower catalog.*

Eisenhower's location in upstate New York provides opportunities for outdoor activities in every season. Sailing on the Finger Lakes, hiking in state parks or the Montezuma Wildlife Refuge, and skiing at nearby slopes are popular pastimes for Eisenhower students. The College also sponsors numerous intercollegiate and intramural athletic activities for men and women.

If you have minimal athletic instincts, you can turn your attention to Eisenhower's co-curricular offerings. Campus media include: ***The General Star*** and ***The Paper*** (newspapers), ***Renaissance 20*** (yearbook), ***Logos*** (literary magazine), and WIKE (radio).

There are also groups with close ties to academic disciplines such as the Anthropology Club, Political Science Club, and French and Spanish Clubs; and special interest clubs such as the Outing Club, Sailing Club, and Photography Club. And there are groups for performers, like the Eisenhower Student Players, the College Community Chorus, and the Chamber Music Ensemble.

These campus groups - and many more not listed here - seek new members each year, so be assured that if you want to participate, you can.

For many students, Eisenhower provides the first contact with a small college located in a small community. It's usually a pleasant surprise for those accustomed to much larger numbers to find themselves on a campus where people know each other and care about each other.

There's an easy-going intimacy at Eisenhower that helps you get to know others. As a result, you begin to know more about yourself.

If you are considering the Eisenhower alternative, we encourage you to contact either the RIT or Eisenhower Admissions Office to ask any other questions you may have about the Eisenhower option.

Rochester Institute of Technology
Office of Admissions
One Lomb Memorial Drive
Rochester, NY 14623
(716) 475-6631

Eisenhower College of RIT
Admissions Office
Seneca Falls, NY 13148
(315) 568-7411

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 four five-year cooperative programs leading to the bachelor of science degree with majors in electrical, computer, industrial and mechanical 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 a 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 program in computer engineering, offered jointly by the Department of Electrical Engineering and the School of Computer Science and Technology, utilizes the facilities of both departments and the RIT computer facility.

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
1st 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 and technology 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, graduates of the two-year engineering science programs are able to enter the regular third year program in any of RIT's four 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. Qualified graduates of mechanical technology programs desirous of earning a bachelor of science degree in mechanical engineering take an individualized transfer program that best suits their particular background and meets their career objectives. Two year 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 program in Computer Engineering is “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.

For further information on graduate programs in the College of Engineering, request the Graduate Bulletin or contact the director of 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 15-16 of this Bulletin.

Four five-year cooperative programs leading to the BS degree are offered. The four majors are: electrical, computer, industrial and mechanical 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 Engineering[1]—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 Engineering[1]—This program, jointly sponsored by the Department of Electrical Engineering and the School of Computer Science and Technology, 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 Engineering[1]—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 Engineering[1]—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.

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.

[1] About 20 per cent of the program consists of electives in social sciences, literature, and humanities.

Freshman Admission Requirements			Transfer Admission with junior standing	
Program	Required High School Subjects*	Desirable Elective Subjects	Two Year College Programs	Desirable minimum grade point average
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)	2.50 3.20
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).	2.50
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).	2.50
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).	2.50

**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, Program Coordinator

The computer engineering program is jointly offered by the Department of Electrical Engineering and the School of Computer Science and Technology. 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 principals 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 Program, 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 or suspension according to Institute policy.

BS degree in Computer Engineering

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SMAM-251, 252, 253 Engineering Calculus I, II, III	4	4	4
	SCHG-208, 209 General Chemistry for Engineers I, II	4		4
	SPSP-205, 206 General Physics I, II		4	4
	ICSP-208 Introduction to Programming	4		
	ICSP-305 Assembly Language Programming		4	
	*General Studies-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year	SMAM-305 Calculus IV	4		
	SMAM-306 Differential Equations		4	
	I CSS-4 30 Numerical Methods			4
	SPSP-207 General Physics III	4		
	SPSP-314 Modem Physics I		4	
	EEEE-351 Circuit Analysis I			4
	EMEM-331. 332 Mechanics I, II	4		4
	EEEE-340 Introduction to Digital Systems		4	
	ICSP-216 Program Design & Validation/FORTRAN		4	
	*General Studies-Lower Division	4		4
	‡Physical Education Elective	0	0	0
Third Year		F/W		S/Sp
	EEEE-441, 442 Electronics I, II	4		4
	EEEE-352, 353 Circuit Analysis II, III	4		4
	ICSS-320 Data Structure Analysis	4		
	SMAM-351 Probability & Statistics I			4
	EEEE-430 Linear Systems			4
	*General Studies-Lower Division	4		
Fourth Year	EEEE-643 Digital Electronics	4		
	EEEE-613 Introduction to Automatic Control			4
	EEEE-531 Energy Conversion	4		
	ICSS-440 Operating Systems	4		
	ICSS-720 Computer Architecture			4
	EEEE-660 Interface Electronics & Logic			4
	*General Studies-Upper Division	5		5
Fifth Year	ICSS-545 Processor Design Concepts	4		
	EEEE-634 Introduction to Communication Systems	4		
	EEEE-693 Digital Data Communications			4
	Restricted Elective (**)	4		
	Math/Science Elective	4		4
	Professional Elective			4
	*General Studies-Upper Division			5

(**)Either ICSS-755 Real Time Computation or EEEE-675 Analog/Hybrid Comp.
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.

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 to 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.

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.

BS degree in Electrical Engineering

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	EEEE-201 Intro, to Electrical Engineering	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-205, 206 General Physics I, II**		4	4
	*General Studies-Lower Division	4	4	4
	ICSP-220 Fortran Programming for Engineers		4	
	‡Physical Education Elective	0	0	0
Second Year	EEEE-351 Circuit Analysis I			4
	EM EM 331, 332 Mechanics I, II	4		
	SMAM-305 Calculus IV	4		
	SMAM-306 Elementary Differential Equations		4	
	SMAM-308 Engineering Mathematics			4
	SPSP-207 General Physics III**	4		
	SPSP-314, 315 Introduction to Modern Physics I, II		4	4
	*General Studies-Lower Division	4	4	
	EEEE-340 Intro, to Digital Systems		4	
	‡ Physical Education Elective	0	0	0
Third Year		F/W		S/SR
	EEEE-352, 353 Circuit Analysis II, III	4		4
	EEEE-430 Linear Systems			4
	EEEE 441, 442 Electronics 1. II	4		4
	SMAM-351 Probability and Statistics			4
	SMAM-420 Complex Variables	4		
	*General Studies-Lower Division	4		
Fourth Year	EEEE-531 Energy Conversion	4		
	EEEE-471, 472 Electric and Magnetic Fields I, II	4		4
	EMEM-431 Thermodynamics			4
	EEEE-643 Digital Electronics	4		
	EEEE-634 Intro, to Communications Systems	4		
	EEEE-613 Intro, to Automatic Controls			4
	*General Studies-Upper Division			5
Fifth Year	Professional Elective	4		4
	Professional Elective	4		4
	Free Elective	3-5		3-5
	*General Studies-Upper Division	5		5

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.
**The University Physics sequence (SPSP-311, 312, 314) may be taken by those students who desire a more intensive course and who have the necessary background in mathematics.

	Quarter Credit Hours
Professional Electives in Electrical Engineering	
EEEE-532 Electrical Machines	4
EEEE-535 Introduction to Power Electronics	4
EEEE-536 Motor Application and Control	4
EEEE-614 Design of Controls Systems	4
EEEE-621 Transmission Propagation and Waves	4
EEEE-645 Special Semiconductor Devices	4
EEEE-650 Introduction to Logic and Switching	4
EEEE-660 Interfacing Electronics and Logic	4
EEEE-665 Microcomputer Systems 1	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-673 Applied Electrical Design	4
EEEE-674 Fiber Optics: Theory and Applications	4
EEEE-675 Analog/Hybrid Computation	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 27 for policy on physical education.

AAS Transfer Program

Dr. Roger E. Heintz, 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.

BS degree in Electrical Engineering
AAS Transfer Program

Year	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	Quarter Credit Hours: Fall	Winter	Spring	Summer
†	EEE-351 Circuit Analysis I				4
	* General Studies (L.D.)				4
	ICSP-220 Fortran Programming for Engineers				4
	SMAM-305 Calculus IV				4
Third Year	EEEE-352, 353 Circuit Analysis II, III	Co-op	4	Co-op	4
	EEEE-430 Linear Systems				4
	EEEE-441, 442 Electronics I, II		4		4
	SMAM-306 Differential Equations		4		
	SMAM-308 Engineering Mathematics				4
	SPSP-314 Modern Physics		4		
	‡Physical Education		0		
Fourth Year	EEEE-471, 472 Electromagnetic Fields I, II	Co-op	4	Co-op	4
	EEEE-531 Energy Conversion		4		
	EEEE-643 Digital Electronics		4		
	EMEM-431 Thermodynamics				4
	* General Studies (L.D.)		4		
	* General Studies (U.D.)				5
	SMAM-351 Probability & Statistics				4
	‡Physical Education		0		
Fifth Year	Professional Elective	Co-op	4	4	
	Professional Elective			4	
	EMEM-331, 332, Mechanics I. II		4	4	
	* General Studies (U.D.)		5	5	
	SMAM-420 Complex Variables		4		
	‡Physical Education		0		

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.
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
†Summer prior to third year.

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, quantitative methods, computer programming and applications, management systems, and manufacturing processes. The curriculum emphasizes balance rather than specialization.

BS degree in Industrial Engineering

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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
	SPSG-205, 206 General Physics I, II		4	4
	'General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year	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
	SPSG-207 General Physics III	4		
	EMEM-343 Materials Processing		4	
	EMEM-344 Materials Science			4
	Science Elective		4	
	•General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Third Year		F/W		S/SR
	EIEI-420 Work Measurement & Analysis I	4		
	EI EI-520 Engineering Economy	4		
	EIEI-481 Management Theory & Practice	4		
	SMAM-351, 352, Introduction to Probability & Statistics	4		4
	EI EI-415 Human Factors I			4
	EI EI-401 Introduction to Operations Research I			4
	EIEI-422 Systems & Facilities Planning			4
Fourth Year	EIEI-510, 511 Applied Statistics I, II	4		4
	EIEI-402 Introduction to Operations Research II	4		
	EIEI-503 Simulation			4
	EIEI-516 Human Factors II	4		
	"Professional Electives	4		4
	'General Studies-Upper Division			5
Fifth Year	EIEI-530 Engineering Design	4		
	EIEI-560 Project Design			4
	•'Professional Elective	4		4
	•General Studies-Upper Division	5		5
	Free Elective	4		4

***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. 64 for General Studies requirements.*
tSee Pg. 27 for Policy on Physical Education.

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, quality control, manufacturing, and management consulting.

Balance rather than specialization has allowed our graduates to pursue varied career paths. Examples of this diversity, along with the role that an 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 a medical peer review system
   d. 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.

Further information

If you are interested in learning more about the opportunities within industrial engineering and/or the nature of the cooperative work assignments in industrial engineering, write to the department for further information.

Mechanical Engineering

Bhalchandra V. Karlekar, 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 tools 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 selects one of two options for intensive study. These areas of concentration are in the two traditional branches of mechanical engineering; namely applied mechanics and thermal fluid science. Both options offer a core of three courses and a number of additional electives.

Students may use a total of four professional and free electives to extend their educational experience in their options. They may also use courses from other options and graduate levels as professional and free electives. Such flexibility permits each individual to prepare for employment or graduate school in his or her specific area of interest.

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 accomodate 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 of 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 accrediting 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.

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. 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.

The Mechanical Engineering Department is staffed to offer professional courses in the areas of thermal systems, applied mechanics, manufacturing, environmental science, systems analysis, 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.

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.

Mechanical Engineering options
(4 Credits each)

Option A: Applied Mechanics
Required Courses
EM EM-632 Advanced Mechanical Systems Design
EMEM-672 Selected Machine Elements
EMEM-694 Stress Analysis

Electives:
EMEM-664 Engineering Acoustic and Noise Control
EMEM-670 Thermal Stresses
EMEM-676 Kinematic Analysis of Mechanisms
EMEM-679 Dynamics of Physical Systems II
EMEM-685 Advanced Strength of Materials
EMEM-689 Patent Law and Protection
Selected Graduate Level Courses

Option B: Thermal Fluid Science
Required Courses:
EMEM-635 Industrial Heat Transfer
EMEM-652 Fluid Mechanics of Turbomachinery
EMEM-660 Refrigeration and Air Conditioning

Electives:
EMEM-601 Alternate Energy Sources
EMEM-650 Gas Dynamics
EMEM-651 Viscous Flow
EMEM-667 Introduction to Air Pollution
EMEM-669 Introduction to Water Pollution
EMEM-677 Modern Energy Conversion
EM EM-680 Advanced Thermodynamics
EMEM-690 Environment and the Engineer
EMEM-695 Solid Waste Management
EMEM-696 Nuclear Power
Selected Graduate Level Courses

BS degree in Mechanical Engineering

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SMAM-251, 252, 253 Calculus	4	4	4
	SCHG-208, 209 General Chemistry for Engineers	4		4
	EMEM-201 Intro, to Mechanical Engineering Graphics	4		
	SPSP-205, 206 General Physics I, II		4	4
	EMEM-343 Materials Processing		4	
	'General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year	EMEM-336 Statics	4		
	EMEM-337, 338 Strength of Materials I, II		4	4
	SPSP-207 General Physics III	4		
	SMAM-305 Calculus	4		
	SMAM-306 Differential Equations		4	
	EMEM-340, 341 Engineering Communications I & II		4	
	'General Studies-Lower Division		4	
	EEEE-461 Electrical Engineering I			4
	SMAM-308 Engineering Mathematics			4
	EMEM 344 Materials Science			4
	^Physical Education Elective	0	0	0
Third Year		F/W		Sp/Su
	EMEM-413, 414 Thermodynamics I, II	4		4
	EEEE-462 Electrical Engineering II	4		
	EMEM-437 Introduction to Machine Design	4		
	'General Studies-Lower Division	4		
	EMEM-415 Fluid Mechanics I			4
	EMEM-439 Dynamics I			4
	EMEM-440 Numerical Modeling			4
Fourth Year	EMEM-514 Heat Transfer	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 Physical Systems I			4
	Mechanical Engineering Option A or B			4
	'General Studies-Upper Division			5
Fifth Year		F/W		Sp
	Professional Electives	4		4
	'General Studies-Upper Division	5		5
	Mechanical Engineering Option A or B	4		4
	Free Electives	4		4

**See Pg. 64 for General Studies requirements.*
tSee Pg. 27 for Policy on Physical Education.
***Successful completion of this course is required to enter Option A.*

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 communication design, environmental design, painting, printmaking and medical illustration. In the School for American Craftsmen concentrations are given in ceramics and ceramic sculpture, glass, metalcrafts and 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 studios of the School of Art and Design are superior in every respect. 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, 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 and craftspeople. They have been broadly educated in Europe and the United States, and are well acquainted with contemporary practice in their art 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 teachers and counselors.

The Wallace Memorial Library is particularly strong in the extensive list of contemporary periodicals in the arts and crafts available for study and research.

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. The college is a charter member institution of the National Association of Schools of Art.

Plan of education

The programs in the College of Fine and Applied Arts are two and four years in length and lead to the associate in applied science and the bachelor of fine arts degrees. 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. Both graduate degrees may be earned in programs carried during the regular and summer studies. 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.

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 majors. Successful completion of this program qualifies students for second year standing in the following options: communication design, environmental 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. 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 instructors. 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 or craftspeople in mind, further emphasize the practical character of the 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.

1. The portfolio must contain examples of at least 10 pieces of the applicant's best work-35mm slides are preferred, displayed in an 8 1/2" x 11" vinyl slide protector page.

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. Personal interviews are not required; however, if you desire one, please contact Mrs. Janet Reed, at (716) 475-2643 for an appointment.

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 insure 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
Rochester, New York 14623
Telephone: (716) 475-6631

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 15-16 of this Bulletin.

This college is composed of the School of Art and Design and the School for American Craftsmen.

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 and craftsmen. Students learn by working in the studios equipped with excellent facilities. Most graduates earn their living utilizing their RIT background.

Communication Design-Prepares students to convey and interchange thoughts, concepts, options and information as creative members of problem solving teams. Career fields include applied arts, designing for industry, corporations, art studios, government, social and non-profit organizations. Degrees granted: AAS-2 year; BFA-4 year.

Fine Arts-Students concentrate in printmaking, painting or medical illustration and take other art electives. They prepare as professional artists and have exploratory potential for later careers in 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.

**Medical illustration students do not receive an AAS degree.*

	Freshman Admission Requirements		Transfer Admission with junior standing	
Program[1]	Required High School Subjects[2]	Desirable Elective Subjects	Two Year College Programs	Desirable minimum grade point average
Communication 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, including examples of original drawings.	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. Space in medical illustration is limited and by special portfolio.	2.0
Environmental 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
Ceramics and Ceramic Sculpture	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio of original ceramics work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges. Space in this program at RIT is limited.	2.0
Glass	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio or original glass work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges. Space in this program at RIT is limited.	2.0
Metalcrafts and Jewelry	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio or original metals work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges. Space in this program at RIT is limited.	2.0
Weaving and Textile Design	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio or original textiles work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges. Space in this program at RIT is limited.	2.0
Woodworking and Furniture Design	1 year any mathematics; 1 year any science	Art or industrial courses; portfolio or original wood work required	Transfer as a junior is uncommon, as comparable programs are not generally available at other colleges. Space in this program at RIT is limited.	2.0

[1]About one-third of the courses in each program consist of electives in social science, literature and humanities.
[2]Four years of English are required in all programs (except where slate *requirements differ).*

Environmental Design—Prepares students to design effectively for social, industrial and environmental conditions. Interior and exterior space, and product design are relevant to the designer. Concern is given to future forecasting and emphasizes the humanistic and larger environments. Degrees granted: AAS-2 year; BFA-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.

School of Art and Design

Peter Giopulos, Director

Philip Bornarth, Representative to Academic Council for Fine Arts

Robert Cole, Representative to Academic Council for Foundation Studies

Craig McArt, Representative to Academic Council for Environmental Design

Fred Meyer, Representative to Academic Council for Graduate Studies

James VerHague, Representative to Academic Council for Communication 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 communication design, environmental 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 General Studies 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.

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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
	•General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year t	FSCF-225, 226, 227 Art and Civilization	3	3	3
	•General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
	** Electives (must have three studios each quarter-one which must be the core in which you are going to major)			
	"•FADC-301. 302, 303 Communication Design	9	9	9
	•••FADD-301, 302, 303 Environmental Design			
	•"FADP-301, 302, 303 Advanced Drawing			
Third Year	FSCF-380 Contemporary Art (One quarter required; offered every quarter)	3		
	oArt History Electives (select two)		3	3
	•General Studies-Upper Division	5	5	5
	Major (one)			
	FADR-401, 402, 403 Printmaking			
	FADC-401, 402, 403 Communication Design			
	FADP-401, 402, 403 Drawing and Painting	6	6	6
	FADD-401, 402, 403 Environmental Design			
	***Electives (one per quarter)*	3	3	3
Fourth Year	•General Studies-Upper Division	5	5	5
	Major (one)			
	FADR-501, 502, 503 Printmaking			
	FADC-501, 502, 503 Communication Design			
	FADP-501, 502, 503 Drawing and Painting	9	9	9
	FADD-501, 502, 503 Environmental Design			
	*'*Electives (one per quarter)*	3	3	3

tUpon completion of the second year, the associate in applied science degree is awarded
**See Pg. 64 tor General Studies requirements.*
tSee Pg. 27 tor Policy on Physical Education.
"Additional intercollege studio courses are available by recommendation of the academic advisor and administrator. Electives are registered on a space available basis and subject fo change without prior notice. Consult the advisor when planning programs.
*'"*Core Electives—Introductory courses that are prerequisite (o the respective third year major. FADC-301, 302, 303, required for entrance into Communication Design major: FADD-301, 302, 303 for Environmental Design major: FADP-301, 302, 303, for Printing and Painting major. However, all three Core Electives are available as elective choices.*
oTotal of 18 quarter credits of Art History: Art and Civilization and Contemporary Art required.

Electives-
FADC-411, 412, 413 Communication Design
FADC-511, 512, 513 Communication Design
FADD-320 Graphic Visualization
FADD-411, 412, 413 Design Applications
FADD-511, 512, 513 Design Applications
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
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 Electives-
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

Programs

Major concentrations are offered in communication design, environmental design and the fine arts (painting, printmaking, medical illustration). Electives may be pursued, beginning in the second year, in painting, printmaking, design applications, communication design and the crafts. The first year forms the foundation preparation for the major concentration, with courses required in drawing and two- and three-dimensional design. The communication designer is in the service of ideas and humanity. He or she has the abilities and competence needed for effectively planning, imparting and interchanging thoughts, concepts, opinions, and information. He or she is an inventive and creative member of the problem solving teams in the contemporary world of business, industry, agriculture, government, education, and religion. This designer utilizes typography, symbols or photography to create images for a client. The program in environmental design prepares students to design effectively for the social, industrial and environmental condition. The curriculum concerns itself with the preparation for future forecasting, with an emphasis upon the humanistic and larger environment. Interior and exterior space designed to serve people and product design is studied.

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.

Medical Illustration option

(CFAA portfolio and additional six drawings of natural forms required for admission to be presented as slides)

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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
	'General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year [1]	FSCF-225, 226, 227 Art and Civilization	3	3	3
	•General Studies-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
	•"FADP-301, 302 Advanced Drawing	3	3	
	•••FADP-313 Medical Illustration			3
	SBIG-201, 202, 203 General Biology	4	4	4
	((Photography (A&D) for three quarters:			
	PPHG-207 Still Photography	3		
	PPHF-207 Introduction to Filmmaking		3	
	PPHF-209 Introduction to TV			3
Third Year	•General Studies-Upper Division	5	5	5
	FADP-421,422, 423 Medical Illustration Applications	5	8	8
	Gross Anatomy (U of R)+	7		
	•'Art Elective		3	3
Fourth Year	•General Studies-Upper Division	5	5	5
	FADP-531, 532, 533 Advanced Medical Illustration	6	6	6
	Select One:			
	FADE-511, 512, 513 Design Applications			
	FADC-511, 512, 513 Communication Design			
	"Art Elective (one per quarter)	3	3	3

**See Pg. 64 for General Studies requirements.*
***Art Electives listed on previous page.*
*y**Core courses that are prerequisite to the third year.*
****3 quarters of Still Photography may be substituted.*
tA tuition surcharge will be applied in this quarter.
tSee Pg. 27 for Policy on Physical Education.
[1]Upon successful completion of the second year, the associate in applied science (fine arts—painting) degree is awarded.

Course descriptions

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

The credit requirements for the Fine Arts-Painting, Printmaking; Communication Design; and Environmental Design programs are as follows:

	qtr. cr.
Required Art Major	84
Required Professional Art Electives in the Visual, Graphic or Photo Arts	21
Open Electives	15
General Studies	54
Art History and Creative Sources	24
	198

School For American Craftsmen

Robert Johnston, Director

Gary Griffin, Representative to Academic Council for Crafts

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 apprecitation, 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 General Studies 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.

Course descriptions

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

Craft Majors

Year		Quarter Credit Hours: Fall	Winter	Spring
	FADF-201, 202, 203 Design	3	3	3
	FADF-205, 206, 207 Creative Sources	2	□	2
	FADF-261, 262, 263 Drawing	3	3	3
	•General Studies Electives-Lower Division	4	4	4
	Materials and Processes (one)			
	FSCC-200 Ceramics			
	FSCG-200 Glass			
	FSCM-200 Metalcrafts	5	5	5
	FSCT-200 Textiles			
	FSCW-200 Woodworking			
	^Physical Education Elective	0	0	0
	FSCF-225, 226, 227 Art and Civilization	3	3	3
	•General Studies Electives-Lower Division	4	4	4
	Materials and Processes (one)			
	FSCC-300 Ceramics			
	FSCG-300 Glass			
	~~FSCM-300 Metalcrafts~~	□	5	□
	FSCT-300 Textiles			
	FSCW-300 Woodworking			
	**Electives (one per quarter)	3	3	3
	^Physical Education Elective	0	0	0
	FSCF-380 Contemporary Art (one quarter required; offered every quarter)	3		
	oArt History Electives (select two)		3	3
	•General Studies Electives-Upper Division	5	5	5
	Materials and Processes (one)			
	FSCC-400 Ceramics			
	FSCG-400 Glass			
	FSCM-400 Metalcrafts	5	5	5
	FSCT-400 Textiles			
	FSCW-400 Woodworking			
	**Electives (one per quarter)	3	3	3
	•General Studies Electives-Upper Division	5	5	5
	Techniques and Thesis (one)			
	FSCC-500 Ceramics			
	FSCG-500 Glass			
	FSCM-500 Metalcrafts	0	0	0
	FSCT-500 Textiles			
	FSCW-500 Woodworking			
	**Electives (one per quarter)	3	3	3

tUcon satisfactory completion of the second year, the associate in applied science degree is granted.
**See Pg. 64 tor General Studies requirements.*
†See Pg. 27 for Policy on Physical Education.
***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 a studio other than their major concentration.
eTotal of 18 quarter credits of Art History; Art and Civilization and Contemporary Art required.

Electives -
FADC-411, 412, 413 Communication Design
FADC-511, 512, 513 Communication Design
FADD-320 Graphic Visualization
FADD-411, 412, 413 Design Applications
FADD-511, 512, 513 Design Applications
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
FSCT-251, 252, 253 Textiles I
FSCW-251, 252, 253 Woodworking I
PPHG-207, 208, 209 Still Photography

Art History Electives-
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

College of General Studies

Mary Sullivan, Dean

The College of General Studies 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 capacities as a thinking, creating, and responsible person. Thereby enriched, RIT students will be all the better prepared for their precessions 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 and varied fields of human endeavor.

The program of the College of General Studies, 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 to 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 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 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 General Studies 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 on the following pages. The close involvement of these programs with the humanistic studies of the other General Studies 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.

Curriculum

Language and Social Science
Literature Area Area:

Disciplines: Disciplines:

Language Anthropology
(prefix GLLC) (prefix GSSA)
Literature Economics
(prefix GLLL) (prefix GSSE)
Political Science
(prefix GSSM)
Psychology
(prefix GSSP)
Sociology
(prefix GSSS)

Science and
Humanities Area

Disciplines:

Fine Arts
(prefix GSHF)
History
(prefix GSHH)
Philosophy
(prefix GSHP)
Science
(prefix GSHN)

Plan of education
The courses of the College of General Studies are available to students registered in one of the colleges of the Institute. (Degree programs in Social Work and Criminal Justice are available to students' through the College of General Studies, and are described on later pages of this section.) The basic curriculum of the college requires the student to take 24 quarter credit hours of lower division core courses followed by 30 quarter credit hours of upper division electives. Because of particular needs or requirements, some exceptions to this basic curriculum may be found. The program outlines of each school or department list the general studies requirements by year of study.

During the first two years the student will take four-credit hour courses which will involve him or her in basic studies in language, literature, history, philosophy, the behavioral sciences, and critical approaches to art or science.

During the final two years the student will have the opportunity to deepen his or her knowledge in areas of particular interest. The student will elect six five-credit hour courses from a broad range of possibilities in three areas- Language and Literature, Science and Humanities, and Social Science.

It should be noted that all lower division courses carry four quarter hours of credit and all upper division courses carry five quarter hours of credit. Further, all courses in the lower division and upper division meet three scheduled class hours each week. The discrepancy between credit hours and class hours is offset by carefully planned and extensive out-of-class assignments and projects. The purpose of this plan is to provide the student with opportunities for extended responsibility beyond those normally found in a regular class situation.

The College of General Studies will enroll students who are not currently degree candidates. Individual programs will be developed for each student.

Diploma courses will not normally be counted toward the completion of a degree in social work or criminal justice, and cannot normally be used toward the completion of general studies requirements.

Faculty
The faculty of the College of General Studies 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 provision of rich and meaningful learning experiences for the student and continuing growth in their scholarly fields.

Lower division requirement
Students must have two courses from each of the above areas: Language and Literature, Social Science, Science and Humanities.

Students may not repeat a discipline within an area-even though the courses in a particular discipline are quite different; only one course in, for instance, literature may be taken to meet lower division requirements. Each quarter, students should contact their advisor for the choice of electives, which may be restricted to a given area: Language and Literature, Social Science, Science and Humanities.

Upper division requirement
Students may select any six courses at the upper division level.

Resources
The college is fortunate in having a wide variety of resources both within the Institute and in the community. At RIT the Bevier Gallery, Wallace Memorial Library, and an extensive record collection are supplemented by audiovisual material and visiting discussion leaders.

Community resources include the Rochester Public Library, and the libraries of several local companies. The RIT library will arrange interlibrary loans with state or company libraries upon request. Advantage is also taken of such other resources as the George Eastman House of Photography, the Rochester Museum of Arts and Sciences, the Memorial Art Gallery, Kilbourn Hall, and the Eastman Theatre.

Summer Session
Under the auspices of the Institute Summer Session, the College of General Studies, upon sufficient demand, offers a number of courses in Language and Literature, Science and Humanities, and Social Science. Information concerning 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
Rochester, NY 14623

Admission at a Glance: College of General Studies Programs—Criminal Justice, Social Work

General Information on RIT's admission requirements, procedures and services is included in detail on Pages 15-16 of this Bulletin.

Two programs leading to the BS degree are offered. They are criminal justice and social work.

Also, the college offers a wide variety of liberal arts electives for students enrolled in other RIT programs. The purpose is to help students develop an awareness of the humanistic world in which they live. Students, therefore, can complement their technological knowledge with courses *in language, literature, social science, science, and humanities.*

Social Work—Prepares students to assist individuals, 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 student with an opportunity to relate academic learning to professional practice through relevant individual, group, family, and community experiences. Degree granted: BS-4 year.

Criminal Justice—The program is designed to prepare students for responsible positions in criminal justice and 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 offers unique opportunities for practical on-the-job learning experiences. Degree granted: BS-4 year.

Freshman Admission Requirements

Program	Required High School Subjects*	Desirable Elective Subjects
Social Work	Elem. Algebra; Inter. Algebra; 1 year any science	Social sciences; humanities
Criminal Justice	Elem. Algebra; Inter. Algebra; 1 year any science	Social sciences; humanities, e.g. History, Government, Economics

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

Transfer Admission with junior standing

Two-Year College Programs	Desirable minimum G.P.A.
Students holding an AA or AAS degree will be granted two (2) years of transfer credit. The transfer credit may be credited to courses anywhere in the four year sequence. This will enable the student to complete basic social work foundation courses.	2.0
Junior standing for the first two years is offered for an associate's degree in an appropriate major. Holders of liberal arts or other two-year degrees will be granted credit for the first two years except for required professional courses. All transfer students must demonstrate competency in professional courses required in the first and second years or must take these courses.	2.0

Criminal Justice

Elizabeth B. Croft, Director

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, as well as to provide continuing education for men and women already pursuing professional criminal justice careers.

The curriculum is structured in such a way as to provide the student with the basic knowledge and skills of all facets of the criminal justice system. Areas of study include law enforcement, court, 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 to begin specialization in a particular area within the criminal justice field as well as to acquire advanced auxiliary skills now needed in this field. It should be emphasized that in both the professional courses and the general education courses, students will be stimulated to develop their own capacities for sound judgment and their own decision-making skills. Through careful academic guidance, they will be encouraged to design a well-balanced program of study leading to professional competence as well as to breadth in personal development. A particularly important aspect of the program is the supervised field education placement.

These specific goals are undergirded by a program that pursues the following more general goals:

1. To broaden the social, cultural and political perspectives of personnel in criminal justice or students who are planning a career in this area.
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 this 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 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, probation departments, parole, halfway houses, community treatment centers, retail and industrial security, customs, narcotics control, drug treatment, data processing, youth service programs, counseling, crime control planning and research.

"We have a forward-looking approach," says Bette Croft, director of the program. "We're here to investigate ways of improving the system, not just to study how it works," The curriculum is designed to prepare students for entrance into the criminal justice system, and to provide continuing education for those already pursuing criminal justice careers. 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, 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 any particular area within the field. Concentrations in the form of courses in business, social work, photography and computer science are also available. Students receive careful academic guidance in designing a well-balanced program of study leading to professional competence and breadth in personal development.

During the junior or senior year, students spend 22 weeks working in one of a variety of agencies in criminal justice. This internship gives them the chance to witness and participate in the activities of an established criminal justice 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.

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 interests 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 10 quarter credit hours. This credit may be used to replace criminal justice upper division professional 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. Of the approximately 250 students currently enrolled, about 25 percent are women. Approximately 20 percent of the students are currently employed in some facet of the criminal justice system.

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 Department and/or equivalent CCE courses. Also included as part of the principal field of study are the following General Studies courses: GSSS-210; GSSS-502; GSSP-210; GSSP-203; GSSP-503. Matriculated students not maintaining a 2.00 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 Department. These courses are grouped under only one general heading, even though many are appropriate for students with tangential career objectives.

A student is encouraged to select professional elective courses with the advice of his faculty advisor.

In some cases, a student may be permitted, with written approval from his faculty advisor, to take courses from other colleges within the Institute to fulfill professional elective requirements.

Professional Elective Options
Corrections
Behavior Modification in Criminal Justice
Legal Rights of the Offender
Correctional Administration
Counseling within the Criminal Justice System
Alternatives to Incarceration
Criminology
History of Organized Crime
Major Issues in Criminal Justice
White Collar Crime
Minority Groups & the Criminal Justice System
Crime & Violence
Social Control of Deviant Behavior
Law
Constitutional Law & Criminal Justice
Evidence
Court Administration
Comparative Criminal Law
Sentencing Process
Victimless Crime & the Law
Advanced Criminal Law
Law Enforcement
Administrative Concepts in Law Enforcement
Criminal Investigation
Civil Disobedience
Police-Community Relations
Security
Industrial Security
Physical Security

Criminal Justice Bachelor of Science Degree

Year		Quarter Credit Hours
First Year	GCJC-203 Criminology	4
	GCJC-201 Fundamentals of the Criminal Justice System	4
	GCJC-207 Corrections	4
	GCJC-204 Introduction to Public Administration	4
	GSSS-201 Fundamentals of Sociology	4
	GSSP-210 Introduction to Psychology	4
	'Five General Studies (Electives)-Lower Division	20
	Open Elective	4
	^Physical Education Elective	0
Second Year	GCJC-301 Fundamental Concepts of Criminal Law	4
	GCJC-303 Law Enforcement in Society	4
	GCJC-304 The Judicial Process	4
	GCJC-309 Juvenile Justice	4
	Two Professional Electives	8
	GSSP-203 The Psychology of Childhood and Adolescence	5
	GSSP-503 The Abnormal Personality	5
	'Two Science Electives (College of Science)'	8
	'Two General Studies (Electives)-Lower Division	8
	^Physical Education Elective	0
Third and Fourth Year	GCJC-411 Issues in Corrections	4
	GCJC-401 Scientific Methodology	4
	GCJC-403, 404 Field Experience[2]	18
	'Two General Studies Electives-Upper Division	10
	GCJC-526 Issues in Law Enforcement	4
	GCJC-528 Etiology of Crime	4
	GCJC-514 Planning and Change in Criminal Justice	4
	Three Professional Electives[3]	12
	GSSS-502 Contemporary Social Problems	5
	'Four General Studies Electives-Upper Division	20
	Open Elective	4

*See Pg. 64 for General Studies requirements. Students in criminal justice are required to take one additional lower division course, which may be chosen from any of the three General Studies areas listed.
tSee Pg. 27 for Policy on Physical Education.
[1] Computer Science or math courses may be taken in place of the science electives.
[2] In-service students will be required to take two professional electives per quarter, for a total of 16 credit hours - this will satisfy the 18 hours of credit required for Field Experience.
[3] Professional electives are designed to allow the student to concentrate on a particular discipline(s) of criminal justice. Courses in other disciplines may be taken with permission.

Social Work Program Offered in Response To Community Needs

Arnold J. Berman, Director

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.

It 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 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.

Accreditation
The bachelor of science degree program in social work is fully 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 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, deaf people, children and their families, and senior citizens.

Employment is also available in agencies that provide such special services as community planning and intervention, metropolitan planning, rural social services, hospital work, corrections work, school social work, day care center work, 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 General Studies. Matriculated students not maintaining a 2.00 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:

1. A continuum of social work and social welfare courses

This would include 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.

Further, generic methods courses will be offered before and concurrently with field instruction. Emphasis will be placed on the development of Interventive skills and on the differential use of common principles in a diversity of situations requiring social work intervention.

Also, a senior seminar and project will give the student an opportunity to study a particular aspect of social work practice, to reflect on his or her social work study and experience, and to focus on future professional and humanitarian goals.

2. A broad spectrum of foundation courses in the social sciences and humanities

Through liberal education opportunities it is hoped to assist students in their intellectual, aesthetic, and social development, to stimulate their curiosity, and to sharpen their ability to engage in independent inquiry. Course work in human behavior and the social environment 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 be used to help students develop those techniques indispensable to good written and oral communication and pursue a vigorous intellectual independence.

3. Field observation, volunteer opportunities, and field instruction

A continuous range of learning opportunities is provided throughout the curriculum by required experiences or elected situations. 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 Department 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 Seminar and Project course. The Independent Study option also may be used to extend experience in the field. All work in this area will be under the supervision of RIT faculty.

4. Professional electives and concentrations

The Social Work program offers a wide variety of professional electives. Because of the multiple offerings in some elective areas, and related courses in other departments, the student has the opportunity to develop a concentration of study in:

Deafness and Hearing Impairment
Alcoholism and Substance Abuse
Families and Children
Legal (Criminal Justice)
Managment and Administration

Among the other elective offerings are Self-Awareness, Rural Services, Gerontology, Advocacy, Mental Health, Women's Issues, Current Issues, and a selection of Intervention courses.

In addition to courses offered by the Social Work Department, professional electives that complement a student's unique career plans may be selected from other RIT departments.

5. Open electives

Some academic credits are allotted to the pursuit of any other interests which students select.

Transfer Credit

Transfer credit is given for academic work taken prior to entering the social work program. A student entering with an appropriate two-year degree can complete the RIT program in two academic years.

Course Descriptions

For a description of course content and sequencing, please request the Course Description catalog from the Admissions Office.

Social Work

Year		Quarter Credit Hours
First Year	GSWS-210 Intro, to the Profession of Social Work	4
	GSSP-210 Introduction to Psychology	4
	SBIG-210 Human Biology	4
	SBIG-213 Human Reproduction	4
	GSSP-203 Psychology of Childhood & Adolescence	4
	GSWS-211 Social Welfare: Structure & Function	4
	GSSS-210 Introduction to Sociology	4
	*Four General Studies Electives (Lower Division)	16
	One Professional Elective	4
	t Physical Education	0
Second Year	GSWS-302 Social Welfare: History	4
	GSSE-210 Introduction to Economics	4
	GSHH-547 History of Social Discrimination	5
	GLLC-431 or 432 Spanish I, II or GSWS-310 Hispanic Culture for Social Workers and GSWS-311 Social Work From a Pan Afrikan Perspective . .	8
	GSSP-515 Psychology of Human Adjustment	5
	GSWS-312 Research Methods	4
	GSWS-411 Methods of Social Work I & Lab	4
	Three Professional Electives	12
	'Two General Studies Electives (Lower Division)	8
	^Physical Education	0
Third Year	tGSWS-421, 422 Field Instruction I, II	10
	GSWS-412, 413 Methods of Social Work II, III	8
	One Professional Elective	4
	GLLC-402 Conference Techniques	4
	*Two General Studies Electives (Upper Division)	10
Fourth Year	GSWS-535 Seminar and Project	4
	GSWS-532 Social Welfare: Profession & Issues	4
	GSWS-533 Social Welfare: Policy & Planning	4
	GSSM-514 Theories of Political Systems	5
	One Open Elective	4-5
	•Four General Studies Electives (Upper Division)	20
	Two Professional Electives	8

**See Pg. 64 for General Studies requirements.*
tSee Pg. 27 for Policy on Physical Education.
fFull-time field placement in social work agency.
Note Jransfer credit may be given, when appropriate, for any course with the exception of the Methods Sequence, Field Instruction, Policy & Planning, Profession and Issues, and Seminar and Project.

College of Graphic Arts and Photography

Lothar K. Engelmann, Dean

The College of Graphic Arts and Photography encompasses the School of Photographic Arts and Sciences, the School of Printing, and the Graphic Arts Research Center.

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 photographic science and instrumentation, a BS degree in professional photography, and a BFA degree in photographic illustration. A program in photographic management and marketing-given jointly by the School of Photographic Arts and Sciences and the College of Business-leads to the BS degree. A program in biomedical photographic communications leading to AAS and BS degrees is also offered. Graduate programs lead to an MS degree in photographic science and instrumentation, and to an MFA degree in photography. More than 900 students are enrolled from nearly every state and many foreign countries. The curriculum in photographic science and instrumentation 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 newly-approved BS program in Printing Systems Management combines printing and industrial engineering, and prepares graduates for optimizing operating conditions in the complex printing establishment. It also offers programs leading to the MS degree in printing technology and printing education. Over 650 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 Graphic Arts Research Center, with its own full-time staff, conducts research in 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 students. They are also individuals who are educationally qualified and have had extensive professional experience and training in the graphic arts industries.

The establishment of two distinguished professorships highlights this qualification of the college's teaching staff. The Melbert B. Cary, Jr., Professorship emphasizes the School of Printing's involvement in typography and design generally, while 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 directly, the Graphic Arts Research 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 General Studies 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.

Most 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 student and approved by his or her advisor. 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, and they must also complete satisfactory thesis work.

Requirements for the MS degree in photographic science and instrumentation, 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 and printing systems management 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 program.

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 vocational needs not met by the four-year programs.

Information on summer programs in either school can be obtained from the director of the Summer Session.

Graphic Arts Research Center
GARC serves the printing and graphic communications industry through research, continuing education, and the dissemination of information. It acts as an interface between RIT's academic programs and the commercial world of production and research. GARC's professional staff has been recruited from industry and research organizations. This experienced staff provides realistic counsel when lecturing or acting as undergraduate and graduate thesis advisors in the field of printing as well as in the field of photographic science. GARC's facilities are used in conjunction with lectures, seminars, and demonstrations for special students. GARC information is made available to students in such publications as ***Graphic Arts Literature Abstracts,*** and GARC reports of research efforts.

The Science and Technology section consists of fundamental research programs in color theory, color measurement and specification, paper technology, image evaluation, screenless lithography, study methods for gray balance determination, and photometric measurement of dot area.

The Physical Testing Laboratory which emphasizes color reproduction, conducts industry-supported programs for testing paper, ink, and other printing products. Its facilities also accommodate test runs for the Science and Technology section. And many of the continuing education programs (seminars in Web Offset Newspaper Training, Paper-Ink-Press, Compositions Systems, and Color Reproduction) use the lab facilities, including the four-unit perfecting web offset press.

The Information Services library houses an extensive international collection of literature relevant to the graphic arts. From its extensive holdings it offers the following services to both the educational and industrial communities.

Graphic Arts Literature Abstracts (GALA)—Formerly called ***Graphic Arts Index,*** GALA represents a new and expanded effort into current awareness and retrospective retrieval efforts within the graphic arts. GALA, published monthly on a subscription basis, offers subject categorized, fully indexed informative abstracts of the graphic arts literature as gleaned from the timely scanning of over 200 international publications, periodicals and conference proceedings.

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 15-16 of this Bulletin.

The School of Photographic Arts and Sciences, the School of Printing, and the Graphic Arts Research Center 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[1]-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. Degrees granted: AAS-2 year; BS-4 year.

Photographic Illustration[1]—Students use photography to solve visual communication problems leading to vocations in studio, mass media, and museum practices. Students develop innovative and individualized responses to visual problems, and are expected to become sensitive to contemporary graphic design. Degrees granted: AAS-2 year; BFA-4 year.

Photographic Processing and Finishing Management[1]-Students develop a thorough knowledge of photographic process, production techniques and procedures, and business, including aspects of promotion and selling in a competitive market. Degrees granted: AAS-2 year; BS-4 year.

Professional Photography[1]—Students learn skills in business as well as photography to enable them to seek employment in fields of their choice. Demands a high degree of application of students' evolving abilities to obtain professional competence. Degrees granted: AAS-2 year; BS-4 year.

Photographic Science and Instrumentation[1]—Students learn of the application of physics, chemistry, and mathematics to photography; of the materials and processes of 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.

Printing[1]-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.

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. Degree granted: BS-4 year

Printing Systems Management—Prepares students for career that emphasizes measurement and control techniques, problem solving and optimization of operating condition in the industrial technological environment in the printing industry. Degree granted: BS-4 year

[1]About one-third of program consists of electives in social science, literature, and humanities. There are also many professional electives available.

Freshman Admission Requirements			Transfer Admission with junior standing	
Program	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable minimum grade point average
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; PPHP-301, 302, 303; and PPHP-311, 312, 313. Remaining credit may be any combination of drawing, design, or photography. Opportunities for transfer are limited.	2.2
Photographic Illustration	2 years any mathematics; 1 year any science	Art courses	Total of 93 quarter credits including 48 quarter credits in photography, 24 quarter credits in general studies. "C" grade in RIT Summer PPHG-200 and PPHG-210 may be substituted for 18 credit hours of the 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 evaluation of credit.	2.2
Professional Photography	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; PPHP-301, 302, 303; and PPHP-311, 312, 313. Remaining credit may be any combination of drawing, design, or photography. Opportunities for transfer are limited.	2.2
Photographic Science and Instrumentation	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 general studies. "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
Printing	Elem. Algebra; Plane Geom. or Inter. Algebra; 1 year any science	Printing courses or experience with school publication; chemistry; physics; interest in printing; additional mathematics	Associate's degree in graphic arts including wide range of courses in general studies, 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.	2.2
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 general studies, 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.	2.2
Printing Systems Management	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Physics and Chemistry	Additional mathematics	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.*

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. Some chemicals and specialized equipment are supplied. Students are encouraged to purchase photographic equipment that will further their chosen careers. All first year BFA and BS students in professional photography are required to have their own hand-held small or medium format camera and a professional light meter. All uppercl^ss professional photography students are required to have their own view camera and allied equipment.

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 represents a remarkable cross section of various photographic fields. Many faculty members possess not only formal degrees but recognition from professional societies in the form of honors and titles indicating professional excellence.

Programs of study

The School of Photographic Arts and Sciences offers an undergraduate (BS) program in photographic science and instrumentation; an undergraduate (BFA) program in photographic illustration; an undergraduate (BS) program in professional photography; an undergraduate (BS) program in photographic processing and finishing management; an undergraduate (BS) program in biomedical photographic communications, and an undergraduate (BS) program in filmmaking and television.

Graduate programs

The School of Photographic Arts and Sciences offers two master's degree programs: MFA in photography and the MS in photographic science and instrumentation. These are described in the 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. A special course is offered for high school and college art teachers desiring to build a background in basic photography. 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 the 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 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.

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.

Photographic Illustration

Applicants for photographic illustration must have had two years of mathematics and one year of science. Art courses are recommended.

Photographic Processing and Finishing Management

Applicants for admission in this program should have had two years of high school mathematics, elementary and intermediate algebra, and chemistry. Additional science is recommended.

Professional Photography

Applicants for professional photography must have had two years of high school mathematics, including either intermediate algebra or plane geometry, and one year of science.

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 a reasonable chance of success.

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

Transfer students
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 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 (professional photography or photographic illustration) from 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.

Transfer students should expect to have light schedules during part of their residence at RIT because of prerequisite requirements and scheduling problems.

Summer transfer
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.

Transfer Admission

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.

Requirements for admission to second year**

Film and Television
A total of 33 quarter credits, including 12 acceptable credits in general studies, an acceptable science course (nine quarter credits), and/or an acceptable design studio course (six quarter credits); plus 12 credits in photography, additional art courses, or science courses; and a "C" grade or better in summer course *PPHG-200 (Photography) and PPHG-210 (Materials and Processes of Photography).

Photographic Illustration
A total of 30 quarter credits, including 12 acceptable credits in general studies and 6 acceptable credits in studio courses in drawing and design, and 12 credits in photography or additional art courses, plus a "C" grade or better in summer courses *PPHG-200 (Photography) and PPHG-210 (Materials and Processes of Photography).

Photographic Processing and Finishing Management
A total of 37 quarter credits, including 12 quarter credits in general studies, acceptable credits in college math (6 quarter credits) and 16 quarter credits in a combination of business and management, plus 3 additional credits in photography or science.

Professional Photography
A total of 33 quarter credits, including 12 acceptable credits in general studies, acceptable science course or courses (9 quarter credits), and/or an acceptable design studio course (6 quarter credits); plus 12 credits in photography, additional art courses, or science courses; and a "C" grade or better in summer courses *PPHG-200 (Photography) and PPHG-210 (Materials and Processes of Photography).

Photographic Science
A total of 39 quarter credits, including 12 acceptable quarter credits in general studies, acceptable courses in calculus (12 quarter credits) or higher mathematics, and general physics or chemistry of not less than one year in either, and 3 additional credits in photography or science, plus a "C" grade or higher in summer courses *PPHS-200 (Fundamentals of Photographic Science) prior to admission to the second year.

Requirements for admission to third year

Photographic Illustration
A total of 93 quarter credits including 24 acceptable quarter credits in general studies. The remainder of 69 quarter credits must include a minimum of 12 quarter credits of studio courses in design and drawing, plus nine credits of History and Aesthetics of Photography, or their equivalents. (A candidate lacking some of these credits of studio courses in design and drawing, plus 9 credits of History and Aesthetics of are required. If there are insufficient photography studio courses the applicant will be required to take PPHG-200 and PPHG-210 during the summer.

Professional Photography
A total of 96 quarter credits including 24 acceptable quarter credits in general studies, 9 credits in science or higher mathematics and 6 credits of design. Also 57 quarter credits in any combination of photography-related courses of which 48 credits must be equivalent to PPHG-201, 202, 203, PPHP-301, 302, 303, and PPHP-311,312 and 313.

Photographic Science
A total of 80 quarter credits including 24 acceptable quarter credits in general studies, a minimum of 20 quarter credits in calculus or higher mathematics, and acceptable courses of not less than one year each in general chemistry and general physics, a computer programming course, plus a "C" grade or higher in summer courses *PPHS-200 and PPHS-210 (Fundamentals of Photographic Science I and II) prior to admission to the third year.

**These are summer courses required by those persons who do not have a sufficient photographic background. Maximum of 24 student accepted.*
***There is a limit of approximately 100 students in each of the second years of photographic illustration and professional photography.*

Biomedical Photographic Communications

Nile R. Root, Coordinator

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 teams 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, which can be selected in consultation with the advisor.

Transfer candidates must have an 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.

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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
	•General Studies Elective-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
	Summer (4th Quarter) Internship for 10 weeks in a medical setting.			
Second Year	PPHB-301, 302, 303 Biomedical Photography II ...	5	5	5
	PPHP-311,312, 313 Basic Color	3	3	3
	PPHB-331, 332, 333 Preparation of Biomedical Visuals	3	3	3
	•General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Third Year	PPHB-413 Biomedical AV Design and Production.	4		
	PPHB-401, 402 Advanced Photography in Biomedical Communications.....		4	4
	•Professional Electives	3 to 4	3 to 4	3 to 4
	Science Electives (Advanced Courses in Biology) .	3 to 4	3 to 4	3 to 4
	•General Studies-Upper Division.....	5	5	5
	Summer Internship (Optional)			
Fourth Year	PPHB-501, 502, 503 Senior Thesis Project.....	4	4	4
	•General Studies-Upper Division.....	5	5	5
	Business Electives.....	4	4	4
	••Professional Electives	3 to 4	3 to 4	3 to 4

tAssociate's degree awarded upon successful completion of second year.

**Possible recommended professional electives:
PPHF-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.

*See Pg. 64 for General Studies requirements.

tSee Pg. 27 for Policy on Physical Education.

Film and Television

Richard Floberg, Staff Chairman

The courses in film and television are designed for students who recognize the motion picture medium as an expressive force uniquely important in today's world. They are intended 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 communicating with moving images and the aesthetic principles governing the art. They also are offered to students in Professional Photography, Photographic Illustration or Biomedical Photographic Communications; and 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.

Film and Television

Year		Quarter Credit Hours Fall	Winter	Spring
First Year	FADF-221, 222, 223 Design	2	2	2
	PPHG-201, 202, 203 Photography	7	7	7
	PPHG-211, 212, 213 Materials and Processes of Photography	3	3	3
	•General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year	•General Studies-Lower Division	4	4	4
	oScience Option Electives	3	3	3
	PPHF-301, 302, 303 Film Making (I)	4	4	4
	PPHF-417, 418, 419 TV Production	4	4	4
	^Physical Education	0	0	0
Third Year	•General Studies-Upper Division	5	5	5
	PPHF-411, 412, 413 Film Making (II)	4	4	4
	PPHF-407, 408, 409 History of Film	3	3	3
	**Non-Photo Electives	4	4	4
Fourth Year	•General Studies-Upper Division	5	5	5
	Senior Production I & II Film/Television	4	4	
	Film/Television Post Production			4
	•••Prof. Elective Courses (one per Qtr.)	2	2	2
	Or			
	Prof. Elective Course in Fall Qtr.	(2)		
	and			
	PPHF-421, 422 Script Writing		(3)	(3)
	**Non-Photo Electives	4	4	4

fAssociate's degree awarded upon successful completion of second year.
*See Pg. 64 for General Studies requirements.
tSee Pg. 27 for Policy on Physical Education.

Notes: 1. Any student at RIT may take any course in the Film/TV Department for which the pre-requisites have been met, provided there is space. Students transferring into the Department will be evaluated individually for transfer credit.

o2. Recommended Science Elective Options (2nd Year) Cr. 3/qtr. Such as:
SCHG-281, 282, 283 General Chemistry
SSEG-201, 202, 203, 204 Contemporary Science
SBIG-201, 202, 203 General Biology
SPSP-211,212,213 College Physics
Other with permission from Coordinator

**3. Recommended Non-Photographic Electives (3rd and 4th Year) Cr. 4/qtr. Such as:
Psychology]
Sociology
Music | Various courses in these disciplines are offered by the College of General Studies.
Philosophy
Literature J
BBUA-210 Financial Accounting
ITEE-310, 311 Electricity and Electronics
Various other courses such as Design and Computer Graphics (presently being offered)

***4. Professional Elective Courses (Any three of the following courses)
Directing Cr. 2/qtr.
Visualization Cr. 2/qtr.
Sound Recording Cr. 2/qtr.
Script Writing Cr. 3/qtr.

Photographic Illustration

Illustration Photography
Film Making
Photojournalism
Photography as a Fine Art

C. James Gleason, Staff Chairman

The curriculum leading to a bachelor of fine arts degree in 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, billboards, 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 may make educational, entertainment business films and TV commercials. They are qualified to function as artists using photography as a principal means of expression. They may become scholars, photohistorians, photojournalists, or museum curators.

Areas of concentration

The bachelor of fine arts program is subdivided into four major 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 so desires within the advisory system, to select those courses which provide for and best suit his or her particular needs.

The first year is common to photographic illustration and professional photography programs. After the first year, the student elects to continue in either photographic illustration or professional photography. This is based on educational background and availability of faculty and facility.

Bachelor of Fine Arts professional electives

PPHF-401, 402, 403 Film Making I
PPHF-407, 408, 409 History and Aesthetics of Film
PPHF-421,422 Scriptwriting
PPHL-421, 422, 423 Nature Photography
PPHL-521, 522, 523 Color Photo Workshop
PPHL-411,412, 413 Photojournalism I & II PPHL-511, 512, 513
PPHL-401, 402, 403 Photography as a Fine Art I & II PPHL-501, 502, 503
PPHL-431, 432, 433 Illustration Photography I & II PPHL-531, 532, 533
PPHL-437, 438, 439 Visual Communications Workshop
PPRT-591, 592, 593 Reproduction Photography, Offset Platemaking Offset Presswork
PPHL-599 Independent Study
Others to be selected in consultation with advisors and staff chairman.

Bachelor of Fine Arts in Photographic Illustration

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	FADF-221, 222, 223 Design	2	2	2
	PPHG-201. 202, 203 Photography	7	7	7
	PPHG-211. 212, 213 Materials and Processes of Photography	3	3	3
	'General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Yearf	FADF-321, 322, 323 Design	2	2	2
	'General Studies Electives-Lower Division	4	4	4
	PPHL-301, 302, 303 History and Aesthetics of Photography	3	3	3
	PPHL-311, 312, 313 B.F A. Photography II	6	6	6
	^Physical Education Elective	0	0	0

Major Photographic Electives:
Illustration Photography Photography as a Fine Art
Photojournalism Film Making
(All BFA students must select one of these electives as a two-year involvement)

Third Year	FSCF-225, 226, 227 Art and Civilization	3	3	3
	•General Studies Electives-Upper Division	5	5	5
	Major Photo Elective	4	4	4
	Professional Electives (selected from BFA elective list)	3	3	3
Fourth Year	Art History Electives	3	3	
	FSCF 380 Contemporary Art			3
	•General Studies Electives-Upper Division	5	5	5
	Major Photo Elective	4	4	4
	Professional Electives (selected from BFA elective list)	3	3	3

fUpon successful completion of the second year, the associate in applied science degree is awarded.
**See Pg. 64 for General Studies requirements.*
tSee Pg. 27 for Policy on Physical Education.

Photo Management

Program Trains

Industry Managers

James E. McMillion. Jr., Coordinator

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 after two years are awarded the AAS degree and should qualify for area supervisory positions in a finishing plant.

Photographic Processing and Finishing Management

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
PPHP-411, 412, 413Sensitometry
PPHP-441, 442, 443 Advanced Color Printing
SCHG-205, 206, 207 Chemical Principles
Others to be selected in consultation with advisors.

Photographic Processing and Finishing Management majors

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	PPHS-201, 202, 203 Photo, for Scientists & Engineers	4	4	4
	SMAM-201, 202 College Algebra and Trig	3	3	
	BBUB-201 Management			4
	PPHP-311,312, 313 Basic Color	3	3	3
	PPHM-204 Orientation to Production Ph. Processing & Finishing			1
	•General Studies	4	4	4
	^Physical Education Elective	0	0	0
Second Year t	PPHM-301, 302, 303 Production Processing & 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
	'General Studies	4	4	4
	^Physical Education Elective	0	0	0
Third Year	PPHM-401, 402, 403 Photographic Process Control	4	4	4
	PPHM-410, 411, 412 Training and Supervision	4	4	4
	PPRM-503, 504 Statistics of Quality Control		4	4
	BBUB-401 Behavioral Science	4		
	•General Studies	5	5	5
	Summer Internship			
Fourth Year	BBUA-210, 211 Accounting	4	4	
	FIE! 482 Production Control	4		
	BBUM-263 Marketing			4
	Professional Electives**	4	8	4
	PPHM-520 Operation, Care and Maintenance of Photofinishing Equipment		1	
	PPHM-501, 502, 503 Senior Seminar	0	0	1
	'General Studies	5	5	5

*See Pg. 64 for General Studies requirements.
tSee Pg. 27 for Policy on Physical Education.
**Professional electives must be chosen in consultation with the student's academic advisor.
tUpon successful completion of second year, the associate of applied science degree is awarded. It is required that students seeking the baccalaureate degree spend a summer in an internship program.

Professional Photography

Donald L. Bruening, Staff Chairman

The professional photography curriculum prepares the student for a career in visual communications and its related fields, that is, solving a client's visual needs.

To this end, during the first two years, the student acquires a broad base of knowledge and skills in the visual or aesthetic as well as the technical areas of photography. In the final two years, each student follows an advanced program of elective courses based on his or her particular field of interest. Courses may be selected that lead to specialized skills or to a very broad background for future growth and specialization. Senior students with high grade point averages may work on a one-to-one basis in an area of advanced specialization through independent studies. Emphasis is also placed on business skills and the realities of current and projected trends, both within the profession, and in the socio-economic environment of which the graduate expects to become a part. This program also gives an excellent background for a student who chooses a career in photo-related areas such as that of studio management, technical representation, and similar professions.

The student learns from instructors who have come from the profession and who have established their competence in fields ranging from advertising illustration through commercial, industrial, portraiture, color processing and printing, and special laboratory techniques.

Broadly stated, this program involves studies and experiences in both technical and creative aspects of visual problem solving. The curriculum is planned to give students skills in business as well as photography, to qualify them to seek employment in the field of their choice.

Science option electives (second year)

SMAM-201, 202, 203 College Algebra and Trigonometry
SCHG-281, 282, 283 General Chemistry
SSEG-201, 202, 203, 204 Contemporary Science
SBIG-201, 202, 203 General Biology
SPSG-211, 212, 213 College Physics
And also the following may be considered if all necessary prerequisites have been met.
SCHG-205, 206, 207 Chemical Principles
SCHC-211, 212, 213 General Chemistry
and others with permission of staff chairman.

Business Course Requirements

The business courses required in the third year are: New Ventures Development, Small Business Management and Finance, and Small Business Marketing and Planning. These three courses (4 credit hours each) must be completed on the RIT campus. These courses are unique and not transferable.

Non-Photographic Electives

All students are required to complete 12 hours of non-photographic electives prior to completing the Bachelor of Science degree. These elective courses may be taken from the offerings in:

1. The Communication Design Program, College of Fine and Applied Arts
2. College of Business
3. College of Engineering
4. College of General Studies
5. Audiovisual Communications Program, Institute College
6. College of Science
7. School of Printing

There will be no seats specifically set aside in courses in these programs for photo students. A student must meet prerequisites for any course he desires to enter, or have permission from the instructor. This may mean that students may have to wait until registration day at the opening of each quarter to register for these courses. Courses from other areas of the Institute may be utilized after careful consultation with and approval from the student's advisor in writing. Students may transfer up to 4 quarter credit hours of non-photographic electives to RIT toward this 12-hour requirement.

Bachelor of Science professional electives

PPHF-401, 402, 403 Film Making I
PPHF-407, 408, 409 History and Aesthetics of Film
PPHF-421,422 Scriptwriting
PPHF-501, 502, 503 Film Making II
PPHF-507, 508, 509 Introduction to TV Production
PPHL-411, 412, 413 Photojournalism I
PPHL-511, 512, 513 Photojournalism II
PPHM-301, 302, 303 Machine Processing
PPHP-407 AV Preparation and Presentations
PPHP-408 Scientific and Technical Applications of Photography
PPHP-409 Corporate and Special Interest Publications
PPHP-421, 422, 423 Advertising Photography
PPHP-431 Forensic Photography
PPHP-441, 442, 443 Advanced Color Printing
PPHP-501, 502, 503 Industrial Photography Seminar
PPHP-521, 522, 523 Advanced Color Seminar
PPHP-541, 542, 543 Portrait Photography
PPHP-551, 552, 553 Special Topics
PPHP-599 Independent Study
PPRT-591, 592, 593 Reproduction Photography, Offset Platemaking, Offset Presswork

Others to be selected in consultation with advisor and staff chairman.

Professional Photography

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	FADF-221, 222, 223 Design	2	2	2
	PPHG-201, 202, 203 Photography	7	7	7
	PPHG-211, 212, 213 Materials and Processes of Photography	3	3	3
	•General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year t	Science Elective	4	4	4
	•General Studies Electives	4	4	4
	PPHP-301, 302, 303 Photography II	4	4	4
	PPHP-311, 312, 313 Basic Color	3	3	3
	^Physical Education Elective	0	0	0
	oPPHP-304 Retouching	1,	(1)	(1)
Third Year	CBUE-221 New Ventures Development	4		
	CBUE-222 Small Business Management and Finance		4	
	CBUE-223 Small Business Marketing and Planning			4
	•General Studies Electives-Upper Division	5	5	5
	Professional Electives (Elect 2 Selected from B.S. Elective List)	xx	xx	xx
Fourth Year	Non-Photographic Electives	3-4	3-4	3-4
	•General Studies Electives-Upper Division	5	5	5
	Professional Electives (Elect 2 Selected from B.S. Elective List)	××	xx	xx

tUpon successful completion of the second year, the associate in applied science degree is awarded.
**See Pg. 64 for General Studies requirements.*
tSee Pg. 27 for Policy on Physical Education.
xxSufficient courses to make a total of 189 credit hours.
oMay be taken any quarter.

Photographic Science and Instrumentation

Ronald Francis, Staff Chairman

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 photographic science and instrumentation.

A broad segment of American business is an employer of graduates of the Photographic Science and Instrumentation Division; for example, aerospace, business machines, information handling, microelectronics, scientific instruments, graphic arts, industrial chemicals, and photographic materials and equipment. Aside from 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 Photographic Science and Instrumentation Division 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 preceding transfer.

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 acquire photoscience industrial experience during their program at RIT.

Four-year program
Bachelor of Science in Photographic Science and Instrumentation

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 photographic science and instrumentation, 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 Photographic Science and Instrumentation

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, mathematics, engineering, and/or photographic science and instrumentation. 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 Photographic Science and Instrumentation

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, PPHG-700 (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 division.

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).

Photographic Science and Instrumentation

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-599 Independent Study
PPRT-591 Reproduction Photography
PPRT-592 Printing Plates
PPRT-593 Printing Presses
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
SPSP-455 Optical Physics
Others to be selected in consultation with advisors and staff 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 Variables and Signals
EEEE-734 Communication Techniques
EEEE-735 Digital Data Transmission
PPHS-751, 752, 753 Special Topics in Photographic Science
PPRM-702 Computers in Management
PPRT-702 Graphic Reproduction Theory
SCHA-711 Instrumental Analysis
SMAM-711,712 Advanced Engineering Mathematics

Photographic Science and Instrumentation

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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
	•General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year t	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
	•General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Third Year	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
	•General Studies Electives-Upper Division	5	5	5
Fourth Year BS program	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		
	•General Studies Electives-Upper Division	5	5	5
Fourth Year BS/MS	•General Studies Electives-Upper Division	5	5	5
	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		
Fifth Year BS/MS program	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		

t Upon successful completion of the second year, the associate in applied science degree is awarded.
** See Pg. 64 for General Studies requirements.*
^ See Pg. 27 for Policy on Physical Education.

Others to be selected in consultation and with approval of graduate coordinator. Undergraduates with proper prerequisites may take graduate electives for undergraduate credit upon approval of advisors and staff chairman.

School of Printing

Mark F. Guldin, Director

The School of Printing at Rochester Institute of Technology is one of the relatively few educational institutions in the United States that offers major degree programs in printing. It is the largest degree-granting school in its field in the country, and enjoys a position of leadership because of its extensive laboratory facilities, its up-to-date programs of study, and its competent faculty.

The primary objective of the School of Printing is to prepare students-both men and women-for successful careers in the 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-to." Printing school graduates have successful careers in management at all levels in the graphic arts industry, in selling, in supervision, in design, and in research among others.

These occupational objectives involve certain educational objectives. These are to help the student to develop the following: a broad understanding of the procedures involved in the major important processes; an appreciation of the aesthetic qualities of good printing; an understanding of the applications of science and engineering in the graphic arts; a knowledge of theory and practice in the various aspects of management; skills in communication, and an understanding of the student's professional and general environment as a means of developing personally as a well-rounded individual and a responsible citizen.

Career opportunities

The graduate with a BS degree in printing has available a variety of career choices. The printing industry is one of the country's largest, employing not only persons skilled in its own special technologies but also chemists, physicists, engineers, accountants, printing educators, marketing specialists, designers, artists, photographers, copy editors, computer specialists, production and traffic managers, and the closely-related packaging specialist. RIT has all of these programs within its 10 colleges-men and women in the School of Printing have this unique opportunity to elect courses that give them a breadth in preparation for a career of their own choosing in this growing field.

Special requirements for admission

General 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, 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 in the field through investigation or personal associations. While high school graduation is stated as a basic requirement for admission, with intermediate algebra or plane geometry and one year of science as specific prerequisites, preference is given to applicants who have had some additional work in mathematics, physics, or chemistry.

Scholarships and financial aids

Scholarships available to students in the School of Printing number approximately 55, and range in value from $100 to full tuition. Some of these awards may be continued beyond one year depending upon the records made.

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
Graphics Arts Industry
4615 Forbes Avenue
Pittsburgh, Pa. 15213

For information regarding scholarships administered by the Institute, write to the Financial Aid Office.

Areas of study for the Printing Program

The School of Printing offers a four-year course of study that leads to the bachelor of science degree in printing. The degree of associate in applied science is offered upon successful completion of the first two years. Continuation beyond the second year depends upon the satisfactory completion of the first two years and a grade point average of at least 2.0.

The four-year program prepares graduates for a wide variety of technical and management positions in the printing and related industries. Among these are positions in administration and general management, production management, production and quality control, sales and sales management, 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 are available to graduates, as are positions in the book, newspaper, and magazine publishing industries.

The cooperative plan of education is available in the School of Printing for those choosing this option.

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 an assistant in such classifications as estimating, production control, specification writing, purchasing, copy preparation, typography and layout, and sales.

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 printing program includes a group, or core, of basic required courses that is indicated in the program outline on page 87. Students have the opportunity to expand their own areas of interest by selecting course combinations, or developing individual program sequences from approved elective courses.

Two-year programs for college graduates
Many college graduates with baccalaureate degrees may complete the professional requirements for the bachelor of science degree in printing in two years of concentrated study. This is because they have already satisfied many requirements in general studies, mathematics, and science elsewhere. Upon admission, such students are usually given the equivalent of two years of credit.

Those who have taken courses which parallel those required in their chosen majors in the School of Printing normally are given additional transfer credit, if grades are "C" or better.

Cooperative program
The cooperative program in printing is a flexible and voluntary program which will be available to printing students who have successfully completed the first two years of the required printing program and to qualified printing transfer students accepted at the junior-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 will have a wide variety of graphic arts work experiences available to them. This cooperative program in printing will require up to five years for completing BS degree requirements.

Graduate program
The School of Printing also offers a graduate program leading to the master of science degree, described in the separate Graduate Bulletin. Information concerning this program is available from the Admissions Office.

Organization
For purposes of program administration, planning, supervision, and student counseling, the School of Printing is organized into four divisions: Design-Composition, Photography-Plate-Press, Management, and Graduate.

While each student is expected to use initiative in selecting elective courses, each division administers program sequences which may be developed from professional elective courses.

Design-Composition Division

Archibald D. Provan, Staff Chairman

It is necessary for most people in the graphic arts to have an appreciation for good design and typography because much of their time will be spent evaluating the printed word 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, in turn, have a need for employing well-qualified people in these areas. In addition, the needs of inplant, 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 courses 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 sequences 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. Although particularly oriented for those interested in book design, this flexible program can be altered to fit the specific needs of others interested in the wide range of opportunities the publishing industry has to offer.

Design and typography
A program for those students with a basic interest in the aesthetics of printing. The student is given a broad range of courses, calligraphy to typography, design to copy preparation, which are important for entering the field of design, typography, or any of the other creative fields of the printing industry.

Composing room procedures
A sequence giving printing students an overview of typesetting techniques and the handling of materials as they are related to layout and design. The diversity and challenges in this field are reflected through a series of courses ranging from electronics in computerized typesetting through estimating and other management areas related to the composing room.

Photography Plate-Press Division

Edward A. Brabant, Staff Chairman

The production segment of the industry is the core area of most printing facilities. Every manager in the industry from design through sales and from personnel through finance must have a firm grasp of this core area if their decisions are to be valuable ones. 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 major printing processes, encompassing operations and materials in camerawork, stripping, platemaking, presswork, inks, substrates and finishing.

This division administers sequences in various production areas such as:

Lithographic technology
This program gives the student an 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.

Packaging printing
This sequence, offered in conjunction with the Department of Packaging Science, emphasizes the problems encountered 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 program for students who wish to specialize in the photomechanical processes in printing. The student is prepared for management positions with camera service departments within printing firms and with color separation service companies.

Flexographic technology
A sequence for students who wish to enter the flexography industry with a background designed to be particularly helpful for their careers. This allows the student to use elective credits to emphasize appropriate technical course work and take advantage of many management electives.

Management Division

Walter A. Campbell, Staff Chairman

To facilitate a high level decision-making process, it is necessary for most management personnel in the graphic arts to have a clear understanding of the interrelationships that exist 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 the other divisions, the Management Division provides the "topping" for shaping future managers in the graphic arts. In collaboration with the other divisions, the seven full-time faculty members and two part-time specialists in this division, all of whom have significant work experience in the printing industry, offer sequences of courses in the following areas:

Estimating
Estimating is at the very 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 prepares 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 the more involved specialized applications in typesetting and optical character reading devices. This sequence is designed to provide the student with a basic understanding of computers and of their potential in production management.

Newspaper production management
A program 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 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
This sequence introduces the student to basic concepts of personnel management from a behavioral science standpoint. Drawing heavily on courses in the College of General Studies, the sequence prepares persons 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 program prepares students for positions in printing sales and marketing, printing equipment sales, and typographic sales as well as positions as technical representatives for graphic arts supply firms. Students are also prepared for sales positions in allied industries such as ink, paper, and packaging, and for positions as printing buyers and brokers.

Electives
The following electives supplement required courses. Each student elects courses to suit his or her individual interests and objectives, and to meet the credit requirements of the printing program. Selection is subject to prerequisite requirements and availability of courses.

General Studies electives
In general, the program requires that the student take one course per quarter from this area which includes subjects such as economics, psychology, language communications, literature and fine arts appreciation. See page 64 for more specific details regarding distribution requirements.

Math/Science electives
Each student must take nine credits of college mathematics as recommended by the School of Printing.

The second-year science sequence must be Chemistry, SCHG-281, 282, 283, or Physics, SPSP-214, 215, 216, or Chemical Principles, SCHG-205, 206, 207. The third-year science sequence can be chemistry or physics, advanced chemistry, advanced physics, calculus, computers, or photography for Scientists and Engineers, PPHS-201, 202, 203.

Professional electives
These are usually selected from the printing management and technology electives listed below but may also include courses from the Colleges of Business or Engineering or other colleges in the Institute for which the subject matter is approved as being relevant to the student's individual needs.

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

Printing electives

Printing Management
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 the Graphic Arts (Cr-4)
PPRM-518 Purchasing in the Graphic Arts (Cr-3)
PPRM-599 Independent Study (Cr-Arranged)

Printing Technology
PPRT-213 Principles of Copy Preparation (Cr-3)
PPRT-301 Typography II (Cr-4)
PPRT-303 Layout and Printing Design (Cr-4)
PPRT-304 Advanced Relief Press (Cr-4)
PPRT-306 Tone Reproduction Photography (Cr-3)
PPRT-307 Lithographic Plates (Cr-3)
PPRT-308 Lithographic Press Problems (Cr-4)
PPRT-309 Advanced Screen Printing (Cr-3)
PPRT-310 Relief and Gravure Platemaking (Cr-3)
PPRT-313Copy Preparation (Cr-4)
PPRT-314 Flexography (Cr-4)
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-329 Introduction to Book Design (Cr-3)
PPRT-333 Introduction to Book Production (Cr-3)
PPRT-401 Typographic Workshop (Cr-4)
PPRT-403 Layout and Printing Design (Cr-4)
PPRT-406 Color Separation Photography (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.

Printing

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	PPRT-201 Typography I	3		
	PPRT-202 Composition Technology	3		
	PPRT-203 Layout and Printing Design	3		
	PPRT-204 Relief Press		3	
	PPRT-205 Gravure Printing		3	
	PPRT-206 Reproduction Photography		3	
	PPRT-207 Printing Plates			3
	PPRT-208 Lithographic Press			3
	PPRT-209 Screen Printing			3
	Mathematics Option	3	3	3
	*General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year t	PPRT-302 Composition Systems	3		
	PPRT-311 Imposition and Finishing		3	
	PPRT-402 Applications of Electronics to Graphic Arts			3
	PPRM-201 Introduction to Technical Writing	3		
	PPRM-302 Personnel Relations		3	
	PPRM-210 Financial Controls		3	
	**Science Elective	4	4	4
	PPRT-312 Stripping			3
	*General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Third Year	PPRT-410 Introduction to Paper	3		
	PPRM-301 Applications of Computers to Graphic Arts			3
	PPRM-401 Estimating I		4	
	PPRM-403 Printing Production Management I	3		
	**Science Elective	4	4	4
	Professional Electives		4	4
	*General Studies Electives-Upper Division	5	5	5
Fourth Year	SMAM-309 Statistics		4	
	PPRM-590 Senior Seminar	2		
	Professional Electives	10	9	10
	*General Studies Electives-Upper Division	5	5	5

*See Pg. 64 for General Studies requirements.
**Approved three-quarter sequences are listed under Science Electives.
t Upon completion of the second year, the associate in applied science degree is awarded.
^ See Pg. 27 for Policy on Physical Education.

Newspaper Production Management

Robert G. Hacker, Coordinator

The printing and publishing industries are undergoing dynamic changes in technology. Within the newspaper field these changes are particularly drastic, completely altering how things are accomplished. Coupled with this are the advances in technology and market penetration of related information-handling industries resulting in increasingly strong competition for newspapers in the areas of reader interest and advertising appeal. These advances have made it imperative for newspapers to alter not only the way in which a newspaper is printed and distributed but 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 increasingly a function of advertising and editorial preparation, a direction enveloping previously distinct business functions as well. These trends will result in the integration of these departments into a single entity utilizing a computer system to handle, transmit, and process information and control the production and delivery of the resultant product.

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 goal of a useful and profitable position in the marketplace. The revolutionary changes in this field, themselves, point 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.

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 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 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.

Scholarships and financial aid
In addition to the scholarships generally available to School of Printing students, there are a number of scholarships available for students enrolled in the newspaper production management program. Additional scholarships are available through the National Scholarship Trust Fund of the Educational Council of the Graphic Arts Industry. 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

For information regarding scholarships administered by the Institute, write to the Financial Aid Office.

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. Employing about 383,000 people, the newspaper industry continues to be the third largest employing segment of the total manufacturing industry in the country. With 8,200 establishments producing over 1,700 dailies and 7,400 weeklies, the four-year program in production management prepares graduates for entry level positions in these establishments.

The ***U.S. Industrial Outlook*** says of the newspaper industry, “The continuing development and implementation of new technologies, successful research efforts and educational programs will support a growth rate ranging between 7 and 8 per cent per year to the mid-1980s.

The program stresses management, engineering, the sciences, computer and printing technology, along with liberal studies.

The cooperative plan of education is available in the School of Printing for those 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.

Cooperative program
The cooperative program in newspaper production management is a flexible and voluntary program available to students who have successfully completed the first two years of the required newspaper production management program, and to transfer students accepted at the junior level. A wide variety of work experiences are available in the newspaper industry where students’ practical work experiences can build upon the formal classroom learning. This cooperative program can require up to five years for completing the BS requirements.

Organization
The BS program in newspaper management is organized under the management division of the School of Printing. This division offers many courses in the marketing, financial, personnel, and production segments of the industry and are available to the newspaper production management students.

Electives
The following electives supplement required courses. Each student elects courses to suit his or her individual interests and objectives, and to meet the credit requirements of the printing program. Selection is subject to prerequisite requirements and availability of courses.

General Studies electives
In general, the program requires that the student take one course per quarter from this area which includes subjects such as economics, psychology, language communications, literature and fine arts appreciation. See page 64 for more specific details regarding distribution requirements.

Math/Science electives
For students with a strong mathematics background, math courses other than SMAM-201, 202, 203 may be taken. Prerequisites for this program are high school algebra and trigonometry. Math choices could be SMAM-204 Modern Algebra, SMAM-214, 215 Introduction to Calculus, SMAM-216, 217, Introduction to Math of Business and Finance.

The second year science sequence must be Chemistry SCHG-281, 282, 283. The third year recommended science sequence is ICSS-200, ICSP-305, ICSS-575.

Professional electives
These are usually selected from the electives listed below but may also include any other School of Printing course.

Recommended professional electives
PPRM-516 Marketing in the Graphic Arts
ICSP-215 Programming Language-Fortran
ICSP-310 Programming Systems Design
PPRT-323 Newspaper Color
PPRT-324 Newspaper Composition
PPRM-702 Computer in Management

Newspaper Production Management

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	PPRM-302 Personnel Relations			3
	PPRM-310 Industrial Organization and 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
	EENG-201 Introduction to Engineering	4		
	Mathematics Elective	3	3	3
	*General Studies Elective-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year	PPRM-201 Introduction to Technical Writing			3
	PPRT-210 Newspaper Presses		3	
	PPRM-301 Applications of Computers in Graphic Arts	3		
	PPRT-320 Newspaper Production I		3	
	PPRT-402 Applications of Electronics		3	
	PPRT 322 Circulation and Mailroom			3
	EI EI -420 Work Measurement & Analysis	4		
	Professional Electives			3
	**Science Elective	4	4	4
	*General Studies Elective-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Third Year	PPRM-210 Financial Controls I	3		
	PPRM-514 Newspaper Management		4	
	PPRT-330 Newspaper Production II			3
	PPRM-518 Purchasing in the Graphic Arts	3		
	EIEI-422 Systems and Facilities Planning			4
	Professional Electives		3	
	**Science Elective	4	4	4
	*General Studies-Upper Division	5	5	5
Fourth Year	SMAM-309 Statistics	4		
	PPRM-509 Economics of Production Management			4
	PPRM-511 Labor Relations in Graphic Arts		4	
	PPRM-515 Legal Problems in Publishing			4
	Approved Professional Electives	6	8	4
	*General Studies-Upper Division	5	5	5

*See Pg. 64 for General Studies requirements.
**Approved three quarter sequences are listed under Science electives.
^ See Pg. 27 for Policy on Physical Education.

Printing Systems Management

Walter G. Campbell, Coordinator

There is a need in the printing industry for people who have a competency in both printing and industrial engineering.

The main focus for such people is on printing processes so that operating conditions in printing plants and allied industries can be optimized. 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 everyday occurrences. The program in Printing Systems Management integrates coursework in printing technology, printing management, industrial engineering, math/science, and general education to prepare people for the printing industry, who are excellent problem solvers when analyzing printing plant operations.

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 of 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 a printing plant or by general interest in graphic communications and engineering. High school graduation is a requirement along with coursework in elementary algebra, plane geometry, intermediate algebra, trigonometry, physics and chemistry. Preference is given to those who have had additional work in mathematics, physics and chemistry.

Scholarships and financial aid

There are a number of scholarships in the School of Printing which range in value from $100 to full tuition. Some of these may be continued beyond one year depending upon how well the student has performed.

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

For information regarding scholarships administered by the Institute, write to or contact the Financial Aid Office, 475-2186.

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 in printing technology, 29 in printing management, 40 in industrial engineering, 32 in math/science, 54 in general studies and six elective credits.

Employing about 1.1 million people, the commercial printing industry has about 40,000 plants. Although many of these plants are quite small, nearly 8,000 of them would be sufficient size to require the services of a 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.

The ***U.S. Industrial Outlook*** says that, "The stability and growth that has existed in the commercial printing industry for more than a decade is expected to continue into the 1980s". This program is designed to complement the industry's growth by stressing management, engineering, the sciences, along with computer and printing technology.

Graduates of two-year colleges are encouraged to transfer into the four-year program. Qualified transfer students find that many of their two-year college credits are applicable toward the four-year degree.

Cooperative program

The cooperative program in printing systems management is a flexible and voluntary program available to students who have successfully completed the first two years of the required printing systems management program, and to qualified transfer students accepted at the junior level. A wide variety of work experiences is available in the printing industry where students' practical work experiences can build upon the formal classroom learning. This cooperative program can require up to five years for completing the BS requirements.

Organization

The BS program in printing systems management is organized under the management division of the School of Printing. This division offers many courses in the marketing, financial, personnel, and production segments of the industry and are available to the printing systems management students.

Electives

Students may elect professional courses in printing or industrial engineering to complete their two-elective course requirement.

General Studies electives

In general, the program requires that the student take one course per quarter from this area which includes subjects such as economics, psychology, language communications, literature and fine arts appreciation. See page 64 for more specific details regarding distribution requirements.

Principal field of study

For students matriculated in the Printing Systems Management Program, the principal field of study consists of all course work in the School of Printing and the Department of Industrial Engineering. Matriculated students not maintaining a 2.0 cummulative grade point average in their principal field of study are subject to academic probation or suspension according to Institute policy.

Printing Systems Management

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	PPRT-201 Typography I	3		
	PPRT-213 Principles of Copy Preparation	3		
	PPRM-210 Financial Controls I	3		
	SMAM-251 Engineering Calculus I	4		
	PPRT-204, 205, or 209 Relief, Gravure, or Screen Printing		3	
	PPRT-206 Reproduction Photography		3	
	PPRM-301 Appl. of Computers to the Graphic Arts		3	
	SMAM-252 Engineering Calculus II		4	
	PPRT-207 Printing Plates			3
	PPRT-208 Lithographic Press			3
	PPRM-403 Printing Production Management I			3
	SMAM-253 Engineering Calculus III			4
	*General Studies Electives-Lower Division	4	4	4
	^Physical Education Elective	0	0	0
Second Year	PPRT-302 Composition Systems	3		
	EENG-201 Introduction to Engineering (Drafting)	4		
	SMAM-351 Introduction to Probability & Statistics	4		
	SMAM-305 Engineering Calculus IV	4		
	PPRM-201 Introduction to Technical Writing		3	
	SPSP-205 General Physics (Mechanics)		4	
	SMAM-352 Introduction to Probability & Statistics		4	
	PPRT-311 Imposition and Finishing			3
	SPSP-206 General Physics (Heat)			4
	EENG-202 Introduction to Engineering (Fortran)			4
	*General Studies Electives-Lower Division		4	4
	^Physical Education Elective	0	0	0
Third Year	PPRT-315 Ink and Color	4		
	El El -422 Systems and Facilities Planning	4		
	El El-420 Work Measurement and Analysis I	4		
	PPRM-401 Estimating I		4	
	El El -41 5 Human Factors I		4	
	EIEI-511 Applied Statistics II		4	
	PPRM-511 Labor Relations			4
	PPRT-308 Lithographic Press Problems			4
	EIEI-401 Operations Research I			4
	*General Studies Electives-Upper Division	4	5	5
Fourth Year	PPRT-406 Color Separation Photography	3		
	EIEI 503 Simulation	4		
	riEI 550 Safety Engineering	4		
	PPRM-590 Senior Seminar	2		
	PPRT-500 Quality Control		3	
	EIEI-482 Production Control I		4	
	Professional Elective		3	
	PPRM-502 Financial Controls II			4
	Professional Elective			3
	*General Studies Electives-Upper Division	5	5	10

*See *Pg. 64 tor General Studies requirements.*
^See Pg. 27 for Policy on Physical Education.

Institute College

Dennis C. Nystrom, Dean

Organized in 1973, Institute College is the ninth of 10 colleges within the administrative framework of Rochester Institute of Technology. It incorporates the School of Engineering Technology, the School of Computer Science and Technology, the Department of Packaging Science, the Center for Community/Junior College Relations and the Department of Instructional Technology.

Both the School of Engineering Technology and the Center for Community/Junior College Relations have expanded rapidly to include additional curricula designed to meet their original objectives. At the same time, they have established close relationships with many two-year colleges. By so doing, they can build upon the curricula of the associate's degree granting institutions and supply faculty in those areas of technical and professional education where a demonstrated need exists.

The Department of Packaging Science offers courses leading to the bachelor of science degree in packaging science.

The Department of Packaging Science draws heavily upon courses offered in other schools and colleges of the Institute. With the addition of several packaging science courses, the broadly-developed curriculum is representative of the areas of knowledge that are basic to the packaging science industry.

The School of Computer Science and Technology-an existing program since 1971-became a department of Institute College in June 1973 and a school in the same college in July 1976. This school is also closely related to the two-year colleges and has an active upper-division component besides offering the freshmen and sophomore years.

The Department of Instructional Technology offers both upper-division work in audiovisual communications and graduate programs in instructional technology. The audiovisual curriculum serves graduates of the two-year colleges and upon completion of an additional two years leads to the bachelor of science degree.

Resources

Since Institute College is geared toward programs of practical application, it is necessary that well-planned laboratory and shop facilities be made available to students in upper division and graduate courses.

Institute College utilizes some of the finest facilities and equipment available. The new packaging science laboratories, the computer science facilities and equipment, and the new instructional technology laboratory have all seen additional equipment installed. The School of Engineering Technology's sharing of facilities with the College of Engineering allows the use of the most modern and sophisticated equipment in the engineering technology curricula. The added availability of remote terminals feeding into the Sigma 9 computer (and others) gives the student a maximum opportunity to utilize computers in his or her curriculum.

Memberships

Institute College holds institutional membership in the American Association of Community and Junior Colleges.

Acceptance of the associate's degree

The School of Engineering Technology and the Department of Instructional Technology (Audio-visual 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 in three years of additional study in the cooperative education 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 the 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 four-year 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 Institute College 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: Institute College Programs

General Information on RIT's admission requirements, procedures and services is included in detail on Pages 15-16 of this Bulletin.

This college includes the Department of Instructional Technology, the School of Engineering Technology, the School of Computer Science and Technology, and the Department of Packaging Science.

Programs offered by this college further reflect RIT's concern to provide students with relevant, career-oriented programs that lead to rewarding employment.

The Institute College prepares its students for a world of rapidly expanding technological applications.

Computer Science: General computer science, prepares graduates to enter employment as research programmers or enter graduate schools for specialized training. The **Applied Software Science** option is designed to prepare students to enter employment as applied software specialists, applications programmers, or research programmers. Degrees granted. AAS-2 year; BS-4-5 year.

Computer Technology: The **Computer Systems** option is oriented to prepare management, systems analysts, information systems designers, and business applications programmers. Systems application area is selected from the other RIT programs. The **Systems Software** option is designed to prepare systems programmers or systems software specialists. Any relevant curriculum at RIT may be chosen as minor study. 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 three options-management, design or technical-prepare students for initial employment in such areas as management, sales, marketing, purchasing, graphic design, structural design, product development, and the technical and engineering phases of production. 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.

*__Electrical Engineering Technology:__ Early emphasis in this program is on further mastery in 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 or mechanical design. The practical and applied are emphasized. Degree granted: B. Tech.-3 year with co-op.

*__Manufacturing 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 increasing complex field. Degree granted: B. Tech.-3 year with co-op.

*__Audiovisual Communications:__ Prepares students with production/design abilities in using various media. The graduate becomes a communications specialist, a producer or production manager or an advisor to trainers and faculty members. Degree granted: BS-2 year.

*Upper *Division only.*

Freshman Admission Requirements

Program †	Required High School Subjects*	Desirable Elective Subjects
Computer Systems **Systems Software Science**	Elem. Algebra; Inter. Algebra	
Applied Software Science **Computer Science**	Elem. Algebra; Inter. Algebra; Trigonometry Plane Geometry Physics or Chemistry	Additional mathematics and science
Packaging Science	Elem. Algebra; Inter. Algebra 1 year any science Additionally for the Technical option; Plane Geometry; Trigonometry	Additional mathematics, science, printing, and art
Civil Engineering Technology	First two years available at many two-year colleges.	
Electrical Engineering Technology	First two years available at many two-year colleges and RIT's College of Continuing Education.	
Mechanical Engineering Technology	First two years available at many two-year colleges and RIT's College of Continuing Education.	
Manufacturing Technology	First two years available at some two-year colleges and RIT's College of Continuing Education	
Audiovisual Communications	First two years available at some two-year colleges.	

†All options include electives in social science, literature and humanities.
**Four years of English are required in all programs, except where state requirements differ.*

Transfer Admission with junior standing

Two-Year College Programs	Desirable minimum grade point average
Data processing, business, or equivalent computer technology	2.25
Computer Science, engineering, mathematics and science.	2.3
Packaging Science or equivalent	□□□
Civil, construction technology, or equivalent.	2.3
Electrical technology, electronics, technology, or equivalent.	2.3
Mechanical technology, air conditioning technology, or equivalent.	2.3
Manufacturing technology, mechanical technology, drafting & design technology or equivalent.	2.3
Audiovisual technology, television production, communications electronics, or comparable programs.	□□□

Audiovisual Communications

Clint Wallington, Chairman

Bachelor of Science in Audiovisual Communications

With little fanfare, the use of audiovisual materials for training, for public relations, and for presentations has grown markedly. What was previously unusual in training-slide/tape training packages, multi-image presentations, audio and video cassettes-is now the commonplace. Behind the scenes is a core of professional audiovisual specialists who translate ideas into media. While the growth of the field brings a need for specialists in particular medium such as photography, television, or filmmaking, there is a demand for the audiovisual generalist who can work in a variety of media and manage the production process from client need to finished product.

Now RIT's Audiovisual Communications program in the Department of Instructional Technology is specifically designed to expand and improve the skills of graduates of two year (associate's degree) programs in audiovisual media.

It is an upper division transfer program leading to a bachelor of science degree after two years of study. For the first time graduates of two-year colleges can transfer into a four-year college without changing their major field.

RIT's Audiovisual Communications program is thus an important steppingstone to better job opportunities or to further graduate study in this exciting and dynamic field. It is also one of only a few programs in the nation offering a baccalaureate degree in this field. It is innovative in concept, pragmatic in its approach, and emphasizes a strong career orientation for its students.

Objectives

The primary objectives of the BS program in audiovisual communications are to prepare fully qualified individuals for professional employment as audiovisual communications specialists. This rapidly growing field is concerned with effectively and efficiently transmitting information by using systematically designed audiovisual materials. The bachelor of science program is concerned with training professionals in the rigorous process of designing and producing these materials. An advisory committee from industry, potential employers, and educational institutions helps keep the curriculum up-to-date and relevant.

Audiovisual Communications, BS degree

	Quarter hours
General Education, required	
*General Studies-Upper Division	25
GLLC-402 Conference Techniques	4
SSEG-201, 202, 203 Contemporary Science	12
Elective	4
	Total 45
Free Electives	5
Audiovisual Communications, required courses	
ICIC-440 Audiovisual Program Design I	4
ICIC-450 Audiovisual Program Design il	4
ICIC-550 Management of Audiovisual Program	4
Audiovisual Management Elective	4
Audiovisual Production Electives	8
ICIC-401 Message Design	4
ICIC-510 Writing for Audiovisual Programs	4
ICIC-405 Audiovisual Seminar	2
ICIC-595, 596 Senior Project	4
	38
Audiovisual electives	8
^Physical Education electives (as required)	0
Total credit for BS (plus associate's degree)	96

*See Pg. *64 for General Studies requirements.*
^See Pg. 27 tor Policy on Physical Education.

Curriculum

The curriculum concentrates on three major areas: audiovisual program design, audiovisual management, and production skills. The major emphasis is on acquiring technical competence, a mastery of skills and techniques. Course assignments are made to permit hands-on experience in designing, producing and evaluating audiovisual products in specific training situations. By requiring core courses in each of the three areas, and permitting electives from a wide range of courses, a high degree of individualization is accomplished. Course requirements may be adjusted to meet individual needs through student/faculty advisement conferences.

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 specialist, photography, film making, television production, graphic design, commercial art, and other related fields.

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 degree requires the completion of 96 quarter credit hours, a normal two-year program. If not acquired at the two-year college, RIT also requires two years of physical education.

Audiovisual Management electives

ICIC-460 Selection, Storage and Dissemination of Media Resources
ICIC-502 Practicum in Audiovisual Management
ICIC-560 Media Facilities Design

Other electives may be taken in the College of Business and the College of Continuing Education with the approval of the appropriate department and the student's academic advisor.

Audiovisual Program Design elective

ICIC-501 Practicum in Audiovisual Program Design

Other electives may be taken in the College of Continuing Education with the approval of the appropriate department and the student's academic advisor.

Audiovisual Production electives

ICIC-490 Audio Techniques
ICIC-503 Practicum in Production
ICIC-570 Survey of AV Hardware
ICIC-580 Producing Multimedia Presentations
ICIC-581 Producing Multimage Presentations
ICIC-583 Advanced Multimage Project

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.

Course descriptions

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

School of Computer Science and Technology

Jack Hollingsworth, 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 manpower 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 industries, computer applications departments, or enrollment in graduate schools to pursue advanced studies.

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, data base systems, programming languages, systems analysis, and many others. It is important to note that programming is merely a tool in computer science and itself is not computer science. An undergraduate computer science and technology student is required to take a certain number of computer science courses in a selected option that will provide a good foundation in computing and useful specialities for employment.

Programs

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

1. Computer science (BS) degree program with options in computer science and applied software science
2. Computer technology (B. Tech) degree program with options in computer systems and system software science
3. A computer engineering (BS) program jointly offered with the Department of Electrical Engineering. (For details see the College of Engineering section.)

Students entering as freshmen may change options during the first three years of study without losing credit for courses they have taken (except computer engineering).

The only concern is mathematics requirements and professional or free electives, which differ between the various options. Students in all computer science and technology programs are required to obtain one year (four quarters) of Co-op work experience before graduation.

Computer Science option, BS degree

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	ICSS-202 Introduction to Computer Science	4		
	ICSP-208 Introduction to Programming	4		
	ICSP-210 Program Design & Validation		4	
	ICSP-305 Assembly Language Programming			4
	SMA,VI-251. 252. 253 Calculus	4	4	4
	SPSP-205, 206 Physics & Lab		4	4
	*General Studies Elective (Lower Division)	4	4	4
	‡Physical Education Elective	0	0	0
Second Year †	ICSS-315 Digital Computer Organization	4		
	ICSS-320 Data Structure Analysis		4	
	SMAM-305 Calculus	4		
	Math Elective		4	
	Computer Science Elective		4	4
	ICSS-340 Finite State Machine & Automata			4
	Science Elective	4		4
	*General Studies Elective (Lower Division)	4	4	4
	‡Physical Education Elective	0	0	0
Upper Division Years	ICSS-400 Logical Design	4		
	ICSS-440 Operating Systems	4		
	ICSS-480 Formal Languages	4		
	ICSS-525 Assemblers, Interpreters & Compilers	4		
	ICSS-545 Microprogramming	4		
	ICSS-550 Review of Computer Science	4		
	ICSS-575 Minicomputer Systems and Applications	4		
	SMAM-511, 512 Numerical Analysis or Math Elective	8		
	Computer Science Elective	20		
	Math/Science Electives	8		
	*General Studies Elective (Upper Division)	30		
	Free Electives	8		
	Co-op (4 quarters)			

** See Pg. 64 for General Studies requirements.*
† See Pg. 27 for Policy on Physical Education.
☐ Upon completion of the second year, the associate in applied science degree is awarded.

Computer Science program

The computer science program of the School of Computer Science and Technology offers options in computer science and applied software science. As a result of the mathematical requirements of the BS degree program, students with strong interest in mathematics are encouraged to pursue the BS degree options. In the case of students who are interested in computer science and technology, but are weak in mathematics, the bachelor of technology options would be the more desirable choice.

The computer science option is designed for students who are not sure which speciality will be pursued and for those who wish to enter graduate studies immediately following graduation. The applied software science option is designed for students who wish to work as scientific applications specialists upon graduation. However, the applied software science option also fully prepares its students for graduate studies.

Computer Science option

Guy Johnson, Coordinator

This program is designed to provide students with a broad and flexible background in computing theories and applications. Students who have decided not to specialize in an applied area should take this approach. In general, the program provides instruction in the following areas:

1. Computer science: required and elective courses including courses in the areas of automata theory, formal languages and logical design.
2. Math and/or science: including courses in calculus, physics, and numerous electives.
3. General studies: including courses in language, literature, science, humanities and the social sciences.
4. Free electives: two unrestricted courses.

Graduates from this program are fully capable of entering employment or pursuing further educational goals at the graduate level.

Applied Software Science option
Rodger Baker, Coordinator

This program is designed to provide competence in scientific and technical application software. All technical and scientific fields, such as engineering, physical science, mathematics, library science, psychology and others, rely heavily on the computer to achieve analysis, design, production, control and test. The applied software specialist is needed to make the computer applicable to a chosen field(s). Employment is to be found as scientific programmer or scientific system analyst in any of the above fields.

Students with strong mathematic backgrounds or interests are encouraged to choose this option.

Computer Technology program

The computer technology 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 the bachelor of science degree program.

The options of this program are structured such that approximately 50 percent of the course work is in computer science and another 25 percent is in a professional elective area chosen outside computer science from such areas as business, mathematics, engineering, etc. This additional course work allows the students to tailor their overall program to a computer application or technical area of their own choosing. The remaining course work is in liberal arts (i.e., general studies electives) and mathematics. The required mathematics courses (i.e., Introductory Calculus and Statistics) give these students the necessary mathematical background to deal with many problems in computer science and computer technology. Students who want a more intensive background in mathematics can take the classical calculus and probability and statistics course sequence to meet the mathematics requirements and apply the additional hours towards their professional elective requirement. Two options are currently offered: computer systems and systems software science.

Students transferring to RIT with an associate's degree in data processing, accounting, etc. will find the bachelor of technology program particularly attractive. Except in unusual cases, these students can expect to receive full transfer credit for their AAS course work and a balanced mapping of these courses into the required curriculum. Since the students enter the program as juniors, they are normally eligible to begin their Co-op work experience after one quarter of course work at RIT.

Most graduates of the computer technology program go on to full-time employment in their chosen application or technical 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.

Applied Software Science option, BS degree

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	ICSS-202 Introduction to Computer Science	4		
	ICSP-208 Introduction to Programming	4		
	ICSP-210 Program Design and Validation		4	
	ICSP-305 Assembly Language Programming			4
	SMAM-251, 252, 253 Calculus	4	4	4
	Physics Elective		4	4
	*General Studies Electives (Lower Division)	4	4	4
	‡Physical education Elective	0	0	0
Second Year †	ICSS-315 Digital Computer Organization	4		
	ICSS-320 Data Structure Analysis		4	
	ICSP-215 Programming Language - FORTRAN			4
	SMAM-305 Calculus	4		
	SMAM-306 Differential Equations		4	
	Computer Science Elective			8
	Math-Science Elective and SMAM-351 Probability and Statistics	4	4	
	*General Studies Elective (Lower Division)	4	4	4
	‡Physical Education Elective	0	0	0
Upper Division Years	ICSS-430 Numerical Methods		4	
	ICSS-440 Operating Systems		4	
	ICSS-575 Minicomputer Systems Applications		4	
	ICSS-545 Microprogramming		4	
	ICSS-550 Review of Computer Science		4	
	Computer Science Electives		28	
	Math or Science Electives		12	
	*General Studies (Upper Division)		30	
	Free Electives		8	
	Co-op (4 quarters)			

*See *Pg. 64 for General Studies requirements.*
†See Pg. 27 for Policy on Physical Education.
‡Upon completion of the second year, the associate in applied science degree is awarded.

Computer Systems Option
William J. Stratton, Coordinator

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 programming system specification and design, business applications programming, data communication, and database design and implementation.

Positions in business data processing and data management not only require a strong computing background, but also a sound foundation in analytical and business skills. For this reason, students are required to take a basic sequence of courses from the School of Business and the Department of Mathematics. The student may continue to pursue a professional electives concentration in either business or mathematics, or may choose yet another relevant curriculum at RIT.

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

Computer Systems Option. B. Tech. degree

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	ICSS-202 Introduction to Computer Science	4		
	ICSP-208 Introduction to Programming	4		
	ICSP-210 Program Design and Validation		4	
	ICSP-305 Assembly Language Programming			4
	SMAM-214, 215 Introductory Calculus (3)	3	3	
	SMAM-309 Statistics (3)			4
	*General Studies Electives (Lower Division)	4	8	8
	‡ Physical Education Electives	0	0	0
Second Year †	ICSS-315 Digital Computer Organization	4		
	ICSS-320 Data Structure Analysis	4		
	ICSS-325 Data Organization and Management		4	
	ICSP-307 Business Applications Programming			4
	ICSS-335 Systems Specification, Design and Implementation			4
	Computer Science Elective (1)		4	
	BBUB-201 Managment Concepts	4		
	BBUA-210 Financial Accounting		4	
	Professional Elective			4
	*General Studies Elective (Lower Division)	4	4	4
	‡ Physical Education Electives	0	0	0
Upper Division Years	ICSS-420 Data Communication Systems		4	
	ICSS-485 Database Concepts		4	
	ICSP-488 Programming Systems Workshop		4	
	Restricted Computer Science Electives (2)		8	
	Computer Science Electives (1)		32	
	BBUB-434 Operations Management		4	
	Professional Electives		28	
	*General Studies Electives (Upper Division)		15	
	Cooperative Education (4 quarters)			

†Upon successful completion of the second year, students are eligible for the Associate in Applied Science degree.
(1)Computer Science courses may be taken as Computer Science Electives except as noted in the Course Description Catalog.
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
(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-350 Programming Language Concepts
ICSS-440 Operating Systems
ICSS-730 Discrete Simulation
ICSS-770 Computer Graphics

Group B: Systems Software - Hardware Emphasis
ICSS-565 Computer Systems Selection
ICSS-575 Minicomputer Systems and Applications
ICSS-721 Microprocessors and Microcomputers

(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.

Systems Software Science Option
Michael Lutz, Coordinator

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 applications programmers. These tools include operating systems, compilers, text processors and database systems.

Students in this option must learn to deal with 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 grounding 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.

Systems Software Science Option, B. Tech. degree

Year		Quarter Credit Hours Fall	Winter	Spring
First Year	ICSS-202 Introduction to Computer Science	4		
	ICSP-208 Introduction to Programming	4		
	ICSP-210 Program Design and Validation		4	
	ICSP-305 Assembly Language Programming			4
	SMAM-214, 215 Introductory Calculus (3)	3	3	
	SMAM-309 Statistics (3)			4
	*General Studies Electives (Lower Division)	4	8	8
	‡ Physical Education Electives	0	0	0
Second Year †	ICSS-315 Digital Computer Organization	4		
	ICSS-320 Data Structure Analysis	4		
	ICSS-325 Data Organization and Management		4	
	ICSP-306 Advanced Assmebly Techniques			4
	Computer Science Electives (1)		4	4
	Professional Electives	4	4	4
	*General Studies Elective (Lower Division)	4	4	4
	‡Physical Education Electives	0	0	0
Upper Division Years	ICSS-350 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)		24	
	Professional Electives		32	
	*General Studies Electives (Upper Division)		15	
	Cooperative Education (4 quarters)			

† Upon successful completion of the second year, students are eligible for the Associate in Applied Science degree.

(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-545 Processor Design Concepts
ICSS-720 Computer Architecture
ICSS-721 Microprocessors and Microcomputers
Group C: Application Areas
ICSS-485 Database Concepts
ICSS-515 Analysis of Algorithms
ICSS-730 Discrete Simulation
ICSS-770 Computer Graphics

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

* See Pg. 64 for General Studies requirements.
‡ See Pg. 27 for Policy on Physical Education.

Engineering Technology

John F. Adams, Acting 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. The School of Engineering Technology was established to offer upper-division (junior-senior) level work in civil engineering technology (environmental and construction options), electrical engineering technology, manufacturing technology and mechanical engineering 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.

Each student is considered individually when his or her program is planned. 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.

The 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.

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 help 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 School of Engineering technology 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

The School of Engineering Technology accepts only transfer students. Admission to the bachelor of technology degree programs in the School of Engineering technology is open to persons holding an associate's degree in air conditioning technology, civil or construction technology, electrical technology, manufacturing technology, mechanical technology, a comparable associate's degree program, 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.

RIT's College of Engineering also is able to accept engineering technology associate's degree graduates; however, additional work is required, depending upon the specific program and the student's past scholastic performance.

Program requirements

School of Engineering Technology students are required to successfully complete the prescribed program including co-op experience.

A total of 39 quarter credit hours of general studies for the B. Tech degree (associate's degree program plus RIT course work) is required. The quantity of general studies to be completed at RIT is, therefore, 39 quarter hours ***minus*** the amount of general studies transferred from the two-year college.

Unless suitable physical education credit is transferred, students are also required to complete up to three physical education electives with passing grades (see policy statement on page 27).

Graduation requirements

The minimum requirements for the B. Tech degree in engineering technology are (1) successful completion of the prescribed program including co-op work experience. (2) minimum cumulative quality point average of 2.0.

Accreditation

The program of study leading to the bachelor of technology degree in civil engineering technology, (environmental option), 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, upper division baccalaureate program

Russell L. Vesper, Staff Chairman

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, working drawings, specifications, and construction.

All students enter this program at the third year level, having already received an appropriate associate's degree in civil or construction technology or an acceptable equivalent. An appropriate associate's degree will generally include the following:

Technical Mathematics
(preferable Introduction to Calculus)
Technical Physics
Elementary Soil Mechanics
Hydraulics and Fluid Mechanics
Plan and Route Surveying
Elementary Structural Design
Statics and Strength of Materials

Students with backgrounds that do not meet the above standards may be required to take remedial courses.

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.

Cooperative education plan

Experience gained in the cooperative education plan is especially valuable. A large number of students work in their co-op jobs for consulting engineers. Their duties include inspection of construction, surveying, and drafting. Several co-op students work in water and wastewater treatment plants, operating control panels, performing laboratory tests and doing routine maintenance work. (It is possible to obtain an operator's license while on this type of assignment.) Other students work for town engineering departments, state agencies, construction companies, industrial construction departments, and testing agencies.

Civil Engineering Technology, B. Tech degree—Environmental option

		Quarter Credit Hours: Fall Winter		Spring Summer
1,2	Completion of an appropriate associate's degree at a two-year college			
Third Year	#ITEC-420 Hydraulics	4		
	ITEC-428 Report Writing	2		
	SCHG-271 Chemistry of Water I	3		
	SMAT-421 Solution of Engineering Problems I	4		
	‡‡SMAT-420 Introduction to Solutions of Engineering Problems	(4)		
	*General Studies Elective (Lower Division)	4		
	‡Physical Education Elective	0		
	ITEM-404 Applied Mechanics of Materials			3
	SCHG-272 Chemistry of Water II			3
	SBIG-440 Environmental Microbiology			4
	SMAT-422 Solution of Engineering Problems II			4
	'‡‡SMAT-421 Solution of Engineering Problems I			(4)
	*General Studies Elective (Lower Division)			4
	‡Physical Education Elective			0
Fourth Year	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 II	(4)		
	‡Physical Education Elective	0		
	ITEC-510 Design of Water Treatment Facilities			3
	ITEC-513 Computer Techniques in Civil Engineering			1
	ITEC-514 Land Planning			2
	ITEC-516 Analysis of Reinforced Concrete Structures			4
	Technical Elective			3
	*General Studies Elective (Upper Division)			5
Fifth Year	ITEC-520 Design of Wastewater Treatment Facilities	4		
	ITEC-527 Soil Mechanics and Foundations	4		
	Technical Elective	4		
	‡‡ITEE-414 Basic Electrical Principles	(4)		
	General Studies Elective (Upper Division)	5		
	**ITEC-544 Contracts and Specifications			3
	**ITEC-546 Professional Principles & Practices			1
	Technical Elective			4
	Free Elective			4
	*General Studies Elective (Upper Division)			5

#Students who successfully complete a proficiency examination in hydraulics will take ITEC-434 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 Solution of Engineering Problems 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. 64 for General Studies requirements.*

‡See Pg. 27 for Policy on Physical Education.

Graduates of this program can expect to find employment with consulting engineers, in supervisory positions of pollution control facilities, construction companies, industrial firms, and the engineering departments of various federal, state and local governmental agencies. Also, several graduates have successfully completed master's degrees in civil and environmental engineering at other schools of engineering.

Technical electives

ITEC-549 Environmental Engineering Project..... 4 credits
ITEC-550 Construction Practices ..... 4 credits
ITEC-552 Structural Analysis & Design II (structural steel)..... 4 credits
CTEM-560 Legal and Ethical Responsibilities of the Field Engineer (Evening course)*..... 4 credits

*Refer *to College of Continuing Education Bulletin.*

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.

Construction option cooperative education schedule

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

Civil Engineering Technology, B. Tech degree-Construction Option

		Quarter Credit Hours		
		Fall Winter		Spring Summer
1, 2	Completion of an appropriate associate's degree at a two-year college			
Third Year	#ITEC-420 Hydraulics	4		
	ITEC-428 Report Writing	2		
	SCHG-271 Chemistry of Water I	3		
	SMAT-421 Solution of Engineering Problems I	4		
	‡‡SMAT-420 Introduction to Solutions of Engineering Problems	(4)		
	*General Studies Elective (Lower Division)	4		
	‡Physical Education Elective	0		
	**ITEC-460 Construction Equipment			3
	ITEM-404 Applied Mechanics of Materials			3
	BBUB-245 Business Management			4
	SMAT-422 Solution of Engineering Problems II			4
	‡‡SMAT-421 Solution of Engineering Problems I			(4)
	*General Studies Elective (Lower Division)			4
	‡Physical Education Elective			0
Fourth Year	***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 II	(4)		
	ITEM-436 Engineering Economics	4		
	‡Physical Education Elective	0		
	ITEC-513 Computer Techniques in Civil Engineering			1
	ITEC-516 Analysis of Reinforced Concrete Structures			4
	**ITEC-500 Labor Relations			3
	Technical Elective			4
	*General Studies Elective (Upper Division)			5
Fifth Year	***ITEC-508 Cost Estimates	3		
	ITEC-527 Soil Mechanics and Foundations	4		
	***ITEC-444 Mechanical Equipment for Buildings	3		
	Technical Elective.....*	3		
	‡‡ITEE-414 Basic Electrical Principles	(4)		
	*General Studies Elective (Upper Division)	5		
	**ITEC-544 Contracts & Specifications			3
	**ITEC-546 Professional Principles & Practices			1
	**ITEC-450 Construction Management			4
	Free Elective			4
	*General Studies Elective (Upper Division)			5

#Students who successfully complete a proficiency examination in hydraulics will take ITEC-422 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 Solution of Engineering Problems, 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*

****Offered in Winter Quarter only*

**See Pg. 64 for General Studies requirements.*

‡See Pg. 27 for Policy on Physical Education.

Electrical Engineering Technology, upper division baccalaureate program

John F. Adams, Staff Chairman

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 professional 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 the computer area, a sequence of courses is shown which provides a strong program in this area. This sequence includes recommended course offerings from the School of Computer Science and Technology.

The curriculum also includes one year of cooperative work experience 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 degree programs that are closely related to electrical technology and that have appropriate circuits and electronic course levels, are also accepted.

Technical electives
(each carries 4 quarter credit hours)

ITEE-521 Electromagnetic Fields and Antennas
ITEE-524 Microwave Systems
ITEE-526 Semi-Conductor Physics
ITEE-534 Communications Systems I
ITEE-535 Communications Systems II
ITEE-536 Control Systems II
ITEE-538 Digital Computer Design I
ITEE-539 Digital Computer Design II
ITEE-542 Microprocessors
ITEE-543 Minicomputers, Controllers, and Peripherals
ITEE-546 Industrial Electronics
ITEE-547 Digital Processing of Signals
ITEE-548 D.C. and A.C. Machine Design
ITEE-550 Power Systems I
ITEE-551 Protective Relaying
ITEE-552 Power Systems II
ITEE-554 Electronic Optic Devices
ITEE-556 Transmission Lines and Filters
ITEE-580 Senior Project
ITEM-425 Statistical Quality Control
ITEM-550 Topics in Machine Design for Electrical Majors

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	

Electrical Engineering Technology, B. Tech. degree

		Quarter Credit Hours: Fall Winter	Quarter Credit Hours: Spring Summer
1, 2	Completion of an appropriate associate's degree at a two-year college		
Third Year	ITEE-401 Circuit Theory I	4	
	ITEE-424 Logic & Digital Devices	4	
	**SMAT-420 Introduction to Solution of Engineering Problems	(4)	
	SMAT-421 Solution of Engineering Problems I	4	
	*General Studies (Lower Division)	4	
	‡Physical Education Elective	0	
	ITEE-402 Circuit Theory II		4
	ITEE-428 Linear Amplifier Design		4
	**SMAT-421 Solution of Engineering Problems I		(4)
	SMAT-422 Solution of Engineering Problems II		4
	ICSP-302 Computer Applications in Engineering Problems I		1
	*General Studies Elective (Lower Division)		4
	‡Physical Education Elective		0
Fourth Year	**SMAT-422 Solution of Engineering Problems II	(4)	
	ITEE-404 Control Systems I	4	
	ITEM-408 Statics and Strength of Materials	4	
	ITEE-532 Power Amplifier Design	4	
	† ITEE-538 Computer Design I	(4)	
	*General Studies Elective (Upper Division)	5	
	‡Physical Education Elective	0	
	ITEE-520 Electrostatic and Magnetic Fields		4
	ITEM-411 Engineering Materials I		4
	ITEE-530 Applications of Discrete and Integrated Circuit Elements		4
	† ITEE-539 Computer Design II		(4)
	*General Studies Elective (Upper Division)		5
Fifth Year	Technical Specialization Option (Communications, Power Systems, Digital Design)	4	
	Technical Electives	8	
	Free Elective	3-5	
	ITEM-436 Engineering Economics		4
	Technical Electives		8
	*General Studies Electives (Upper Division)		5

***Entering students will take SMAT-420 or SMAT-421 depending on their evaluation of their mathematical background. Those students assigned to SMAT-420 will be taking a 3 course sequence in Solution of Engineering Problems and will, therefore, defer taking one fourth year General Studies Elective until their fifth year, thus reducing the elective choices by one course.*

†Students desiring the computer design elective sequence are advised to take ITEE-538/539 in their fourth year and defer ITEE-404/520 until the fifth year.

**See Pg. 64 for General Studies requirements.*

‡See Pg. 27 for Policy on Physical Education.

Elective Sequence-Computer Design Specialization

4th Year Fall/Winter Spring/Summer	 ITEE-538 Computer Design I ITEE-539 Computer Design II
5th Year Fall/Winter Spring	 ITEE-542 Microprocessors ICSP-215 Fortran ITEE-543 Minicomputers, Controllers, and Peripherals

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, 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.

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. Thus, technical and communication skills are enhanced to benefit the student's co-op work experience as well as his future professional performance.

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	-

Year		Quarter Credit Hours: Fall Winter	Quarter Credit Hours: Spring Summer
1, 2 Completion of an appropriate associate's degree at a two-year college			
Third Year	ITEM-407 Mechanical Engineering Technology Laboratory	4	
	ICSP-205 Computer Techniques	3	
	**SMAT-420 Introduction to Solution of Engineering Problems	4	
	**SMAT-421 Solution to Engineering Problems I	(4)	
	ITEM-404 Applied Mechanics of Materials	3	
	ITEM-414 Materials Technology I	3	
	‡ Physical Education Elective	0	
	**SMAT-421 Solution to Engineering Problems II		4
	**SMAT-422 Solution of Engineering Problems II		(4)
	ITEM-405 Applied Dynamics		4
	ITEM-415 Materials Technology II		4
	*General Studies Elective (Lower Division)		4
	‡ Physical Education Elective		0
Fourth Year	Technical Elective	4	
	** SMAT-422 Solution of Engineering Problems II	(4)	
	ITEM-441 Thermodynamics and Heat Transfer	4	
	ITEE-411 Electrical Principles for Design I	4	
	*General Studies Elective (Lower Division)	4	
	‡ Physical Education Elective	0	
	ITEM-461 Mechanics of Fluids		3
	ITEM-506 Machine Design		4
	ITEE-412 Electrical Principles for Design II		4
	*General Studies Elective (Upper Division)		5
Fifth Year	ITEM-465 Thermofluid Laboratory	2	
	ITEM-437 Cost and Value Analysis	3	
	Technical Electives	8	
	*General Studies (Upper Division)	5	
	ITEM-521 Logic Control Systems		4
	Technical Elective		4
	Free Elective		3-5
	*General,Studies (Upper Division)		5

** Entering students will take SMAT-420 or 421 depending on an evaluation of their mathematics background. Those students assigned to SMAT-420 will be taking a 3 course sequence in Solutions of Engineering Problems and will substitute this course for a technical elective in the fourth year.

* See Pg. 64 for General Studies requirements.
‡ See Pg. 27 for Policy on Physical Education.

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

ITEM-406 Dynamics of Machinery
ITEM-436 Engineering Economics
ITEM-442 Heat Transfer
ITEM-451 Vibration and Noise
ITEM-507 Design Practice
ITEM-508 Special Topics in Machine Design
ITEM-530 Instrumentation
ITEM-535 Analog Control Systems
ITEM-540 Thermal Technology
ITEM-599 Independent Study

Technical Electives - Energy Sequence

ITEC-434 Environmental Pollution
ITEC-544 Contracts and Specifications
ITEM-404 Applied Mechanics of Materials
ITEM-541 Alternative Energy Applications
ITEM-500 System Design Project I
ITEM-501 System Design Project II

Manufacturing 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 principal 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 newer manufacturing technologies: numerical control, machine tools, micro-processor controls, computer-aided manufacturing, and manufacturing systems.

Objectives of the program

The primary objectives of the baccalaureate program in manufacturing technology are 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 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 the field. The program includes courses in mathematics, computer programming, metal removal and forming, materials science, numerical control, and economic analysis. Also, students are encouraged to select technical electives to enhance their particular areas of interest.

Admission requirements

All students enter at the third-year level having received an appropriate associate's degree in mechanical or manufacturing technology including:

- Manufacturing Processes
- Machine Tools
- Mathematics through Pre-calculus
- Physics
- Mechanical Drafting
- Numerical Controls (manual programming)
- Statics and Elementary Strength of Materials
- Metrology

Students with backgrounds lacking any of the above may be required to take additional courses.

Manufacturing Technology electives

ITEM-425 Statistical Quality Control
ITEM-431 Production Management
ITEM-480 Methods Analysis
ITEM-490 Production Planning
ITEM-491 Material Control
ITEM-514 Special Topics in Material Forming
ITEM-515 Manufacturing Technology
ITEM-599 Independent Study

Other electives may be taken in the Institute College, College of Continuing Education, College of Engineering and College of Science with the approval of the appropriate department and the student's academic advisor.

Manufacturing 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	▫

Manufacturing Technology, B. Tech Degree

		Quarter Credit Hours: Fall Winter	Quarter Credit Hours: Spring Summer
1,2 Completion of appropriate Associate's degree or equivalent			
Third Year	**5MAT-420 Introduction to Solution of Engineering Problems	(4)	
	**SMAT-421 Solution of Engineering Problems I	4	
	ICSP-205 Computer Techniques	3	
	ITEM-436 Engineering Economics	4	
	ITEM-492 Plant Layout	4	
	‡Physical Education	0	
	**SMAT-421 Solution of Engineering Problems I		(4)
	**SMAT-422 Solution of Engineering Problems II		4
	ITEM-506 Machine Design		4
	ITEM-471 Numerical Control II		4
	*General Studies Elective (lower division)		4
	‡Physical Education		0
Fourth Year	Probability and Statistics	4	
	Technical Elective	4	
	ITEE-411 Electrical Principles I	4	
	*General Studies Elective (lower division)	4	
	‡Physical Education	0	
	ITEE-412 Electrical Principles II		4
	ITEM-426 Quality Assurance		4
	ITEM-472 Tool Engineering		4
	*General Studies Elective (upper division)		5
Fifth Year	ITEM-437 Cost & Value Analysis	3	
	ITEM-510 Process Design I	4	
	Technical Elective	4	
	*General Studies Elective (upper division)	5	
	ITEM-511 Process Design II		4
	Technical Elective		4
	Free Elective		3-5
	*General Studies Elective (upper division)		5

***Entering students will take SMAT-420 or 421 depending on an evaluation of their mathematics background. Those assigned to SMAT-420 will substitute this course for a fourth year technical elective.*
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.

Packaging Science

Harold J. Raphael, Director

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 and graphic 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.

BS degree in Packaging Science—Technical option

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	IPKG-201 Principles of Packaging	4		
	* General Studies	4	4	4
	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	
	ICSP-205 Computer Techniques			3
	BBUB-201 Management Concepts		4	
	‡ Physical Education	0	0	0
Second Year	IPKG-310 Methods of Evaluation	2		
	IPKG-311 Packaging Materials I	3		
	IPKG-312 Packaging Materials II		3	
	IPKG-315 Container Systems			4
	* General Studies	4	4	4
	SCHO-231, 232 Organic Chemistry	4	4	
	ITEM-425 Statistical Quality Control			4
	ITEM-301 Engineering Graphics		3	
	BBUM-263 Marketing Principles			4
	PPRT-203 Layout and Printing Design	3		
	‡ Physical Education	0	0	0
Third Year	IPKG-401 The Packaging Industry			2
	IPKG-431 Packaging Production Systems	4		
	IPKG-432 Packaging for Distribution		4	
	IPKG-433 Packaging for Marketing			4
	* General Studies	5	5	5
	SPSP-211, 212, 213 College Physics	4	4	4
	PPRM-201 Introduction to Technical Writing			3
	Free Electives	4	4	
Fourth Year	IPKG-520 Packaging Management	4		
	IPKG-524 Packaging Economics		3	
	IPKG-530 Packaging and the Environment			4
	* General Studies	5	5	5
	Free Electives	8	8	3

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.

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 three options: management, design, 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. A portfolio is required of those students electing the design option.

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 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.

BS degree in Packaging Science—Management option

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	IPKG-201 Principles of Packaging	4		
	SMAM-201, 202, 203 Algebra, Trigonometry, Analytical Geometry	3	3	3
	*General Studies	4	4	4
	SSEG-203 Physics			4
	GSSE-301 Economics I	4		
	GSSE-302 Economics II		4	
	BBUA-210 Financial Accounting		4	
	PPRT-200 Introduction to Printing			3
	‡Physical Education	0	0	0
Second Year	IPKG-310 Methods of Evaluation	2		
	IPKG-311 Packaging Materials I	3		
	IPKG-312 Packaging Materials II		3	
	IPKG-315 Container Systems			4
	*General Studies	4	4	4
	SCHG-201 General Chemistry & SCHG-211 Laboratory	4		
	SCHG-202 Organic Chemistry & SCHG-212 Laboratory		4	
	BBUM-263 Marketing Priniciples	4		
	BBUB-201 Management Concepts		4	
	BBUB-401 Behavioral Science			4
	Business Elective			4
	‡Physical Education	0	0	0
Third Year	IPKG-431 Packaging Production Systems	4		
	IPKG-432 Packaging for Distribution		4	
	IPKG-433 Packaging for Marketing			4
	IPKG-401 The Packaging Industry			2
	*General Studies	5	5	5
	PPRT-203 Layout and Printing Design		3	
	Business Elective		4	
	ICSS-200 Survey of Computer Science	4		
	Free Elective	3		7
Fourth Year	IPKG-520 Packaging Management	4		
	IPKG-524 Packaging Economics		3	
	IPKG-530 Packaging and the Environment			4
	*General Studies	5	5	5
	ITEM-301 Engineering Graphics		3	
	ITEM-425 Statistical Quality Control			4
	PPRM-201 Introduction to Technical Writing		3	
	Free Electives	5		5

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.

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, the required courses in the College of Fine and Applied Arts for the Design Option or 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.

BS degree in Packaging Science—Design option

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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		
	* General Studies		4	8
	SSEG-201 Biology		4	
	SSEG-202 Chemistry			4
	‡ Physical Education	0	0	0
Second Year	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
	FADD-301, 302, 303 Environmental Design	3	3	3
	FADF-261, 262, 263 Drawing	3	3	3
	*General Studies	4	4	4
	‡ Physical Education	0	0	0
Third Year	IPKG-310 Methods of Evaluation	2		
	IPKG-401 The Packaging Industry			2
	IPKG-431 Packaging Production Systems	4		
	IPKG-432 Packaging for Distribution		4	
	IPKG-433 Packaging for Marketing			4
	Packaging Design I, II, III	5	5	5
	SSEG-203 Physics	4		
	BBUM-263 Marketing Principles		4	
	* General Studies			5
	Free Elective		3	
Fourth Year	Packaging Design IV, V, VI	4	4	4
	PPRM-201 Introduction to Technical Writing		3	
	PPRT-200 Introduction to Printing		3	
	PPRT-206 Reproduction Photography			3
	*General Studies	5	5	5
	Free Elective	7		3

** See Pg. 64 for General Studies requirements.*
‡ See Pg. 27 for Policy on Physical Education.

National Technical Institute for the Deaf

William E. Castle, Director
Milo E. Bishop, Dean

The National Technical Institute for the Deaf was created to provide deaf students with the technological 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 1980-81 enrollment will be approximately 1,000.

The partnership: NTID at RIT
As one of RIT's 10 colleges, 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 the 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 teams 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 Blingson 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.

Educational philosophy
The educational objective 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 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. NTID develops training activities for its faculty and staff and for other professionals working with deaf persons across the country.

Cross registration
Qualified deaf students may take selected courses or enroll in programs offered by other RIT colleges. 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 RIT college, NTID students discuss the possibility with their counselor, academic advisor and a member of the educational support team 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.

Summer Vestibule program
The Summer Vestibule program is a series of educational experiences designed to prepare deaf students for further postsecondary training; to determine 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 of RIT. Concurrently, the faculty has the opportunity to evaluate the
to offer counsel and planning for the 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, 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 suits their

individualized needs. The staff is also available for assisting students to make satisfactory adjustments to college life and develop interpersonal relationship skills. The students are also guided through a series of specially designed living arrangements and self-governance experiences. This program has proven invaluable in preparing students to participate in the collegiate environment.

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 normally-hearing students take notes on special notetaking pads and give copies of them to deaf students. Notetaking allows the deaf student to watch the interpreter or teacher while the notetaker records classroom information.

In addition, counseling and speech and hearing services are conducted on an individual basis for each student. 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.

Complementary education
Experiences set up to enrich and increase students' educational opportunities are provided. Complementary education supports academic classes and provides personal development skills. These experiences enable students to become successful professionals in their chosen careers by making them more rounded individuals.

Such activities as athletics, the student newspaper, student government and clubs are not only fun, but give many deaf students the opportunity to become leaders.

In addition to intramural athletics, deaf students may also be members of RIT varsity teams in intercollegiate competition. Deaf athletes have helped RIT to winning seasons in hockey, track and swimming.

Employment opportunities
Historically, more than 97 percent of RIT's deaf graduates seeking employment have found jobs. Many other NTID sponsored graduates choose to continue their education through one of the colleges at RIT or other institutions.

The high employment rate is largely the result of the fact that deaf RIT graduates hold technical skills which are seen as benefits to employers. Also, RIT's highly individualized placement program within NTID teaches students job search skills. Placement specialists help students develop strategies to find jobs and help employers understand the program of NTID and the other colleges of RIT, the graduates' technical and communication skills, and deafness in general.

RIT's co-op program is responsible for opening up some full-time positions for deaf graduates. Employers find most deaf students to be highly motivated and conscientious workers.

Placement does not end when a deaf graduate is employed. Follow-up work with employers and graduates enables NTID to constantly monitor and update each educational program. This assists placement specialists as they prepare to help new graduates find places in business and industry nationwide.

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.

A student should have attended a school or class for deaf students and/or have needed special help because of being deaf.

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.

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.

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. Students must show that they are personally and socially mature enough to enter a program at NTID or one of the other colleges of RIT. This means that students must accept responsibility for themselves and their actions and respect the rights of others. The information is provided through the student's personal references and performance in the Summer Vestibule Program (SVP).

A student must be a citizen or permanent resident of the United States.

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.

College of Science

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 industrial 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 an 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 is an ideal size to provide quality undergraduate education. It has 60 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. We are as well-equipped as some universities which 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 for one or sometimes two years 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 18 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 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, mathematics, and physics, the college has developed one associate's degree program in chemical technology, four bachelor's degree programs in biomedical computing, computational mathematics, medical technology, nuclear medicine technology, and two master's programs in chemistry and clinical chemistry.

In an effort to increase the diversity of its programs and hence enhance the educational alternatives for its students, the College of Science has entered into an interinstitutional dual degree program with the Massachusetts College of Pharmacy allowing students to pursue studies in biology/pharmacy or chemistry/pharmacy.

The programs

The College of Science has undergraduate programs in biology, chemistry, mathematics, computational mathematics, physics, chemical technology, medical technology, nuclear medicine technology, pharmacy, biomedical computing, and pre-medicine and pre-dentistry.

Choice of majors

A student may enroll in the College of Science as a science major without designating a specific major. In consultation with an advisor, a 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, makes 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 a 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 and a program leading to the master of science degree.

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 at the Institute during the fall, winter, and spring for the first and second year. At the beginning of their third year, employment arrangements are made for students in the five-year cooperative programs. Students are assigned to A and B Sections for the last three years of attendance. Students in Section A attend classes during the Fall Quarter while those in section B work on their cooperative jobs. The two sections interchange at the beginning of the Winter Quarter, when students in Section B attend classes and those in Section A work in industry. This interchange of the work/study periods continues throughout the remainder of the third, fourth and fifth years. The work/study periods continue throughout the remainder of the third, fourth and fifth years. The work/study section to which the student is assigned is designated by the coordinator of employment.

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.

Science major

Year		Quarter Credit Hours		
		Fall	Winter	Spring
First Year	** SBIG-201, 202, 203 General Biology	4	4	4
	** SCHC-211, 212General Chemistry	3	3	
	SCHO-230 Intro, to Organic Chemistry			3
	SCHA-261, 262, 263 Chemical Analysis	3	3	3
	SMAM-251, 252, 253 Calculus	4	4	4
	** SPSP-311,312 University Physics		5	5
	* General Studies Elective	4	4	4
	‡ Physical Education	0	0	0

** See Pg. 64 for General Studies requirements.*
‡ See Pg. 27 for Policy on Physical Education.
*** Any two of these three in a given quarter.*

Admission at a Glance: College of Science Programs

General Information on RIT's admission requirements, procedures and services is included in detail on Pages 15-16 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 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-5 year.

Biology/ or Chemistry/Pharmacy— A five-year inter-institutional dual degree program in affiliation with the Massachusetts College of Pharmacy. Prepares students with a thorough education in either biology or chemistry and pharmacy. Graduate pharmacists can choose from a variety of career areas including community, clinical, sales, teaching or marketing. The program also is excellent preparation for entrance to graduate programs in pharmacology, dentistry and medicine. Degrees granted: AS-2 year; Dual BS-5 years.

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.

Mathematics, Computational Mathematics- Graduates qualify for positions in industry and business as well as graduate study. A combination of mathematics courses and electives in computer science enhances employment opportunities. Degrees granted: AS-2 year; BS-5 year.

**Students in these programs receive an AS in General Science upon the successful completion of the first two years.*

Cooperative schedule for chemical technology

		Fall	Winter	Spring	Summer
1st year					
2nd year					
3rd year					

Cooperative schedule for five-year program in biology, mathematics physics and biomedical computing

		Fall	Winter	Spring	Summer
1st and 2nd yrs.					
3rd, 4th yrs.					
5th yr.					

Cooperative schedule for five-year chemistry program

		Fall	Winter	Spring	Summer
1st year					
2nd, 3rd					
4th yrs.					
5th year					

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.*

Nuclear Medicine Technology-G raduates assist physicians in procedures that require use of radioactive materials. Graduates prepare radioactive dosage, collect and prepare specimens, verify patient records, carry out laboratory studies, and present results for interpretation by physicians. Three years are spent at RIT and one year in an approved hospital internship. Degree granted: BS-4 year.*

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, optometric, 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.

College of Science Admission Guide

Freshman Admission Requirements			Transfer Admission with junior standing	
Program [1]	Required High School Subjects*	Desirable Elective Subjects	Two-Year College Programs	Desirable minimum grade point average
Biology, **Biology/ Pharmacy**	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 or Chemistry; Additional Mathematics	Liberal arts major in science, mathematics, computer technology or engineering. Changes from other allied health majors can be arranged	2.5
Chemistry, **Chemistry/ Pharmacy**	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Chemistry	Physics; C.E.E.B. Chemistry Achievement Test	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.	
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
Medical Technology	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Biology	Physics or Chemistry	Medical laboratory technology or equivalent program.	2.5
Nuclear Medicine Technology	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; 2 years lab science	Additional mathematics and science	Biology or medical technology or equivalent program.	2.0
Physics	Elem. Algebra; Plane Geometry; Inter. Algebra; Trigonometry; Chemistry or Physics	Physics or Chemistry; 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

[1] 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.*

Biology Program

Paul A. Haefner, Jr., Head

The Department of Biology offers programs leading to the AS and BS degrees in Biology.

The program of the Department of Biology prepares students for the pursuit of graduate degrees in a variety of biological disciplines as well as the medical arts. Students terminating their education at the BS level find rewarding positions in occupations related to the life sciences, including biomedical research laboratories, food and agriculturally related industries, the pharmaceutical industry and environmental organizations.

Requirements for the AS degree in biology

The student must meet the minimum graduation requirements of the Institute as described in page 19 and in addition must complete the requirements contained in the particular program listed below or its equivalent.

The program must include a minimum of six quarter courses in biology, six quarter courses in non-biological sciences and six quarter courses in general studies.

Requirements for the BS degree in biology

The student must meet the minimum graduation requirements of the Institute as described on page 19 in this bulletin. In addition, the student must complete a minimum of 60 quarter credit hours in biology. A required core of courses comprises 43 quarter credit hours in biology (General Biology, General Ecology, Botany, Introductory Microbiology, Genetics, Biological Laboratory Techniques, Biology Seminar, one quarter course in Anatomy, one quarter course in Physiology. The remaining 17 hours are selected from biology electives.

Additional requirements for the BS degree in biology include a minimum of six courses in chemistry including three in general analytical and three in organic chemistry. A minimum of three courses in physics and three courses in mathematics, including at least two courses in calculus, is also required.

Institute requirements for General Studies may be found on page 64. The policy on Physical Education is described on page 27.

The specialization track

In conjunction with a faculty advisor, individual student programs can be established to meet particular needs, interests, and goals. Because these tracks are designed around the common core curriculum, the student has the added advantage of being prepared for alternate career goals, should the situation arise. The following tracks are available at RIT:

1. Post-graduate. A student achieving the BS degree in biology at RIT will have the essential prerequisites for entry into most universities offering advanced degrees in biological sciences.
2. Pre-professional. Students interested in careers in medicine, optometry, dentistry, and veterinary science can satisfy the requirements for admission to professional schools by majoring in biology at RIT.
3. Biological Research. This program, which includes a variety of courses such as pharmacology, toxicology, and animal surgery, leads to employment in laboratories engaged in pure and applied biological research or in clinical and medical research.
4. Microbiology. This is similar to the biological research program, but emphasizes microbiological aspects that lead to careers in clinical laboratories, in food and drug quality control and in wastewater and sewage treatment facilities.
5. Environmental Science. This track prepares the student for careers in ecological research and management in areas such as conservation, field biology and environmental toxicology. Students may pursue terrestrial, freshwater and marine science options.
6. Pharmacy. An inter-institutional program between RIT and the Massachusetts College of Pharmacy educates the student for the practice of pharmacy. Three years are spent at RIT as a biology major, the final two academic years are in residence at MCP. Baccalaureate degrees are awarded from both institutions.
7. EM Technician. The Electron Microscopy Society of America (EMSA) is the national organization that certifies individuals as EM technicians. Such individuals are in high demand to work in EM laboratories in hospitals, industries and research organizations. The necessary coursework and training to enable a student to receive certification from EMSA is provided by the biology department. It is possible to receive both a baccalaureate degree and certification in four years (or five years, if the student participates in co-op).

Pharmacy/Biology, Chemistry Double Program For Pharmacists

Edward B. Stockham, Program Director

RIT has joined forces with the largest and second oldest college of pharmacy in the country, Massachusetts College of Pharmacy, to offer a double degree program in pharmacy. Graduates of the five-year program earn a bachelor of science degree in pharmacy from Massachusetts College of Pharmacy and bachelor of science degree in either biology or chemistry from RIT.

Pharmacists work in community or chain store pharmacies, hospitals or other health care institutions, in sales or product development for the pharmaceutical industry, and for cosmetic firms, government agencies, insurance companies, and social service agencies. Pharmacists must have a comprehensive knowledge of drugs, including their compositions, chemical and physical properties, and pharmacological activities in the patient, and must be familiar with tests for drug purity and strength. They also serve as a prime source of drug and health information for patients and other health professionals. Additionally, in many health care settings pharmacists are becoming more involved with the clinical use of drugs and drug therapy.

RIT's program is designed to give students a thorough background in the basic sciences as well as exposure to general studies; professional training in pharmacy; and clinical experience in pharmacy in a health care setting. Students in the program spend three years at RIT (specializing in either biology or chemistry). Their fourth and fifth years are spent studying pharmacy at the Massachusetts College of Pharmacy in Boston. A summer internship concludes the program. Graduates of this inter-institutional program receive a BS degree in Pharmacy from the Massachusetts College of Pharmacy and a BS degree in their area of specialization (biology or chemistry) from RIT.

Admission to the Massachusetts College of Pharmacy phase

Admission to Massachusetts College of Pharmacy is open to a minimum of 10 RIT pharmacy students who apply for admission during their third year of study at RIT through Massachusetts College of Pharmacy's normal transfer-student admission process. Students must posses a cumulative grade point average of at least 3.0 to be eligible for admission to Massachusetts College of Pharmacy. Those who are not selected or who do not maintain the academic average necessary for transferring may remain at RIT and complete their degree program.

Requirements for the AS and BS degrees in biology or chemistry and pharmacy

The student must meet the minimum requirements of the Institute as described on page 19 and in addition must complete the requirements contained in one of the particular options listed on these pages or its equivalent as determined and approved by the departments. The bachelor of science degree in pharmacy from the Massachusetts College of Pharmacy requires five years of study, a summer internship and 260 hours of credit for a degree.

Accreditation

The Massachusetts College of Pharmacy is accredited by the New England Association of Schools and Colleges and The American Council on Pharmaceutical Education.

Course descriptions

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

Transfer to Massachusetts College of Pharmacy Phase

Biology or chemistry major students accepted for transfer admission into Massachusetts College of Pharmacy will enter the third year (their fourth year) of the pharmacy program. The curriculum of study includes courses in medical terminology, pharmaceutics, public health, virology, pharmacy orientation, pathology, medicinal chemistry, biopharmaceutics, pharmacy law, dispensing, and general education electives. The pharmacy program is concluded with a clinical pharmacy internship in the Boston area. MCP will grant the bachelor of science degree in pharmacy.

The Institute will accept 45 transfer credits from MCP toward the bachelor's of science degrees in either biology or chemistry from RIT depending on the option followed during the first three years of study at RIT. While enrolled at MCP the student must utilize 15 of the minimum hours of MCP electives to satisfy RIT's general studies requirement.

Biology

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	**SBIG-201, 202, 203 General Biology	3	3	3
	SBIG-205, 206, 207 General Biology Laboratory	1	1	1
	SCHG-215, 216, 217 General Analytical Chemistry	3	3	3
	SCHG-225, 226, 227 General Analytical Chemistry Lab	1	1	2
	SMAM-204, 214, 215 College Algebra, Intro to Calculus	4	3	3
	or			
	SMAM-251, 252, 253 Calculus	(4)	(4)	(4)
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year AS Degree	SBID-340 General Ecology	4		
	SBIO-304 Botany or SBIO-305 Physiology & Anatomy		4	
	SBIO-303 Comparative Anatomy or SBIO-306, Physiology and Anatomy			4
	SCHO-231, 232, 233 Organic Chemistry	4	4	4
	SPSP-211, 212, 213 College Physics	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Third and Fourth Year		For W		S orSR
	SBIC-404 Introductory Microbiology	5		
	SHPM-432 Biological Laboratory Techniques	4		
	SBID-421 Genetics			4
	*General Studies Elective	10		10
	Biology Elective	4		8
	Institute-wide Elective	4		8
Fifth Year BS Degree		F or W		S
	SBIB-550 Biology Seminar (W or S)	2		2
	Biology Electives	4		4
	Institute-wide Electives	4		4
	*General Studies Electives	5		5

**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
***A minimum of 60 quarter credit hours of biology is required for the BS degree. The required core of courses (SBIG-201, 202, 203, 205, 206, 207; SBIB-550; SBIC-404; SBID-340, 421; SB/0-304; SHPM-432; one quarter course in anatomy; one quarter course in physiology; SBIG-204) comprise 43 hours. The remaining 17 hours is selected from biology electives. Other requirements include a minimum of six courses in chemistry (SCHG-215, 216, 217; SCHO-231, 232, 233), three in physics (SPSP-211, 212, 213 or SPSP-211, 212, 213 or SPSP-311, 312,313) and three in mathematics including at least two in calculus.*

Pharmacy Program (Biology option)

Year		Quarter Credit Hours		
		Fall	Winter	Spring
First Year	SBIG-201, 202, 203 General Biology	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 Gen. & Analytical Chemistry Lab	1	1	2
	SMAM-251, 252, 253 Calculus	4	4	4
	or SMAM-204 College Algebra	4		
	and SMAM-214, 215 Intro. Calculus		3	3
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Electives	0	0	0
Second Year AS Degree	SBID-340 General Ecology	4		
	SBIO-305, 306 Physiology & Anatomy		4	4
	SPSP-211, 212, 213College Physics	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
	SCHO-231, 232, 233 Organic Chemistry	4	4	4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Electives	0	0	0
Third Year	ICSP-205 Computer Technology	3		
	SBIC-404 Intro Microbiology	5		
	SCHB-702 Biochemistry	3		
	SBIO-304 Botany		4	
	SHPM-432 Biology Lab Techniques		4	
	SBID-421 Genetics			4
	SBIB-550 Biology Seminar			2
	Science Elective i		4	4
	*General Studies Electives-Upper Division	5	5	5

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.

Pharmacy Program (Chemistry option)

Year		Quarter Credit Hours		
		Fall	Winter	Spring
First Year	SBIG-201, 202, 203 General Biology	3	3	3
	SBIG-205, 206, 207 General Biology Lab	1	1	1
	SCHC-211, 212 General Chemistry	3	3	
	SCHO-230 Organic Chemistry			3
	SCHA-261, 262, 263 Intr. to Chem. Anal	3	3	3
	SMAM-251, 252, 253 Calculus	4	4	4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Electives	0	0	0
Second Year AS Degree	SMAM-305 Calculus	4		
	SCHA-311 Anal. Chem. - Instrumental Analysis	4		
	SBIO-305, 306 Phys. & Anatomy		4	4
	SPSP-311,312 University Physics	4	4	
	SPSP-371, 372 University Physics Lab	1	1	
	SCHP-340 Intro. Phys. Chemistry		3	
	SCHP-441 Physical Chem			3
	SCHP-445 Physical Chemistry Lab			1
	SCHO-431 Organic Chemistry			2
	SCHO-435 Organic Chemistry Lab			2
	SCHC-201 Chem. Literature			2
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Electives	0	0	0
Third Year	SCHP-442, 443 Physical Chemistry	3		3
	SCHP-446, 447 Physical Chemistry Lab	1		1
	SCHB-702 Biochemistry	3		
	ICSP-205 Computer Tech	3		
	SPSP-313 University Physics	5		
	SCHO-432, 433 Organic Chemistry		2	2
	SCHO-436, 437 Organic Chemistry Lab		2	2
	SCHA-312 Anal. Chem - Separations			4
	Science Elective		4	
	*General Studies Electives-Upper Division	5	5	5

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.

Chemistry and Chemical Technology

Earl Krakower, 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, computer science, physics or mathematics. Students may also elect to complete the BS degree requirements in a traditional (non-cooperative) four-year program.

Chemistry

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	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	4	4	4
	SCHC-201 Chemical Literature			2
	ICSP-205 Computer Techniques		3	
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Electives	0	0	0
Second Year		F or W		S orSR
	SCHA-311 Instrumental Analysis	4		
	SCHA-312 Separations Techniques			4
	SMAM-305 Calculus	4		
	SMAM-306 Differential Equations			4
	SPSP-311,312 University Physics	4		4
	SPSP-371, 372 University Physics Lab	1		1
	*General Studies Electives-Lower Division	4		4
	‡Physical Education Electives	0		0
Third Year AS Degree		F or W		S or SR
	SCHP-340 Introduction to Physical Chemistry	3		
	SCHP-441 Physical Chemistry			3
	SCHP-445 Physical Chemistry Lab			1
	SCHO-431 Organic Chemistry			2
	SCHO-435 Organic Chem. Lab			2
	SPSP-331 Electronics & Electricity	5		
	SMAM-431 Linear Algebra	4		
	GLLC-421 German			5
	*General Studies Elective	4		5
	‡Physical Education Elective	0		
Fourth Year		F or W		S orSR
	SCHP-442, 443 Physical Chemistry	3		3
	SCHP-446, 447 Physical Chemistry Lab	1		1
	SCHO-432, 433 Organic Chemistry	2		2
	SCHO-436, 437 Organic Chem. Lab	2		2
	SCHC-402 Introduction to Research	0		
	Institute-wide Electives			6
	SCHI-762 Inorganic Chemistry			3
	GLLC-422 German	5		
	*General Studies Elective	5		
Fifth Year		F orW		S
	SCHI-763 Inorganic Chemistry	3		
	or SCHB-702 Biochemistry	3		
	SCHA-711 Instrumental Analysis	3		
	SCHA-720 Instrumental Analysis Lab	2		
	Chemistry Electives			6
	*General Studies Electives	5		5
	Institute-Wide Electives	5		6

Chemical Technology

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SCHT-241, 242 Chem. Tec. I (General) & (Analytical)	6		6
	SCHG-215 Chem. Tec. II Gen. & (Analytical) Lee	3		
	SMAM-201, 202 Algebra, Trigonometry	3		3
	GLLC-220 English Composition	4		
	PPRM-201 Introduction to Technical Writing			3
	*General Studies Elective-Lower Division			4
	‡Physical Education Elective	0		0
Second Year		SRorF		WorS
	SCHT-243, 244 Chem. Tec. III, IV (Organic)	6		5
	SMAM-203 Algebra, Trigonometry	3		
	SMAM-309 Statistics			4
	SPSP-211 College Physics			3
	SPSP-271 College Physics Lab			1
	SCHT-309 Glassblowing Techniques			2
	*General Studies Electives-Lower Division	8		
	‡Physical Education Elective	0		0
Third Year AAS degree		SRorF		W o r S
	SCHT-305, 306 Chemistry Speciality (Spectrometry)	4		4
	SPSP-212, 213 College Physics	3		3
	SPSP-272, 273 College Physics Lab	1		1
	SPSP-301 Electronics for Technologists			3
	Institute-wide Electives	4		4
	*General Studies Electives-Lower Division	4		4

**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.

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 biochemical 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 19 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.

As part of the BS requirements, students must pass a series of comprehensive chemistry exams that are offered during the senior year. 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 186 quarter credit hours and 372 quality points.

Chemistry (Biochemistry Option)

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SCHC-211, 212 General Chemistry	3	3	
	SCHA-261, 262, 263 Intro, to Chemical Analysis	3	3	3
	SCHD-230 Intro, to Organic Chemistry			3
	SMAM-251, 252, 253 Calculus	4	4	4
	SBIB-201, 202, 203 General Biology	4	4	4
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Electives	0	0	0
Second Year		For W		S or SR
	SCHA-311 Instrumental Analysis	4		
	SCHD-431 Organic Chemistry			2
	SCHD-435 Organic Chemistry Lab			2
	SMAM-305 Calculus	4		
	ICSP-205 Computer Techniques			3
	SPSP-311, 312 University Physics	4		4
	SPSP-371, 372 University Physics Lab	1		1
	or			
	SPSP-211, 212 College Physics	(3)		(3)
	SPSP-271, 272 College Physics Lab	(1)		(1)
	SCHC-201 Chemical Literature			2
	*General Studies Electives-Lower Division	4		4
	‡Physical Education Electives	0		0
Third Year As Degree		F or W		SorSR
	SCHD-432, 433 Organic Chemistry	2		2
	SCHD-436, 437 Organic Chemistry Lab	2		2
	SPSP-331 Electronics and Electricity	5		
	SCHA-312 Separations Technique			4
	SCHB-702 Biochemistry			3
	Science Elective	3-5		
	*General Studies Elective	4		5
	‡Physical Education Elective	0		
Fourth Year		For W		S or SR
	SCHP-340 Intro, to Physical Chemistry	3		
	SCHP-441 Physical Chemistry			3
	SCHP-445 Physical Chemistry Lab			1
	SCHB-703 Biochemistry-Metabolism	3		
	SCHB-704 Biochemistry-Molecular Biology			3
	SCHC-402 Introduction to Research	0		
	*General Studies Elective	5		5
	Science Elective	5-7		3-5
Fifth Year		For W		SorSR
	SCHP-442, 443 Physical Chemistry	3		3
	SCHP-446, 447 Physical Chemistry Lab	1		1
	*General Studies Electives	10		5
	Science Electives	3-4		6-8

** See Pg. 64 for General Studies requirements.*
‡ See Pg. 27 for Policy on Physical Education.

Mathematics

Program

George T. Georgantas, Head

The Department of Mathematics offers two degree programs, one in mathematics and one in computational mathematics.

Students successfully completing the first two years of either program are eligible to receive the associate in science in mathematics degree.

The BS degree involves a five-year curriculum and incorporates industrial cooperative employment during the third, fourth and fifth years. However, the Department of Mathematics will design a special curriculum for students who do not desire to participate in the system of cooperative employment, in which case the student can finish either program in four years.

The program leading to the BS in mathematics is an applied mathematics program requiring a minor concentration in one math-related field (e.g., physics, chemistry, engineering, economics, computer science, etc.). There is an increasing need for mathematicians with backgrounds in such areas.

The program leading to the BS in computational mathematics was specially designed several years ago to meet the needs of employers desiring mathematicians with strong computer science backgrounds.

This program emphasizes topics in mathematics which lend themselves to computer analysis, and involves a substantial number of computer courses.

Graduates of either program qualify for a variety of positions in research corporations, industry, governmental agencies and other business concerns, as well as for graduate studies leading to an MA, MS or Ph.D. degree, not only in mathematics but in a number of other fields as well.

Requirements for the AS and BS degrees

The student must meet the minimum requirements of the Institute as described on page 19 and in addition 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.

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SMAM-251, 252, 253 Calculus	4	4	4
	SMAM-210, 211 Freshmen Seminar	1	1	
	ICSS-202 Intro. Computer Science	4		
	ICSP-215 Programming Language-FORTRAN		4	
	SMAM-265 Discrete Mathematics			4
	** Science	5	5	5
	* General Studies Electives-Lower Division	4	4	4
	‡ Physical Education Elective	0	0	0
Second Year AS Degree	SMAM-305 Calculus	4		
	SMAM-306 Differential Equations		4	
	SMAM-307 Differential Equations			
	or SMAM-308 Engineering Math			4
	SMAM-351, 352 Probability and Statistics	4	4	
	SMAM-431 Linear Algebra			4
	# Elective	4	4	4
	* General Studies Elective-Lower Division	4	4	4
	‡ Physical Education Elective	0	0	0
Third Year		F or W		S orSR
	SMAM-432 Linear Algebra	4		
	SMAM-361 Mathematical Modeling			4
	* General Studies Electives-Upper Division	5		5
	Mathematics Elective	4		4
	# Elective	4		4
Fourth & Fifth Year	*** SMAM-531, 532 Abstract Algebra	4		4
	*** SMAM-411, 412 Real Variables	4		4
	* General Studies Electives-Upper Division	10		10
	Mathematics Elective	4		4
	# Elective	12		12

NOTE: A detailed analysis of the above program is contained in a brochure prepared by the Department of Mathematics and is available upon request.

* See Pg. 64 for General Studies requirements.

‡ See Pg. 27 for Policy on Physical Education.

** One of the following introductory sequences, including the associated laboratory:
SBIG-201, 202, 203 General Biology; SBIG-205, 206, 207 General Biology Lab.
SCHC-211, 212 General Chemistry
SCHO-230 Introduction to Organic Chemistry
SCHG-205, 206, 207 Chemical Principles
SPSP-311, 312, 313 University Physics; SPSP-371, 372, 373 University Physics Lab.
SPSP-205, 206, 207 General Physics; SPSP-275, 276, 277 General Physics Lab.

*** Given in alternate years and blocks

\# 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.

Course descriptions

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

Computational Mathematics

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SMAM-251, 252, 253 Calculus	4	4	4
	SMAM-265 Discrete Mathematics			4
	ICSS-202 Intro. Computer Science	4		
	ICSP-208 Intro, to Programming		4	
	**Science	5	5	5
	*General Studies Elective-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year	SMAM-305 Calculus	4		
	SMAM-306 Differential Equations		4	
	SMAM-351, 352 Intro. Probability & Statistics	4	4	
	SMAM-410 Advanced Calculus			4
	SMAM-431 Linear Algebra			4
	ICSP-305 Assembly Language Programming		4	
	ICSS-315 Digital Computer Organization			4
	ICSP-215 Programming Language-Fortran	4		4
	*General Studies Elective-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Third Year		For W		S or SR
	SMAM-432 Linear Algebra	4		
	SMAM-365 Combinational Mathematics	4		
	SMAM-361 Mathematical Modeling			4
	ICSS-320 Data Structure Analysis	4		
	*General Studies Elective-Upper Division	5		5
	Mathematics Elective			4
	Computer Science Elective			4
Fourth & Fifth Year	***SMAM-511, 512, Numerical Analysis	4		4
	***SMAM-531, 532 Abstract Algebra	4		4
	Mathematics Elective	4		4
	*General Studies Elective-Upper Division	10		
	Computer Science Elective	4		4
	Institute Elective	4		4

NOTE: A detailed analysis of the above program is contained in a brochure prepared by the Department of Mathematics and is available upon request.

**See Pg. 64 for General Studies requirements.*

‡See Pg. 27 for Policy on Physical Education.

***One of the following introductory sequences, including the associated laboratory:*

SBIG-201, 202, 203 General Biology, SBIG-205, 206, 207 General Biology Lab
SCHC-211, 212 General Chemistry
SCHO-230 Intro to Organic Chemistry
SCHG-205, 206, 207 Chemical Principles
SPSP-311, 312, 313 University Physics; SPSP-371, 372, 373 University Physics Lab
SPSP-205, 206, 207 General Physics; SPSP-275, 276, 277 General Physics Lab

****Given in alternate years and blocks*

Physics Program

J. Shaw, Acting 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 19 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 course offered at RIT, please request the Course Description catalog from the Admissions Office.

Physics

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SMAM-251, 252, 253 Calculus	4	4	4
	SCHC-211, 212 General Chemistry	3	3	
	SCH0230 Introduction to Organic Chemistry			3
	SCHG-205, 206 Chemical Principles Laboratory	1	1	
	SPSP-200 Physics Orientation	1		
	SPSP-311, 312 University Physics		4	4
	SPSP-371, 372 University Physics Laboratory		1	1
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year AS Degree	SMAM-305 Calculus	4		
	SMAM-306, 307 Differential Equations		4	4
	SPSP-313 University Physics	4		
	SPSP-373 University Physics Laboratory	1		
	SPSP-321 Introduction to Laboratory Techniques		3	
	SPSP-314, 315 Introduction to Modern Physics		4	4
	SPSP-380 Theoretical Physics I			4
	ICSP-205 Computer Techniques	3		
	*General Studies Electives-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Third Year		F		S
	SPSP-431, 432 Electronic Measurements	3		3
	SPSP-401, 402 Intermediate Mechanics	4		4
	**SPSP-455 Optical Physics	4		
	*General Studies Elective	5		5
	Institute-wide Elective			4
Fourth Year	SPSP-411, 412 Electricity & Magnetism	4		4
	**SPSP-415 Thermal Physics	4		
	SPSP-421, 422 Experimental Physics	2		2
	SPSP-501 Theoretical Physics			4
	*General Studies Elective	5		5
Fifth Year BS degree		F		S
	SPSP-552 Atomic Physics & Quantum Mechanics	4		
	SPSP-521 Advanced Experimental Physics	3		
	SPSP-531 Solid State Physics			4
	SPSP-553 Nuclear Physics			4
	*General Studies Elective	5		5
	Institute-wide Elective	4		4

*See Pg. 64 for General Studies requirements.
‡See Pg. 27 for Policy on Physical Education.
**SPSP-455 and SPSP-415 given in alternate years.

Biomedical Computing

William N. Bigler, Acting 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 and computer science with emphasis on clinical and laboratory applications.

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 fields 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 program 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.

Requirements for the BS in biomedical computing

The student must meet the minimum graduation requirements of the Institute as described on page 19 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 usually will be required to take 100 quarter credit hours, depending on the program they completed at their previous school. Specific requirements will be determined for each transfer student by the department.

Biomedical Computing

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	ICSS-202 Intro, to Computer Science	4		
	ICSP-208 Intro, to Programming	4		
	ICSP-210 Program Design & Validation		4	
	ICSP-305 Assembly Language Prog			4
	SBIG-202, 203 General Biology		3	3
	SBIG-206, 207 General Biology Lab		1	1
	SCHG-215, 216, 217 General & Analytical Chemistry	3	3	3
	SCHG-225, 226, 227 General & Analytical Chemistry Lab	1	1	2
	*General Studies Electives	4	4	4
	‡Physical Education Electives	0	0	0
Second Year	ICSP-215 Programming Language Fortran		4	
	ICSS-320 Data Structure Analysis	4		
	SBIG-201 General Biology	3		
	SBIG-205 General Biology Lab	1		
	SBIO-305, 306 Physiology & Anatomy		4	4
	SMAM-251, 252, 253 Calculus	4	4	4
	SPSP-205, 206 General Physics		3	3
	SPSP-275, 276 General Physics Lab		1	1
	SHPG-204 Communication Skills	1		
	SCHO-431 Organic Chemistry			2
	*General Studies Electives	4		4
	‡Physical Education Electives	0	0	0
Third Year		F/W		s/su
	SPSP-331 Electricity & Electronics	5		
	SCHO-432, 433 Organic Chemistry	2		2
	SHPG-301 Medical Terminology	3		
	SMAM-309 Statistics			4
	Computer Science or Science Electives	2-4		6-7
	*General Studies Electives	4		5
Fourth Year	SHPM-432 Biology Lab Techniques	4		
	Computer Science or Science Electives	6-9		11-13
	*General Studies Electives	5		5
Fifth Year	Computer Science or Science Electives	11-13		5-8
	*General Studies Electives	5		10

☐ See Pg. 64 for General Studies requirements.
☐ See Pg. 27 for Policy on Physical Education.

Course Descriptions

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

Medical Technology Program

William A. Burns, Program Director

The major function of the medical technology program, which leads to the bachelor of science degree is the preparation of students for employment in hospital laboratories, industrial-medical or research laboratories, and pharmaceutical companies. This program has been accepted by the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists as meeting all requirements prior to the Registry examination.

Students enrolled in the medical technology program attend classes at RIT during the Fall, Winter and Spring Quarters for three years. In the Fall Quarter of their third year, they apply for internship to hospital schools of medical technology that are approved by the American Society of Clinical Pathologists. They will then spend their fourth academic year at the hospital that accepts them as an intern in medical technology. At the present time a new integrated internship year is being developed by the medical technology faculty. This new development will provide a second track for completion of a BS degree in medical technology. The students in this track will spend one half of their fourth year at RIT training in clinical methods of analyses and they will spend the last half of this year in hospital laboratories for observation, instruction, and practical training.

The medical technology program is affiliated with Rochester General Hospital, St. Mary's Hospital in Rochester, and Buffalo's Millard Fillmore Hospital. Students may, however, seek admission to any approved hospital for their internship.

Medical Technology (Typical Course Schedule)

Year		Quarter Credit Hours		
		Fall	Winter	Spring
First Year	SBIG-201, 202, 203 General Biology	3	3	3
	SBIG-205, 206, 207 General Biology Lab	1	1	1
	SCHG-21 5, 216, 217 General Analytical Chemistry	3	3	3
	SCHG-225, 226, 227 General Analytical Chemistry Lab	1	1	2
	SMAM-221, 222, 223 College Math	4	4	4
	*General Studies Elective-Lower Division	4	4	4
	‡Physical Education Elective	0	0	0
Second Year	SBIO-305, 306 Physiology and Anatomy		4	4
	SCHO-231, 232 Organic Chemistry	4	4	
	SPSP-211, 212, 331 College Physics & Electronics	3	3	5
	SPSP-271, 272 College Physics Lab	1	1	
	ICSP-205 Computer Techniques	3		
	SBIG-315 Medical Genetics		2	
	SHPG-204 Communication Skills (Fall or Spring)	1		
	*General Studies Electives-Lower Division	4	4	4
	Institute Wide Electives			4
	‡Physical Education Elective	0	0	0
Third Year	SHPM-401 Immunohematology	3		
	SBIO-404 Microbiology	5		
	SCHB-702, 703 Biochemistry	3	3	
	SCHB-605, 606 Biochemistry Case Studies	1	1	
	SHPM-432, 433 Biology Laboratory Techniques		4	4
	SMAM-309 Statistics			4
	SHPM-410 Hematology			4
	*General Studies Elective-Upper Division	5	5	5
	SHPM-405 Diag. Bacteriology		4	

BS degree: the fourth year taken at an approved hospital for training medical technologists.
**See Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.

Nuclear Medicine Technology Program

Dr. Jerome Wagner, 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 internship begins in early June and ends in mid-June of the following year. The first two weeks of training are an intensive introduction to the theory and practice of nuclear medicine technology taught by physicians and technologists from the programs's affiliated hospitals. Classes during this time are held on the RIT campus, and laboratory sessions take place at Rochester hospitals.

Most of the internship 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.

Training during the hospital internship 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 internship also includes a substantial component of training in radioimmunoassay theory and practice. One week of classroom and laboratory work in RIA at RIT during the winter of the internship year is followed by four weeks of radioimmunoassay clinical training at one of the affiliated hospitals.

Nuclear Medicine Technology

Year		Quarter Credit Hours: Fall	Winter	Spring
First Year	SMAM-221, 222, 223 College Math	4	4	4
	SCHG-215, 216, 217 General & Analytical Chemistry	3	3	3
	SCHG-225, 226, 227 General & Analytical Chemistry Lab.	1	1	2
	SBIG-201, 202, 203 General Biology	3	3	3
	SBIG-205, 206, 207 General Biology Lab	1	1	1
	*General Studies Electives-Lower Division	4	5	4
	‡Physical Education Elective	0	0	0
Second Year	SPSP-211, 212, 213 College Physics	3	3	3
	SPSP-271, 272, 273 College Physics Lab	1	1	1
	SCHG-202 Organic Chemistry		3	
	SCHG-222 Organic Chemistry Lab		1	
	SCHG-203 Biochemistry			4
	SBIO-305, 306 Physiology & Anatomy		4	4
	ICSP-205 Computer Techniques	3		
	SHPG-204 Communication Skills	1		
	*General Studies Electives-Lower Division	4	4	4
	**Program Elective	4		
	‡Physical Education Elective	0	0	0
Third Year	SPSP-351, 352, 353 Radiation Physics	5	5	5
	SBIT-430 Radiation Biology	4		
	SMAM-309 Statistics			4
	*General Studies Electives-Upper Division	5	5	5
	**Program Elective	4	4	
	Institute-Wide Elective		4	4
Fourth Year	SHPN-501 Intro, to Clinical Nuclear Medicine	6		
	SHPN-502 Clinical Nuclear Medicine Lecture Series		1	1
	SHPN-503 Review in Nuclear Medicine	1	1	2
	SHPN-510 Radionuclude Imaging & External Monitoring	4	7	4
	SHPN-511 Patient Positioning & Nursing Procedures	1	2	1
	SHPN-512 Nuclear Medicine Pharmacy In-Vitro Procedures & Therapy	2	2	2
	SHPN-513 Nuclear Medicine Administrative Procedures & Radiation Protection	2	1	1
	SHPN-514 Instrumentation in Nuclear Medicine	1	1	1
	SHPN-401 Introduction to Radioimmunoassay		2	
	SHPN-402 Radioimmunoassay Practicum			4

*See *Pg. 64 for General Studies requirements.*
‡See Pg. 27 for Policy on Physical Education.
***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.*

The RIT nuclear medicine technology program has affiliations with the following Upstate New York hospitals: Syracuse area-Community General Hospital; Crouse-Irving Memorial Hospital; Veterans Administration Hospital. Rochester area- The Genesee Hospital; Highland Hospital; Rochester General Hospital; Strong Memorial 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 January preceding the start of the clinical year. Students selected for internships there receive a stipend and 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 19 and in addition must complete the requirements contained in the particular program or its equivalent as determined and approved by the School of Health Related Professions. 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 Joint Review Committee on Education Programs in NMT of the American Medical Association.

Course descriptions

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

ROTC

The general objective of the Reserve Officers' Training Corps is to produce junior officers who, by education, training, attitude, maturity and qualities, are suitable for continued development as officers in the United States Army. The intermediate objectives of the program are to develop in each student:

1. The fundamentals of self-discipline, integrity, and responsibility;
2. An appreciation of the role of a participating citizen in matters dealing with national defense;
3. The ability to evaluate situations, to make decisions, to understand people, and to practice those attributes considered essential in a leader.

Four-year program
The Army ROTC program at Rochester Institute of Technology is voluntary and open to all male and female students enrolled on a full-time basis.

Students are eligible to enroll in this program any time during their freshman or sophomore years. They may also disenroll at any time during these first two years **without obligation.** Upon completion of the sophomore year, the student may request enrollment in the Advanced ROTC Course for the junior and senior years.

Two-year program
This program is offered to all qualified students with two school years remaining who did not previously participate in ROTC. Students in this program attend a six-week Basic Summer Camp between their sophomore and junior years, in lieu of the first two years of ROTC normally presented in the classroom. Upon successful completion of this basic camp, the student is enrolled in the Advanced Course for the last two years. It should be noted that interested students should begin processing applications for this program early in the sophomore year.

Commissioning
In both the two-year and four-year programs, the student must successfully complete all degree requirements. Additionally, each student attends a six-week Advanced Summer Camp, usually between the junior and senior year, prior to being commissioned as a second lieutenant on graduation day.

ROTC sponsors many extra-curricular and hands-on type activities through which the cadet may find an opportunity to develop leadership potential, broaden overall cultural, civic and social backgrounds, and enjoy voluntary weekend outdoor events.

All courses receive full academic credit as free electives.

Scholarships
Full-tuition scholarships are available on a competitive basis to freshmen, sophomores and juniors. Under this program, the Army pays for all tuition fees, lab fees, textbooks, and other required expenses, except room and board. In addition, all students entering the Advanced Course receive $100 per month, with or without a scholarship, for ten months of each academic year. Throughout the entire program, the ROTC student is provided textbooks and related materials free of charge.

For further information
Additional information about ROTC may be obtained by visiting the unit's fifth floor offices in the administration building or by calling 475-2881, 2882.

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

ROTC Faculty

Professor of Military Science
Lieutenant Colonel Victor F. Keefe
BA St. Mary's University
MA University of Oklahoma

Assistant Professors of Military Science

Major Malcolm R. McLellan
BA University of Alabama
MA East Texas State

Major Christopher B. Witt
BS Citadel
MA Sul Ross, West Texas

Captain Robert G. Hipp
AB Dickinson College
MS Alfred University

Captain Ronald Dyches
BA Sam Houston State University

Captain Andrew G. Ellis
BS US Military Academy

Sergeant Major
Samuel G. Tratt

Training Specialists
Sergeant First Class James Rocker
Sergeant First Class James Hughes

Supply Specialist
Staff Sergeant Michael P. O'Connor

Administrative NCO
Staff Sergeant Major L. Redd

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Secretary
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David D. Egan, Attorney

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Lucius R. Gordon, Chairman of the Board, Mixing Equipment Co., Inc. (a unit of General Signal Corporation)

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Alexander D. Hargrave, Chairman of the Board and Chief Executive Officer, Lincoln First Banks Inc.

John E. Heselden, Senior Vice President and Chief of Newspaper Operations, Gannett Co., Inc.

John D. Hostutler, President, Industrial Management Council

Thomas E. Hustead, General Manager, Rochester Products Division, General Motors Corporation

Frank M. Hutchins, Vice Chairman, Board of Trustees, Rochester Institute of Technology; Chairman of the Board, Hutchins/Young & Rubicam Inc.

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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 Herbert J. Mossien

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: Presently open

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: Presently open

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: Presently open

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: Professor Hans Christensen

College of General Studies

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 Raymond H. Merritt

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 Herbert H. Johnson

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 James E. McMillion

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

All Institute

William A. Kern Professorship in Communications

Established: 1971

Donor: RochesterTelephone 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: Presently open

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Robert A. Clark, BS, Ph.D.
College of Continuing Education

Lothar K. Engelmann, BS, MS, Ph.D. College of Graphic Arts and Photography

Donald A. Hoppe, BS, MS,
Administrative Services

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.
Institute College

John E. Paliouras, BA, MA, Ph.D.
College of Science

Thomas R. Plough, BA, MA, Ph.D.
Executive Dean, Eisenhower College

Mary Sullivan, BA, MA, Ph.D.
College of General Studies

Faculty and Staff

College of Business

Walter F. McCanna, BS, Marquette University; Ph.D., University of Wisconsin-Madison, Dean; Professor

Dale F. Gibson, BA, MBA, Associate Dean, Administration; Associate Professor

Raymond F. Von Deben, BS, MS, Assistant Dean, Student Services; Professor

Janet C. Barnard, BS, M.Ed., Ed.D.. Coordinator of Undergraduate Business Administration Planning; Assistant Professor

Eugene H. Fram, BS, ML, Ed.D., Director, Center for Management Study; Professor

George Alley, BA, MS, Director, Department of Food Administration; Professor

Arden L. Travis, BS, M.Ed., Ed.D., Director of Experiential Learning Programs; Associate Professor

Mary Dean Gridley, BA, Winthrop College; MAT, University of South Carolina-Coordinator of Experiential Learning Programs; Instructor

School of Business Administration and School of Retailing

Robert J. Barbato, BA, LeMoyne College; Ph.D., Michigan State University-Assistant Professor

William E. Beatty, BA, Western Maryland; ML, Pittsburgh; MBA, New York University-Associate Professor

Thomas R. Burns, BBA, Ohio State; J.D., Notre Dame-Lecturer

Richard J. Butler, BS, MS, Clarkson College-Assistant Professor

Henry J. Cassia, BS, MBA, New York University-Associate Professor

You-Keng Chiang, BA, Central University, Chunking; MA, Ph.D., Chicago - Prof esso r

Thomas E. Comte, BS, University of California-Davis; MBA, Columbia University; Ph.D., University of Missouri at Columbia-Assistant Professor

Dorothy Cotton, Fashion Specialist, Public Relations Consultant-Lecturer

Frederick D. Crowley, BBA, Iona College; MBA Iona College-Assistant Professor

Terry L. Dennis, BS, Clarkson College; MS, Ph.D., Purdue-Associate Professor

Andrew J. Du Brin, AB, Hunter College; MS, Purdue; Ph.D., Michigan State-Professor

Stanley M. Dye, BA, Haverford College; C.P.A., New York-Distinguished Lecturer

James C. Galloway, AB, Rochester; MBA, University of Pennsylvania-Assistant Professor

Steven C. Gold, BA, BS, Rutgers; MA, Ph.D., SUNY-Binghamton; Assistant Professor

J. Kenneth Graham, Jr., BA, Brown; MBA, Union College & University;-Assistant Professor

John K. Hartley, Jr., BS, MS, Georgia Institute of Technology-Associate Professor

John A. Helmuth, II, BA, MA, Old Dominion University-Assistant Professor

Gene G. Hoff, BBA, Hartwick; MBA, University of Rochester; CMA-Assistant Professor

Frank E. Holley, BS, University of Illinois-Distinguished Lecturer

Bernard J. Isselhardt, BA, MS, Southern Illinois University - Assistant Professor

Paul A. Lebowitz, BA, Case Western University; MS, Rochester Institute of Technology; CPA, New York-Instructor

Margaret S. Marshall, BA, MS, West Virginia-Lecturer

James E. McMillion, Jr., BFA, MFA, Ohio University-Professor, James E. McGhee Professor in Photographic Management

E. James Meddaugh, BS, Rutgers; MBA, Drexel; Ph.D., Pennsylvania State; C.P.A., New York-Professor

William L. Mihal, BS, MS, Clarkson College; Ph.D., University of Rochester-Associate Professor

Herbert J. Mossien, BS, Alfred-J. Warren McClure Professor in Marketing

James E. Pawlukiewicz, BS, MA, University of Kentucky-Assistant Professor

Keith G. Provan, BS, American University; MBA, Boston University; Ph.D., SUNY-Buffalo-Assistant Professor

John L. Roman, BS, MS, SUNY-Albany-Instructor

Jose A. Rullan, BS, Western Carolina University; MS, Rochester Institute of Technology; C.PA-New York-Instructor

Joseph H. Schuler, Jr., BFA, Syracuse; MFA, Rochester Institute of Technology-Lecturer

Dean C. Siewers, BS, Marietta; 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

Hollister Spencer, BA, MBA, Harvard; DBA, Arizona State-Professor

William Stevenson, BIE, MBA, Ph.D., Syracuse-Associate Professor

Charles I. Stubbart, BS. Rochester Institute of Technology; Lecturer

Daniel D. Tessoni, BBA, St. John Fisher; MS, Clarkson College of Technology; C.P.A.-New York-Instructor

Philip R. Tyler, BS, Rochester Institute of Technology; MBA, DBA, Michigan State University-Associate Professor

Paul H. Van Ness, BA, MBA, University of Michigan; MS, Rochester Institute of Technology-Associate Professor

Stanley M. Widrick, BS, Clarkson College of Technology, MBA, SUNY at Buffalo; Ph.D., Syracuse University-Associate Professor

Thomas A. Williams, BS, Clarkson; MS, Ph.D., Rensselaer Polytechnic Institute - Professor

Eugene O. Wilson, BS, MS, Syracuse; MBA, Rochester-Associate Professor

Julian E. Yudelson, BS, University of Pennsylvania; MBA, Emory University; Ph.D., Northwestern University-Associate Professor

John S. Zdanowicz, BS, Rochester Institute of Technology; MBA, Ph.D., Michigan State-Associate Professor

Department of Food Administration and Tourist Industries Management

Frank A. Bucci, BS, New Hampshire; MBA, Boston College-Associate Professor

Francis M. Domoy, BA, MA, SUNY-Buffalo; Ph.D., Michigan State University-Associate Professor

Leila P. Hopkins, BS, Tennessee; MS, Iowa State; R.D.-Assistant Professor

Linda Underhill, BS, MS, Rochester Institute of Technology-Instructor

Carol B. Whitlock, BS, MS, Pennsylvania State; Ph.D., Massachusetts-Assistant Professor

Clinical Faculty

Jean Fox, Director of Dietetics, Rochester General Hospital

Jean Queale, Chief of Dietetic Service, The Veterans Administration Hospital, Canandaigua, New York

College of Continuing Education

Administrative Officers/ Staff

Robert A. Clark, BS, Ph.D.; Dean; Professor

Norman A. Flannigan, BS, M.Ed., Ph.D., Assistant Dean, Operations, Associate Dean, Associate Professor

Evening Programs and Summer Sessions

Frederick P. Gardner, BA, MS, Ed.E., Associate Dean, Professor

John H. Humphries, BS, M.Ed., Ph.D., Director of Special Projects

Betty J. Glasenapp, ABA, Administrative Coordinator, Summer Sessions

Evaluation and Staff Development

Ronald J. Hilton, BA, MA, Executive Director, Associate Professor

External Programs and Special Courses

Dorothy K. Paynter, BA, M.Ed., Acting Executive Director, Assistant Professor

Jessie M. James, BA, Program Consultant, Instructor

Robert M. Way, AB, MS, Program Consultant, Associate Professor

Helen I. Widrick, BS, MS, Consultant, Lecturer

Academic Areas

Business and Community Studies

Rolf A. Zerges, BS, MA, Academic Administrator, Chairperson, Business Administration and Community Studies, Associate Professor

John H. Hickman, BA, JD., Chairperson, Management Studies, Associate Professor

Daniel C. Smialek, AAS, BS, Chairperson, Business Studies

William J. Walsh, CPA, Chairperson of Accounting, Lecturer

Humanistic Studies

Andrea C. Walter, BA, MA, Ed.D., Acting Academic Administrator, Chairperson, Humanities and Communications, Associate Professor

Walter R. Bieder, BA, MA, Chairperson, Behavioral Science, Assistant Professor

Frances Welles, BA, MFA, Manager, Arts Program, Lecturer

Jean Schanker, BFA, MF, Chairperson, Fine Arts and Design

Technical Studies

Robert A. Clark, BS, Ph.D., Academic Administrator, Chairperson, Chemistry, Professor

Austin J. Bonis, BS, MA, Ph.D., Chairperson, Statistics, Professor

Lloyd B. Andrus, Lecturer

Andrew Davidhazy, BFA, MFA, Chairperson, Photography, Associate Professor

Mario DiQuilio, BS, MS, Chairperson, Engineering Drawing, Associate Professor

Frederick P. Frey, Jr., BS, MS, Chairperson, Mathematics, Associate Professor

Alfred C. Haacke, BS, Chairperson, Computer Systems, Physics and Electromechanical Technology, Associate Professor

Bernard A. Logan, BS, M.Ed., Chairperson, Electrical and B. Tech, Associate Professor

Joseph Waldinsperger, NYS Vocational Certification, Chairperson, Machine Shop, Assistant Professor

School for Applied Industrial Studies

James D. Forman, AAS, BS, MS, Director; Professor

Orville H. Adler, B. Tech. Senior Technical Associate, Lecturer

Samuel L. Barone, AAS, Senior Technical Associate, Lecturer

Robert Holmes, BSME, Senior Technical Associate, Lecturer

Ruth L. Mets, BA, Ed.M. Communications, Lecturer

Sheila Mitchell, BA, MS, Mathematics, Lecturer

Ronald Perry, AAS, Senior Technical Associate, Lecturer

Edwin D. Spong, Manpower Specialist

Operations Areas

Delores A Baxter, Administrative Assistant to the Dean

Norine King, Management Diploma, Coordinator, Information Services

Genevieve Knapp, Management Diploma, Coordinator, Financial Services

Andrea L. Schaeffer, BA, Coordinator of Publications

Janet Switzer, Management Diploma, Registration Services

Gail Welch, AAS, Coordinator, Operational Services

Adjunct Faculty

A detailed listing appears in the separate College of Continuing Education Bulletin, available from that College.

Eisenhower College

Joseph D. Coffee, Jr., AB, Columbia University-Chancellor

Thomas R. Plough, BA, MA, Ph.D.-Executive Dean

A detailed listing of RIT's Eisenhower College faculty may be obtained by writing for the Eisenhower College Bulletin, available from the Office of Admissions.

College of Engineering

Richard A. Kenyon, BME, MS, Ph.D., P.E., Dean, Professor

Douglas M. Marshall, BSEM, MSEM, Associate Dean, Associate Professor

Harvey Rhody, BS EE, MSEE, Ph.D., Department Head, Electrical Engineering; Professor

Richard Reeve, BS, MS, Ph.D., Department Head, Industrial Engineering; Professor

Bhalchandra V. Karlekar, BEME, MSME, Ph.D., P.E., Department Head, Mechanical Engineering; Professor

Swaminathan Madhu, MA, MSEE, Ph.D., Director of Graduate Programs, Professor

Roy S. Czernikowski, BEE, ME, Ph.D., Head, Computer Engineering Department; Associate Professor

Roger E. Heintz, BS EE, MSEE, Ph.D., Coordinator of Transfer Programs, Electrical Engineering; Associate Professor

Betty M. Weatherhog- Administrative Assistant to the Dean

Electrical Engineering Department

Robert C. Baker, BEE, MSEE, Cornell; P.E.-Associate Professor

Frank J. Bogacki, BSEE, Gannon College, MSEE, Pennsylvania-Assistant Professor

George Brown, BSEE, Vanderbilt; MSEE, Rochester-Associate Professor

Roy S. Czernikowski, BEE, Catholic University of America; ME, Ph.D., Rensselaer Polytechnic Institute-Associate Professor

Lynn F. Fuller, BS, MS, Rochester Institute of Technology; Ph.D., SUNYat Buffalo-Assistant Professor

Roger E. Heintz, BSEE, Michigan Technological University, MSEE, Ph.D., Syracuse-Associate Professor

Kenneth W. Hsu, BS, National Taiwan Normal University, China; MSEE, Ph.D., Marquette-Assistant Professor

Robert E. Lee, BSME, MSEE, Ph.D., Rochester-Associate Professor

Swaminathan Madhu, MA, University of Madras; MSEE, Tennessee; Ph.D., Washington-Professor

Athimoottil V. Matthew, BEE, Jadavpur University, India; M.Tech, Indian Institute of Technology, India; Ph.D., Queens University, Canada-Visiting Professor

James E. Palmer, BSc, University of Western Ontario; MSEE, University of Pennsylvania; Ph.D, Case Institute of Technology-Professor

George W. Reed, BEE, Clarkson College; MEE, Delaware; P.E.-Professor

Harvey Rhody, BSEE, Wisconsin; MSEE, Cincinatti; Ph.D., Syracuse-Professor

Edward R. Salem, BSEE, Pennsylvania State; MSEE, Catholic University of America; Ph.D., Buffalo-Associate Professor

Tapan K. Sarkar, B. Tech., Indian Institute of Technology, India; MScE, University of New Brunswick, Canada; MSEE, Ph.D., Syracuse-Assistant Professor

Mohamed K. El-Sherbiny, BSEE, MSEE, University of Assiut, Egypt; Ph.D., Iowa State University-Visiting Associate Professor

Raman M. Unnikrishnan, BSEE, University of Kerala, India; MSEE, South Dakota State University; Ph.D., Missouri-Associate Professor

Fung-I Tseng, BSEE, Taiwan University; MSEE, Chiao-Tung University, Taiwan; Ph.D., Syracuse-Assistant Professor

Watson F. Walker, BSEE, Brooklyn Polytechnic Institute; Ph.D., Syracuse-Professor

Industrial Engineering Department

Richard Reeve, BS, MS, Ph.D., Buffalo-Professor

Gary D. Christie, BS, Rochester Institute of Technology; MSIE, Virginia Polytechnic Institute & State University-Assistant Professor

Sudhakar R. Paidy, BS Osmania University, India; MSIE, Ph.D., Kansas State University-Assistant Professor

Jasper E. Shealy, BS, Georgia Institute of Technology; MS, Ph.D., SUNY at Buffalo-Associate Professor

Ralph H. Stearns, BS, Pennsylvania; MBA, New York University; P.E. (Mass.)-Associate 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.-Associate Professor

Robert M. Desmond, BSME, Worcester Polytechnic Institute; MSME, Ph.D., Minnesota; P.E.-Professor

Robert A. Ellson, BME, City College of New York; MSME, Ph.D., Rochester, P.E.-Associate Professor

Amtabha Ghosh, B.Tech., M.Tech., Indian Institute of Technology, India; Ph.D., Mississippi State University-Visiting Assistant Professor

Charles W. Haines, AB, Earlham; MS, Ph.D., Rensselaer Polytechnic Institute; Mathematics and Mechanical Engineering-Associate Professor

William F. Halblieb, BSGE, Massachusetts Institute of Technology; MSME, Rochester, Ph.D., Cornell; P.E.-Professor

Richard B. Hetnarski, MSME, Gdansk Technical University; MS Warsaw University; Dr. Tech. Sci., Polish Academy of Sciences; P.E.-Professor

Ray C. Johnson, MS, BS, Rochester; P.E-Gleason Professor of Mechanical Engineering

Satish Kandlikar, BE, Marathwada University, India; M.Tech., Ph.D., Indian Institute of Technology, India-Visiting Assistant Professor

Bhalchandra V. Karlekar, BEME, College of Engineering, Baroda, India; MSME, Ph.D., Illinois State; P. E.-Professor

Richard A. Kenyon, BME, Clarkson College; MS, Cornell; Ph.D., Syracuse; P.E.-Professor

Hyun Wang Kim, BS, Seoul National University, Korea; MS, University of Michigan; Ph.D., Toledo-Visiting Assistant Professor

Douglas M. Marshall, BSEM, MSEM, West Virginia-Associate 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., Rochester-Assistant Professor

Nevile F. Rieger, BME, M. Eng. Sc., University of Melbourne; Ph.D. University of Nottingham;-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., Rochester-Associate Professor

Academic Technical Associates

Donald E. Buss-Technical Associate, Electrical Engineering Department

Kenneth R. Hood-Lecturerand Senior Technical Associate, Mechanical Engineering Department

Adjunct Faculty

John C. Bancroft, BSc., MSc., University of Calgary, Ph.D., Brigham Young University

Curtis Beck, BS, MS, Rochester Institute of Technology

Michael Branigan, BS, Rochester Institute of Technology; MSIE, Georgia Institute of Technology

David DeMarle, BS (Chemistry), Iowa State University

Dominick J. Fantauzzo, BS, MS, Rochester Institute of Technology

Grace K. Golden, BSME, University of Missouri

Ralph E. Harper, BA, Rochester; LLB, George Washington University

Robert L. Kieffer, BS, Clarkson College; MS, Syracuse

Alexander E. Martens, BSEE, Bresslaw (Germany), MSEE, University of Rochester

Robert O. Naess, BEE, Marquette University

Dinesh Shah, BSME, University of Bombay, India; MSME, Illinois; Ph.D., Syracuse

Kai Sung, BS, National Chiao Tung University, Taiwan; MS, Washington University; Ph.D., Case Western Reserve

Douglas Wiggins, BS, Rochester Institute of Technology

College of Fine and Applied Arts

Robert H. Johnston, BS, MA, Ph.D., Dean, Director, School for American Craftsmen; Professor

Peter Giopulos, BFA, M Ed., Associate Dean; Director, Art and Design; Associate Professor

Philip W. Bornarth, BAE, MAE, Art Institute of Chicago, Academic Representative, Fine Arts; Professor

Robert A. Cole, BA, MS, Maryland, Academic Representative, Foundation Studies; Assistant Professor

Gary Griffin, BA, California State University; MFA, Tyler School of Art, Temple, Academic Representative, School for American Craftsmen; Assistant Professor

Craig J. Me Art, BID, Syracuse University; MFA, Rochester Institute of Technology; Academic Representative, Environmental Design; Professor

Fred Meyer, BFA, MFA, Cranbrook Academy of Arts; Academic Representative, Graduate Studies; Professor

James Ver Hague, BS, Massachusetts Institute of Technology; MS, Rensselaer Polytechnic Institute; BA, State University of New York at Buffalo; MFA, State University of New York at Buffalo; Academic Representative, Communication Design; Associate Professor

School of Art and Design

Janet Ruby-Baird, BFA, Pratt Institute of Technology; MFA, Rochester Institute of Technology-Lecturer

Eric Bellmann, 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

Judith B. Brovitz, BA, MS, University of Rochester-Lecturer

Debra Burger, BS, State University College at Buffalo; MST, Rochester Institute of Technology-Lecturer

Susan Carter, AB, Smith College; BFA, MFA, Yale-Associate Professor

David Dickinson, Chelsea School of Art, London, England; SKHS, Oslo, Norway; MFA, Rochester Institute of Technology-Assistant Professor

William W. DuBois, BFA, Ohio University; M.Ed., Bowling Green State University-Assistant Professor

Alan Fisher, BS, Indiana University; MFA, Rochester Institute of Technology-Lecturer

Frank T. Grubbs, BS, Rochester Institute of Technology-Lecturer

Ruth E. Gutfrucht, BFA, MFA, Rochester Institute of Technology-Professor

Robert Heischman, BFA, Miami University; UCFA, Ruskin School of Art-Assistant Professor

Barbara Hodik, BD.Ed., Benedictine College; MA, New York University; Ph.D., Pennsylvania State-Associate Professor

Paul Hoogesteger, BD, University of Michigan-Lecturer

Robert M. Kahute, BFA, Syracuse University; MFA, Rochester Institute of Technology-Assistant Professor

Robert Kerr, BFA, Illinois State-Associate Professor

Charles F. Lewis, B Arch , Pratt Institute of Technology-Visiting Assistant Professor

Frederick Lipp, BFE, School of the Art Institute of Chicago; MFA, Rochester Institute of Technology-Associate Professor

Bernadette Merkel, BFA, MFA, Rochester Institute of Technology-Assistant Professor

Edward C. Miller, BFA, SUNY at Buffalo, MFA, Illinois State-Associate Professor

Ronald E. Padgham, BFA, Ohio Wesleyan; MFA, Syracuse University; Ed.D, University of Rochester- Associate Professor

R. Roger Remington, BFA, Rochester Institute of Technology; MS, University of Wisconsin; Professor

Marlene Scott, BS, SUNY at Buffalo; MFA, Michigan State-Associate Professor

Luvon Sheppard, BFA, MST, Rochester Institute of Technology-Instructor

James H. Sias, MA, Michigan State University-Assistant Professor

Bruce Sodervick, BS, Indiana State; MFA, Southern Illinois — Assistant Professor

JoanSzabla, BFA, Madonna College; MA, Catholic University of Am erica-Professor

James E. Thomas, BS, Philadelphia College of Art; MFA, Pennsylvania State-Associate Professor

Toby Thompson, BID, Syracuse; MFA, Rochester Institute of Technology-Director, Bevier Gallery, Professor

Ann VerHague, BA, BS, Rensselaer Polytechnic Institute-Lecturer

Robert Wabnitz, Diploma, Rochester Institute of Technology; Certificate, University of Rochester-Adjunct Professor

Sheila Wells, BA, California College of Arts and Crafts; MFA, Rochester Institute of Technology-Professor

Lawrence Williams, BFA, Kansas City Art Institute; MFA, Illinois State- Professor

Norman Williams, BFA, Syracuse; MS, Syracuse-Associate Professor

Stanley H. Witmeyer, Diploma, Rochester Institute of Technology; BS, SUNY at Buffalo; MFA, Syracuse-Professor Emeritus

Richard Wolf, BFA, Pratt Institute-Visiting Assistant Professor

School for American Craftsmen

Donald G. Bujnowski, BS, SUNY at Buffalo; MA, Minnesota-Professor

Hans Christensen, Diploma, National College of Arts and Crafts, Copenhagen-Charlotte Fredericks Mowris Professor in Contemporary Crafts

Amy Davison, BFA, Tufts University; MFA, Tyler School of Art-Visiting Assistant Professor

William A. Keyser, Jr., BS, Carnegie-Mellon Institute of Technology; MFA, Rochester Institute of Technology-Professor

Max L. Lenderman, BS, MS, Indiana State; MFA, Kansas-Assistant Professor

Andrew Magdanz, BS, University of Wisconsin; MA, University of Wisconsin; MFA, California College of Art & Crafts-Assistant 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-Associate Professor

Douglas E. Sigler, BFA, Rochester Institute of Technology; MFA, Rochester Institute of Technology-Associate Professor

Katarina E. Weslien, BFA, Utah State University; MFA, Cranbrook Academy of Art-Visiting Assistant Professor

College of General Studies

Mary Sullivan, BA, MA, Ph.D., Dean-Associate Professor

Dane R. Gordon, BA, BD, MA, Associate Dean-Professor

Robert E. Golden, AB, MA, Ph.D., Acting Associate Dean-Associate Professor

Elizabeth B. Croft, BA, MA, MS, Director, Criminal Justice Program-Associate Professor

Arnold J. Berman, BA, MA, MSW, Director, Social Work Program-Assistant Professor

Thomas J. O'Brien, BS, MA, Staff Chairperson, Language and Literature-Professor

Raymond H. Merritt, BA, St. Olaf College; BD, Luther Theological Seminary; MA, Ph.D., University of Minnesota-Caroline Werner Gannett Professor in the Humanities

Joanne M. Jacobs, BA, MA, Staff Chairperson, Social Science-Assistant Professor

Language and Literature staff

Samuel Abrams, AB, Brooklyn College; MA, University of Illinois-Visiting Assistant Professor

Bruce A. Austin, BA, Rider College; MS, Illinois State University at Normal-Assistant Professor

Helen Baron, BA, University of Michigan; MA, Teachers College, Columbia-Lecturer

Sarah Collins, AB, Centre College; MA, Ph.D., Indiana University-Professor

William De Ritter, BA, St. Lawrence; MA, University of Rochester-Associate Professor

Marion H. Fey, BA, Salem College; MA, University of Florida-Lecturer

Rhona Genzel, BA, City College of New York-Lecturer

Robert E. Golden, AB, University of Michigan ; MA, Ph.D., University of Rochester-Associate Professor

Josephine M. Gray, BA, Rochester; MS, SUC at Brockport-Assistant Professor

Helen Hadsinskyj, BA, University of Kharkov, Ukraine-Visiting Assistant Professor

Lakshmi Mani, BA, MA, Calcutta; MA, SUC at Geneseo; Ph.D., McGill-Professor

Stanley D. McKenzie, BS, Massachusetts Institute of Technology; MA, Ph.D., Rochester-Associate Professor

Joseph M. Nasser, BA, MA, University of Toledo; Ph.D., SUNY at Binghamton-Lecturer

Thomas J. O'Brien, BS, University of Rochester; MA, Columbia University-Professor

Katherine M. Quill, BA, Smith College; MA, Ph.D., University of Rochester-Visiting Assistant Professor

James J. Philbin, BA, Connecticut; MA, Stanford-Professor

Mark L. Price, BA, MA, Miami University-Assistant Professor

Rudolph R. Pugliese, BA, SUNY at Oneonta; MA, SUNY at Brockport - Lecturer

Shreela Ray, BA, Webster College-Lecturer

L. Robert Sanders, BA, MA, SUNY at Albany-Professor

Norris M. Shea, BA, Gannon; MA, Western Reserve-Professor

Caroline Snyder, BA, MA, Radcliffe; Ph.D., Harvard-Associate Professor

Elaine M. Spaull, BA, George Washington University; MA, Georgetown University-Lecturer

Sister Mary Sullivan, BA, Nazareth College; MA, Ph.D., University of Notre Dame-Associate Professor

U.T. Summers, AB, Vassar; MA, Radcliffe-Associate Professor

Dorothy R. Warded, BA, Wellesley College; M. Litt., Oxford University (England)-Lecturer

Jane B. Weedman, BS, Indiana University; MA, University of Dayton; Ph.D., SUNY at Buffalo-Visiting Assistant Professor

Science and Humanities staff

Rodney A. Bailey, BA, University of Connecticut; Ph.D., Washington State University-Associate Professor

Douglas R. Coffey, BFA, Denver; MA, Western Reserve-Associate Professor

Norman R. Coombs, BS, MS, Ph.D., Wisconsin-Professor

Keith Foley, B. Music, MM, Eastman School of Music-Lecturer

Dane R. Gordon, BA, MA, University of Cambridge; BD, University of London; MA, University of Rochester-Professor

Warren L. Hickman, AB, MA, Colgate University; Docteur Sciences Politiques, Graduate Institute of International Studies, University of Geneva, Switzerland-Professor

Nabil M. Kaytani, BA, American University of Beirut; MA, Ph.D., Clark University-Professor

Glenn J. Kist, AB, MA, Xavier; Ph.D., Loyola University, Chicago-Associate Professor

Stuart Leslie, BA, Carleton College; MA, Ph.D., University of Delaware-Assistant Professor

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

Linda I. Nagle, BA, University of Tampa; MA, doctoral studies, Rutgers University-Visiting Assistant Professor

Pellegrino Nazzaro, BA, P. Giannone; Ph.D., University of Naples-Professor

Marie Elena Niccolai, BS, Nazareth College; MFA, Indiana University-Lecturer

Howard Pollack, B. Music, University of Michigan; doctoral studies, Cornell University-Lecturer

John T. Sanders, BA, Purdue University; MA, Boston University; Ph.D., Boston University-Assistant Professor

David B. Suits, BA, Purdue University; MA, Ph.D., University of Waterloo-Assistant Professor

Houghton Wetherald, BA, Brown; MFA, Oberlin-Associate Professor

John A. White, BA, Ph.D., Cambridge University-Assistant Professor

Fred L. Wilson, BA, Murray State University; Ph.D., University of Kansas-Professor (temporary joint appointment with NTID)

Hans W. Zandvoort, MFA, Royal Academy of Fine Arts, The Hague-Associate Professor

Social Science staff

Louis J. Andolino, BS, Rochester Institute of Technology; MA, Kent State University-Associate Professor

Brian P. Barry, BA, St. John Fisher; MSS, Ph.D., Syracuse-Assistant Professor

Charles E. Bates, BA, University of California, San Diego; MA, University of Rochester-Lecturer

N. Evelyn Brandon, BS, MS, Howard- Associate 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-Assistant Professor

Louis R. Eltscher III, BA, Houghton; MA, American University-Associate Professor

Janet E. Farnum, BA, SUNY at Brockport; Ph.D., University of Rochester-Visiting Assistant Professor

Joseph E. Fitzpatrick, BA, M.Ed., Buffalo-Professor

Roger W. Harnish, BA, University of Rochester; MS, Ph.D., Oklahoma State-Assistant Professor

Samuel Haskell, BA, Cornell University; MA, Ph.D., University of Tennessee-Visiting Assistant Professor

Morton Isaacs, BA, Chicago, BS, MA, Columbia; Ph.D., Yeshiva-Associate 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-Assistant Professor

Hoyoung Lee, BA, Seoul National University, Korea, MA, Ph.D., Maryland-Associate Professor

Boris Mikolji, BA, University of Graz; MA, Ph.D., Western Reserve-Professor

Francena L. Miller, BS, MS, Cornell; Ph.D., Pennsylvania State-Professor

Ajit S. Sabharwal, B. Com., Delhi University; MA, University of Rochester-Assistant Professor

Julian Salisnjak, BS, Sir George Williams, Montreal; Ph.D., Alpen University, Austria-Professor

Fred W. Smith, BA, MA, Wheaton College; Ph.D., Michigan State-Professor

Michael Vernarelli, BS, University of Michigan; MA, Ph.D., SUNY at Binghamton-Assistant Professor

Criminal Justice staff

John O. Ballard, BA, MPA, Indiana University-Associate Professor

Paul Brule, BA, Wittenberg University; MA, Xavier University Graduate School-Instructor

Patricia M. Carter, BA, Muskingum College; MA, SUNY at Albany-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. Murley, BA, University of Dallas; MA, Claremont Graduate School and University Center-Assistant Professor

Charles Hales Pangburn, BS, SUNY at Empire-Lecturer

Sherry A. Widmer, BME, Ithaca College; M.Ph., University of Edinburgh-Visiting Assistant Professor

Social Work staff

Arnold J. Berman, BA, Hofstra University; MA, New York University; MSW, Syracuse University-Assistant Professor

Kijana Crawford-Adeleye, BA, Tougaloo College; MSW, Atlanta University-Assistant 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

Lawrence LoMaglio, BA, St. John Fisher College; MA, University of Rochester-Adjunct Assistant Professor

Richard Morales, BA, Michigan State University, Michigan; MA, SUC at Brockport; MSW, Syracuse University-Assistant Professor

Maureen O'Mara, BA, Douglass College-Rutgers University-Adjunct Lecturer

Marjorie R. Schmale, BS, St. Joseph College; MSS, Smith College-Adjunct 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-Lecturer

Betty Toney, BA, Pasadena Nazarene; MSW, University of California at Berkeley-Assistant Professor (joint appointment with NTID)

Adjunct Field Faculty:

Charmaine Bennett, R.N., University of Rochester. Agency: Planned Parenthood

Ann Marie Boughton, MPA, State University College of New York at Brockport. Agency: Regional Council on Aging

Nicholas Cionitti, MSW, CSW, State University of New York at Buffalo. Agency: Monroe Development Center

Lawrence Chu, MSW, Our Lady of the Lake University. Agency: Rochester Rehabilitation Center

Mary Jane Cruikshank, BA, Bucknell University; MSW, State University of New York at Buffalo. Agency: Eastside Community Center

James DiLorenzo, BA, Kent State University. Agency: New York State Division for Youth.

Craig Donaldson, MA, Michigan State University. Agency: New York State Office of Vocational Rehabilitation

Leonard S. Freedman, MSW, Boston University. Agency: Jewish Community Center

Harry H. Lang, MSW, State University of New York at Buffalo. Agency: Hillside Children's Center

Robert E. Lynch, BA, State University College of New York at Geneseo. Agency: Geneseo Migrant Center

William J. Maresca, MA, Villanova University; Ph.D., University of Missouri. Agency: New York State Division for Youth

Thomas E. McAfee, BA, St. John Fisher College. Agency: Crossroads House

Catherine C. Mitchell, BA, Emory University. Agency: Clifton Springs Hospital

Nicholas Rose, BS, MS, SUNY at Buffalo; Agency: NYS Office of Vocational Rehabilitation

Harriette Royer, BA, University of Buffalo; MA, SUNY at Oswego; Agency: NYS Office of Vocational Rehabilitation

Marilyn C. Simons, BS, State University College of New York at Brockport. Agency: Livingston County Department of Social Services

Ellen Taves, MS, University of Rochester. Agency: Planned Parenthood

Alice Williams, BA, Manchester College; MA, University of Chicago. Agency: The Genesee Hospital

College of Graphic Arts and Photography

Lothar K. Engelmann, BS, MS, Ph.D., Dean, Professor

John L. Kronenberg, BS, Associate Dean

School of Photographic Arts and Sciences administrative staff

Russell C. Kraus, BA, Ed.D., Director, School of Photographic Arts and Sciences-Associate Professor

David A Engdahl, BS, M.Ed., Associate Director, School of Photographic Arts and Sciences-Professor

Donald L. Bruening, BA, MBA, Staff Chairman, Professional Photography-Professor

Richard Floberg, BA, MS, Coordinator, Film Making and Television-Associate Professor

Ronald Francis, AB, Ph.D., Staff Chairman, Photographic Science and Instrumentation-Professor

C. James Gleason, BA, MS, Staff Chairman, Photographic Illustration-Associate Professor

John E. Karpen, BS, MFA, Coordinator, Foundation Year-Associate Professor

Mary Jane Maher, Academic Advising and Registration Coordinator

James E. McMillion, Jr., MFA, Coordinator, Photographic Processing and Finishing Management-Professor

William Roger Peterson, Associate Budget Officer

Nile R. Root, MS, Coordinator, Biomedical Photographic Comm unications-Associate Professor.

Richard D. Zakia, BS, Ed.D., Coordinator, MFA Program-Professor

School of Printing administrative staff

Mark F. Guldin, BS, MS, Ph.D., Director, School of Printing — Professor

Carol J. Johnson, BS, Assistant to the Director, School of Printing

Charles Weigand, BS, MS, SUC at Oswego, Staff Chairman, Photography-Plate-Press Division, School of Printing-Assistant Professor

Walter A. Campbell, BA, M.Ed., MBA, Staff Chairman, Management Division, School of Printing-Associate Professor

Archibald D. Provan, BS, M.Ed., Staff Chairman, Design-Composition Division, School of Printing-Associate Professor

Julius L. Silver, BA, Ph.D., Coordinator, Graduate Program, School of Printing-Professor

Linda A. Tolan, BS, Administrative Assistant School of Printing

James R. Walsh, BS, M.Ed., Coordinator, Undergraduate Program, School of Printing-Associate Professor

Graphic Arts Research Center administrative and technical staff

Herbert E. Phillips, AAS, Director, Graphic Arts Research Center

Sven Ahrenkilde, M.Sc., Research Associate

H. Brent Archer, AAS, Research Associate

Selah Bond-Editorial Consultant

Chester J. Daniels, BS, MS,-Senior Technologist

Zenon A. Elyjiw, Senior Technologist

A. Val Johnson, BS, Rochester Institute of Technology (Mechanics Institute) and M.Ed., University of Rochester, Seminar Coordinator

Patricia Knittel, BA, University of San Diego, Editor

Richard N. McAllen, AAS,-Director, Web Offset Laboratory

Milton Pearson, BS, Senior Technologist

Irving Pobboravsky, BS, MS, Senior Technologist

LilyShung, BA, SUNY Albany, MA, SUNY Albany, MLS, Geneseo-Technical Librarian

William D. Siegfried, AB, BS, MA, Director of Training

School of Photographic Arts and Sciences Faculty

Charles A. Arnold, Jr., BFA, Rhode Island School of Design; MFA, Rochester Institute of Technology-Professor

Joseph J. Benenate, BFA, Massachusetts College of Art; MST, Rochester Institute of Technology-Assistant Professor

Terry L. Bollmann, AB, Drury College; BS, Rochester Institute of Technology-Assistant Professor

Ann Brandeis, BA, Queens College; MFA, Pratt Institute of Technology-Lecturer

Donald L. Bruening, BA, Mount St. Mary's Seminary; MBA, Rochester Institute of Technology-Professor

Owen Butler, BFA, Rochester Institute of Technology-Assistant Professor

Burt H. Carroll, B.Ch., Cornell; Ph.D., Wisconsin-Professor

John F. Carson, BS, MSEE, Massachusetts Institute of Technology-Associate Professor

Guenther Cartwright, BA, University of Oregon, MFA, Buffalo-Assistant Professor

Edgar Cohen, Diploma, Rochester Institute of Technology-Lecturer

Kathleen Collins, AB, Stanford; Assistant Professor

John C. Compton, BS, MS, Rochester Institute of Technology-Associate Professor

Neil Croom, BS, State University College of Forestry; M.Ed., Syracuse-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

Walter A. Elling, BA, Un. of Rochester-Associate Professor

David A. Engdahl, BS, M.Ed., University of Rochester-Professor

Lothar K. Engelmann, Ph.D., University of Frankfurt-Professor

Richard Floberg, BA, Iowa State; MS, Boston University-Associate Professor

Ronald Francis, AB, Colby College; Ph.D., Massachusetts Institute of Technology-Professor

Michael A. Geissinger, BFA, MST, Rochester Institute of Technology-Assistant Professor

C. James Gleason, BA, Kent State; MS, Rochester Institute of Technology-Associate Professor

Edward Granger, Ph.D., University of Rochester-Lecturer

Bruce W. Grant, BA, Goddard-Instructor

Albert R. Handy, Certificate, Architectural Engineering, Pratt Institute-Associate professor

Thomas Hill, BS, Wisconsin-Adjunct Professor

Bradley T. Hindson, BA, Rutgers; MFA, Ohio State; Associate Professor

Theron T. Holden, AB, Hamilton College-Lecturer

Thomas P. Iten, BFA, MS, Rochester Institute of Technology-Associate Professor

James Jakubowski, BS, University of Rochester-Lecturer

Hugo C. Jelinek, Diploma, Commercial Academy, Prague, Czechoslovakia-Assistant 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

Russell C. Kraus, BA, William Patterson College; Ed.D, University of Massachusetts-Associate Professor

Robert B. Kushner, MS, Rochester Institute of Technology-Associate Professor

Leon LeBeau, Ph.D., University of Illinois—Adjunct Professor

Henry W. Leichtner, Master Photographer-Adjunct Professor

Howard LeVant, BS, Institute of Design, III. Inst, of Tech.-Assistant Professor

Douglass A. Lyttle, BS, Michigan State-Professor

Ellsworth McCune, BSEE, Ohio University-Lecturer

James E. McMillion, Jr., BFA, MFA, Ohio State-James E. McGhee Professor in Photographic Management

Beatrice Nettles, BFA, Florida; MFA, Illinois-Associate Professor

John Pfahl, BFA, MS, Syracuse-Associate Professor

James Reilly, BA, Franklin & 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-Associate Professor

Albert D. Rickmers, BS, Bloomsburg State; M.Ed., St. Bonaventure; MS, Rochester Institute of Technology-Professor

David J. Robertson, BFA, Pratt Institute; MA, Columbia University Teachers College-Professor

Nile R. Root, MS, Rochester Institute of Technology-Associate Professor

Jacob Ruben, MS, Rochester Institute of Technology; BS, City College of N.Y.-Lecturer

Elliott Rubenstein, BA, MA, St. John's University; MFA, Buffalo-Assistant Professor

Lawrence Scarff, AAS, Rochester Institute of Technology-Lecturer

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-Lecturer

Arnold M. Sorvari, BFA, MST, MFA, Rochester Institute of Technology-Professor

Malcolm Spaul, BS, St. Lawrence University; MFA, Rochester Institute of Technology-Lecturer

Leslie D. Stroebel, BS, Ed.D., Rochester-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-Assistant Professor

Tom Muir Wilson, BFA, Cranbrook Academy of Art; MFA, Rochester Institute of Technology-Associate Professor

Richard D. Zakia, BS, Rochester Institute of Technology, Ed.D., Rochester-Professor

School of Printing

Faculty

Bekir E. Arpag, BS, Rochester Institute of Technology-Associate Professor

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-Associate Professor

Walter R. Capell, BA, Buffalo; J D: New York Law School-Lecturer

Gary J. Corbett, BA, St. Francis College: MBA Fordham University-Instructor

W. Frederick Craig, BS, West Virginia Institute of Technology; M.Ed., Rochester-Associate Professor

Clifton T. Frazier, BS, West Virginia Institute of Technology; M.Ed., Rochester-Associate Professor

Charles Goodykoontz,BS. Rochester Institute of Technology-Lecturer

Robert G. Hacker, BS, Illinois State; MS, South Dakota State; Ph.D., Iowa-Paul and Louise Miller Professor in Newspaper Management

George Hamilton, BA, Chapman College, MBA, US International University California, Assistant Professor

Walter G. Horne, 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 J. Johnson, BS, Rochester Institute of Technology-Melbert B. Cary, Jr., Professor in Graphic Arts

Alexander S. Lawson, Diploma. Rochester Institute of Technology-Adjunct Professor and Professor Emeritus

Joseph L. Noga, BS, Connecticut; MS, Bridgeport-Associate 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-Assistant 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

Hector Sutherland, AB, Dartmouth; MA, New York University-Professor

Ruth Terry-Lecturer

Robert S. Tompkins, Composition Specialist-Assistant Professor

James R. Walsh, BS, Rochester Institute of Technology, M.Ed., Rochester-Associate Professor

Robert J. Webster, BS, SUNY at Buffalo; MS, Ball State-Associate Professor

Charles J. Weigand, BS, MS, SUC at Oswego-Assistant Professor

Hermann Zapf, Calligrapher and Type Designer-Adjunct Professor

Academic Technical Associates

David L. Dembroski-Technical Associate, School of Printing

Daniel Gramlich, Technical Associate, School of Printing

Burton Hineline, Technical Services Associate, School of Printing

John Marciniak, Technical Associate School of Printing

Rik F. Moeller, BS, Technical Associate, Facilities Coordinator, S.P.A.S.

Richard N. Norman, BS, Technical Associate, School of Photography

David P. Pankow, BA, MA, Brooklyn College, MLS, Columbia-Cary Librarian

Paul J. Rogers-Coordinator, Technical Services, School of Printing

William A. Springer, AAS, Lab Associate, S.P.A.S.

Institute

College

John F. Adams, BEE, MSEE-Acting Director, School of Engineering Technology, Professor

Jack Hollingsworth, BS, BA, MS, Ph.D.,-Director, School of Computer Science and Technology

Donna McDonough, BS, MS-Assistant to the Dean

Dennis C. Nystrom, BS, Ed.D., Dean-Professor

Harold J. Raphael, BS, MS, Ph.D-Director, Department of Packaging Science; Professor

Richard L. Rinehart, BS, MS, Ed.D.-Director, Center for Community/Junior College Relations; Professor

Clinton J. Wallington, BA, Ph.D.,-Chairman, Department of Instructional Technology; Professor

School of Computer Science and Technology

Karen Anderson, MS, Rochester Institute of Technology; BS, Georgia State University-Assistant Professor

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-Instructor

James R. Carbin, BS, SUNY at Albany; MS, Rensselaer Polytechnic Institute-Associate Professor

James A. Chmura, BS, MS, Rutgers 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-Associate Professor

John L. Ellis, Ph.D., MS, University of Toledo; MS, University of Oregon-Assistant Professor

Henry Etlinger, BS, University of Rochester, MS, Syracuse University-Assistant Professor

Jack Hollingsworth, BS, BA, University of Kansas, MS, Ph.D., University of Wisconsin-Professor

Stewart Hirshfield, MS, Ph.D., Syracuse University-Visiting Assistant Professor

Guy Johnson, BS, Pennsylvania State; MS, Syracuse-Associate Professor

Edward T. Lee, Ph.D., MS, University of California-Associate Professor

Michael J. Lutz, BS, St. John Fisher College; MS, SUNY at Buffalo-Assistant Professor

Peter Lutz, BS, St. John Fisher College; MS, Ph.D., SUNY at Buffalo-Assistant Professor

Wiley R. McKinzie, BA, University of Wichita; MS, SUNY at Buffalo-Associate Director, School of Computer Science and Technology, Associate Professor

Kenneth Reek, B. Tech., MS, Rochester Institute of Technology-Instructor

Stewart Shen, BS, Chenkung University; MA, University of Washington, Ph.D., Northwestern-Associate Professor

William Stratton, BS, MS, Hunter College; MS, SUNY at Buffalo-Assistant Professor

Daniel S. Yeung, BA, San Diego State; MA, Missouri; MBA, Rochester Institute of Technology; Ph.D., Case Western Reserve-Assistant Professor

Adjunct Faculty

Michael J. Ciaraldi, BA, Cornell University; MS, Rochester Institute of Technology

Walter Maurer, BA, University of Wisconsin, MS, Rochester Institute of Technology

Werner Schenk, BA, Los Angeles State College; MBA, University of Rochester

T.C. Soong, Ph.D., Stanford University

Career Research

Nancy Neville, MA, Fordham University; Acting Director, Career Research

School of Engineering Technology

John F. Adams, BEE, MSEE, Clarkson College, Acting Director, School of Engineering Technology; Staff Chairman, Electrical Engineering Technology-Professor

Ronald F. Amberger, BME, Rensselaer Polytechnic Institute; M.Eng., Penn State University; P.E.-Associate Professor

John Tsan-Hsiang Chen, B.Ed National Taiwan Normal University; MS Wisconsin, MS Marguette; Ph.D Missouri-Associate Professor

Thomas J. Dingman, 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-Assistant Professor

Brendon P. Feeley, Diploma, Dublin College of Technology; MS Trinity College, Dublin C. Mfg. E-Assistant Professor

Kevin M. Foley, AAS, Monroe Community College; BS, SUNY College Environmental Science and Forestry, Syracuse University-Instructor

Burton S. Garrell, BSME, Stevens Institute of Technology; MS, Michigan State-Associate Professor

Louis B. Gennaro, MS, Northeastern University; BS, U.S. Military Academy-Staff Chairman, Mechanical Engineering Technology; 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

David G. Krispinsky, MSE, BE, Youngstown University-Assistant Professor

William C. Larsen, BS, MSCE, Dartmouth; P.E.

Robert E. McGrath, Jr., MSCE, Syracuse University; P.E. - Professor

Robert A. Merrill, BS, Clarkson College; MS, Northeastern; P.E.-Associate Professor

Mark Piterman, MS, Marine Institute, Assistant Professor

James A. Reynolds, AAS, BS, Rochester Institute of Technology; MSEE, Illinois-Associate Professor

Carol A. Richardson, MSEE, Union; BSEE, University of Wyoming - Visiting Assistant Professor

John D. Sherrick, BEE, Clarkson; MSEE, Worcester Polytechnic-Visiting Assistant Professor

Martin J. Siebach, AAS, BS, Rochester Institute of Technology; MSEE, Illinois, P.E.-Associate Professor

Vincent E. Speed, BSME, MIE, University of Toledo; MBA, Rochester Institute of Technology; P.E.-Assistant Professor

John A. Stratton, AAS, BS, Rochester Institute of Technology; MS, Rensselaer Polytechnic Institute, P.E.-Acting Staff Chairman, Associate Professor

Russell L. Vesper, AAS, Fort Lewis A & M College; BSCE, MSCE, New Mexico; P.E.-Staff Chairman, Civil Engineering Technology; Associate Professor

Thomas V. Young, BA, Hunter College; MS, New York University-Associate Professor

School of Engineering Technology Adjunct Faculty

Michael J. Casey, New York City Mechanics Institute; NYC License for both Mechanical Drafting and Sheet Metal Work

Charles M. Buehler, BSEE, University of Wisconsin

Lloyd Merrill, ME, MME, Cornell University, P.E.

Gary Passero, BSCE, Iowa State University, P.E. & L.S.

Vincent J. Perricelli, MS, Engineering-Harvard University; BS, Civil Engineering-Clarkson College of Technology, P.E.

Joseph F. Santoro, MA, Ohio State University; BS, Oswego State

Elias C. Tonias, BCE, Rensselaer Polytechnic Institute, MSCE, Ohio State, P.E.

Instructional Technology

Wallace S. Goya, BA, University of Hawaii; MS, Indiana University-Assistant Professor

Clinton J. Wallington, BA, University of Missouri at Kansas City; Ph.D., University of Southern California-Professor

Ann Wiley, BA, SUNY Buffalo, MSLS, Syracuse University, Ph.D., Syracuse University-Visiting Assistant Professor

Packaging Science

A Ray Chapman, MBA, Rochester Institute of Technology; BS, Michigan State University-Assistant Professor

Daniel L. Goodwin, BS, MS, Michigan State University-Assistant Professor

Robert M. Kahute, MFA, Rochester Institute of Technology; BFA, Syracuse University-Assistant Professor

David L. Olsson, BS, MS, Ph.D., Michigan State University-Associate Professor

Harold J. Raphael, BS, Michigan State University, MS, Oregon State University, Ph.D., Michigan State University-Professor

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, Vice President, Rochester Institute of Technology

Janis L. Baader, Certificate/ Diploma, Moser Business College-Administrative Assistant to the Director

Edward Scouten, BA, University of Nebraska at Omaha, MA, Gallaudet College-Professor, History Specialist

Wendell S. Thompson, MBA, BSBA-Rochester Institute of Technology, Assistant to the Vice President, Rochester Institute of Technology

Office of Integrative Research

Ross E. Stuckless, BA, University of Toronto, MS, Gallaudet College, Ph.D., University of Pittsburgh, Professor, Director

Office of the Dean

Milo E. Bishop, BS, University of Utah, MA, University of New Mexico, Ph.D., Purdue University-Associate Professor, Dean

Ann H. Areson, BA, Allegheny College, MA, School for International Training-Director Special Projects

Barbara P. Hashmann— Administrative Assistant

James J. DeCaro, BCE, ME, SUNY at Buffalo, Ph.D., Syracuse University-Associate Professor

Kenneth T. Derr, BS, M.Ed., Ed.D., Brigham Young University, M.BA, University of California-Assistant Professor, Coordinator Instructional Development

Kathie A. Fletcher, BS, Brigham Young University-Assistant Professor, Instructional Developer

Nancy W. Streim, BA, Bryn Mawr College, MS, SUNY at Brockport-Coordinator Summer Vestibule Program

Bernadette Skobjak, Ed.D., SUNY at Buffalo, MS Ed., State University College at Buffalo, BS Ed., State University College at Buffalo

College of Business Suport Team

Daniel C. Smialek, AAS, BS, Rochester Institute of Technology-Instructor, Acting Staff Chairperson

College of Science and College of Engineering Support Team

B. Edward Cain, BA, SUNY at Binghamton, Ph.D., Syracuse University-Associate Professor, Associate Educational Specialist, Chairperson

Social Work Support Team

K. Dean Santos, BA, University of Minnesota, Duluth, MSW, San Diego State University-Assistant Professor, Staff Chairperson

College of Graphic Arts & Photography Support Team

John J. Head, Jr., BFA, Pennsylvania State University; MFA, Rochester Institute of Technology-Instructor, Staff Chairperson

College of Fine and Applied Arts Support Team

Thomas G. Raco, BFA, MFA, Rochester Institute of Technology-Associate Professor, Assistant Dean for NTID

College of General Studies Support Teams

Lawrence L. Mothersell, BS, MS, SUNY College at Geneseo-Associate Professor, Chairperson, General Education Instructional Team

Peter J. Seiler, BA, Lewis College, MA, DePaul University-Assistant Professor, Chairperson General Education Support Team

Faculty

Full listings of NTID faculty and other support staff are published in NTID Bulletins, available from NTID

College of Science

John D. Paliouras, BA, MA, Ph.D - Dean; Professor

William A. Burns, BA, MS-Associate Dean; Professor

William N. Bigler, AB, MS, Ph.D - Department Head, Clinical Sciences; Associate Professor

Paul A. Haefner, Jr., BS, MS, Ph.D.-Department Head, Biology; Professor

Earl Krakower, BS, Ph.D - Department Head, Chemistry; Professor

George T. Georgantas, AB, AM, Ph.D., Department Head, Mathematics; Associate Professor

John S. Shaw, BS, MS, Acting Department Head, Physics; Associate Professor

Edward B. Stockham, AB, Ph D - Coordinator, Health Programs, Associate Professor

Barbara R. Fox, BA, MS-Assistant to the Dean for Support Services

David A. Lamb, Operations Manager

Judy A. Witzel, AAS-Administrative Assistant

Y. Stephen Yamamoto, BS, Ph.D - Experiential Learning Coordinator

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

G. Thomas Frederick, BS, MS, Ph.D., Ohio State University-Associate Professor

Russell M. Gardner, BS, MA, California State University; Ph.D., Indiana University-Visiting Assistant Professor

Paul A. Haefner, Jr., BS, Franklin & Marshall College; MS, Ph.D., University of Delaware-Professor

M. Joseph Klingensmith, BS, Illinois State; MS, Ph.D., Michigan State-Professor

Douglas Merrill, BS, Ph.D., SUNY College of Environmental Science and Forestry, Syracuse University-Assistant Professor

Carole A. Sack, BA, Univ. Michigan; Ph.D., Michigan State-Associate Professor

Franz K. Seischab, BS, Cornell; MS, SUC at Geneseo; Ph.D., University of Syracuse-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

William N. Bigler, AB, California; MS, San Jose State; Ph.D., Colorado University-Associate Professor

Susannah Butler, BS, Michigan State, Ph.D., SUNY, Stony Brook-Visiting Assistant Professor

Robert E. Gilman, AB, Dartmouth; MS, Ph.D., Michigan-Professor

William J. Hayles, BA, Wesleyan; Ph.D., Iowa State-Professor

Kay Henzel, BS, Bucknell University; Ph.D., Ohio State University-Visiting Assistant Professor

David A. Hilborn, BS, Lafayette; Ph.D., Cornell-Associate Professor

Earl Krakower, BS, McGill; Ph.D., University of British Columbia-Professor

Edwin Lillie, BA, Dublin University; Ph.D., Queen's University (Belfast, N. Ireland)—Visiting Assistant Professor

Joseph L. Lippert, BS, South Dakota School of Mines and Technology; Ph.D., Colorado-Associate Professor

Terence C. Morrill, BS, Syracuse; MS, San Jose State; Ph.D., University of Colorado-Professor

Nina M. Sandberg, AB, Cornell; MS, Wichita; Ed.D., Florida-Associate Professor

Edward B. Stockham, AB, Ph.D., University of Pennsylvania-Associate Professor

Gerald A. Takacs, BS, University of Alberta; Ph.D., Wisconsin-Associate Professor

Vladimir Vukanovic, Ph.D., University of Belgrade-Visiting Professor

Mathematics Department

Neil Bromberg, Sc.B., Brown; MS, Ph.D., New York University-Visiting Assistant Professor

Patricia Clark, S B., S.M., Massachusetts Institute of Technology; Ph.D., University of Rochester-Visiting Assistant Professor

David M. Crystal, BS, MS, SUNY at Albany-Associate Professor

Albert Erskine, AB, MA, University of Michigan-Professor

Allen J. Friedman, BS, MS, Polytechnic Institute of Brooklyn-Assistant Professor

Lester B. Fuller, BA, Houghton; MA, Michigan; Ph.D., Michigan State-Professor

J. Richard Garnham, BS, Purdue; MS, Ohio State-Associate Professor

James A. Glasenapp, BS, Houston; MA, SUNY at Buffalo-Associate Professor

George Georgantas, AB, University of Rochester; AM, Washington University; Ph.D., SUNY at Buffalo-Associate Professor

Marvin H.J. Gruber, BS, Brooklyn; MA. John Hopkins-Associate

Laxmi Gupta, BS, MS, Agra University, India, Ph.D., SUNY Buffalo-Visiting Assistant Professor

Charles W. Haines, AB, Earlham College; MS, Ph.D., Rensselaer Polytechnic Institute-Associate Professor

Edwin T. Hoefer, BA, Elmhurst College; AM, Washington University; Ph.D., SUNY at Buffalo-Visiting Assistant Professor

Richard J. Hoerner, AB, Lebanon Valley College; Ed.M., Temple; MA, SUNY at Buffalo-Professor

Arthur Kwok, BS, MS, Queen Mary College, University of England-Visiting Assistant Professor

Edward A. Newburg, BS, MS, Purdue; Ph.D., University of Illinois-Professor

Olympia Nicodemi, BA, New York University; MA, Ph.D., University of Rochester-Visiting Assistant Professor

Richard Orr, BS, John Carroll University, MS, Case Institute of Technology-Visiting Assistant Professor

John D. Paliouras, BA, Alfred; MA, Ph.D., University of Illinois-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-Assistant Professor

Pasquale Saeva, BS, Niagara; MS, Bowling Green State; MS, Rochester Institute of Technology-Associate Professor

JackTishkoff, BS, MS, MA, University of Rochester-Associate Professor

Thomas C. Upson, BS, Tufts; MS, Rensselaer Polytechnic Institute-Associate Professor

Theordore Wilcox, BS, University of Michigan, MS, Ph.D., University of Washington-Visiting Assistant Professor

Physics Department

Hrishikesh Banerjee, BS, Presidency College; MS, University College of Science; Ph.D., Institute of Nuclear Physics, Calcutta-Professor

F. Kingsley Elder, Jr., BS, North Carolina; MS, Ph.D., Yale, Professor

David Glocker, BS, Washington & Lee University; MS, College of William and Mary; Ph.D., Clemson University-Assistant Professor

Charles A. Hewett, BS, MS, Missouri School of Mines; Ph.D., Missouri-Professor

Kannan Jagannathan, BS, University of Madras, MS, I.I.T., Madras, Ph.D., University of Rochester-Visiting Assistant Professor

Ronald E. Jodoin, BS, Worcester Polytechnic Institute, Ph.D., University of Rochester-Visiting Assistant Professor

Shukla Kapur, BS, MS, University of Delhi, Ph.D., Penn State-Visiting Assistant 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. Schwaneflugel, BA, MA, SUNY at Buffalo-Associate Professor

Earl H. Sexton, BS, Tufts; MS, Massachusetts Institute of Technology; MST, Cornell; Ph.D., SUNY at Albany-Associate Professor

John S. Shaw, BS, MS, Indiana State; Ph.D., SUNY at Albany-Associate Professor

Jerome Wagner, BS, Case Institute of Technology; MS, Ph.D., University of Wisconsin-Assistant Professor

Anne Young, BA, Bryn Mawr, MS, Ph.D., Cornell-Visiting Assistant Professor

Department of Clinical Sciences

William Bigler, AB, Acting Department Head, Professor

Lawrence N. Chessin, MD-Head, Infectious Disease Unit, The Genesee Hospital-Consultant

Biomedical Computing

William A. Burns, Acting Program Director; BA, University of Arizona; MS, Elmira-Professor

Frank K. Seischab, BS, Cornell; MS, SUC at Geneseo-Associate Professor

Clinical Chemistry

William N. Bigler, AB, California; MS, San Jose State; Ph.D., Colorado State; Program Director-Associate Professor

Clinical Faculty

Richard M. Bayer, Ph.D., Rutgers University; Rochester General Hospital

Norman P. Kubasik, Ph.D., Syracuse University, Upstate Medical Center; Genesee Hospital, Rochester, N.Y.

Royden N. Rand, BA, Cornell; MA, Ph.D., University of Buffalo; Eastman Kodak Health, Safety and Human Factors Laboratory

James D. Salvatore, MS, University of Rochester; University of Rochester

Harrison E. Sine, Jr., Ph.D., SUNY at Buffalo; The Genesee Hospital, Rochester, N.Y.

Medical Technology

William A. Burns, BA, University of Arizona; MS, Elmira-Program Director, Professor

James C. Aumer, AAS, Erie County Technical Institute; B.S., M.S., Michigan Technological University; (ASCP)-Clinical Laboratory Instructor

Clinical Faculty

Alvin J. Marx, MD, Director, School of Medical Technology, St. Mary's Hospital, Rochester, N.Y.

Edward H. Jenis, M.D., Director, School of Medical Technology, Millard Fillmore Hospital, Buffalo, N.Y.

Wanda Schreck, MT(ASCP), Coordinator, School of Medical Technology, Millard Fillmore Hospital, Buffalo, N.Y.

Janet Seeley, MT(ASCP), Education Coordinator, School of Medical Technology, Rochester General Hospital, Rochester, N.Y.

Barbara Stein, MS, MT(ASCP) Acting Education Coordinator, School of Medical Technology, St. Mary's Hospital, Rochester, N.Y.

Zymunt M. Tomkiewicz, M.D., Director, School of Medical Technology, Rochester General Hospital, Rochester, N.Y.

Nuclear Medicine Technology

Jerome Wagner, BS, Case Institute of Technology; MS, Ph.D., University of Wisconsin-Program Director, Assistant Professor

Margaret T. Jaconski, AS, RT(ARRT), NMT, Upstate Medical Center-Clinical Coordinator and Instructor

Earl H. Sexton, BS, Tufts; MS, Massachusetts Institute of Technology; MST, Cornell; Ph.D., SUNY at Albany-Associate Professor

Patricia Cooke, BS, NMT(ARRT), Rochester Institute of Technology-Assistant Clinical Coordinator and Instructor

Clinical Faculty

James Victor Baumgartner, BS, RT, NMT, RIA Specialist, Our Lady of Lourdes Memorial Hospital, Binghamton, N.Y.

Edward G. Bell, MD, Director, Department of Nuclear Medicine, Crouse-Irving Memorial Hospital, Syracuse, N.Y.

Johan P. Bonk, MD, Attending Radiologist, Community-General Hospital, Syracuse, N.Y.

Arthur Coleman, MD, Chief of Radiology, Director of Nuclear Medicine, Department of Radiology, Sisters of Charity Hospital, Buffalo, N.Y.

Margaret Corkish, RT, NMT, Supervisor, Nuclear Medicine Technology, Genesee Hospital, Rochester, N.Y.

Linda Decker, RT, NMT, Chief Technologist, Division of Nuclear Medicine, The University of Rochester Medical Center, Rochester, N.Y.

Robert M. Donati, MD, Program Director, Nuclear Medicine, St. Louis Veternas Administration Hospital, St. Louis, MO.

I

Milton H. Dunsky, MD, Acting Chief, Nuclear Medicine Service, Veterans Administration Hospital, Syracuse, N.Y.

Frederick S. Erdman, MD, Chief, Department of Radiology, F.F. Thompson Hospital, Canandaigua, N.Y.

Russell D. Esken, RT, NMT, Chief Technologist, Department of Nuclear Medicine, Veterans Administration Hospital, Syracuse, N.Y.

William Goldman, M.D , Director, Department of Nuclear Medicine, Community-General Hospital of Greater Syracuse, Syracuse, N.Y.

Linda Grasso, BS, Chief Technologist, Charles S. Wilson Memorial Hospital, Johnson City, New York

Joseph Greco, BS, MS, Assistant Supervisor, Clinical Chemistry Laboratory, The Genesee Hospital, Rochester, N.Y.

Charles A. Henry, ARRT, RT, NMT, Chief Technologist & Departmental Administrator, Crouse-Irving Memorial Hospital, Syracuse, N.Y.

David Horn, RT, NMT, Chief Nuclear Medicine Technologist, Community-General Hospital of Greater Syracuse, Syracuse, N.Y.

Baird D. Jay, MD, Chief Radiologist, Charles S. Wilson Memorial Hospital, Johnson City, N.Y.

Robert E. Knack, M.D., Director, Department of Nuclear Medicine, Our Lady of Lourdes Memorial Hospital, Binghamton, N.Y.

Anthony J. Leone, Jr., M.D., Director of Radiology, Genesee Hospital, Rochester, N.Y.

Charles L. Lewis, M.D., Chief, Radiation Oncology & Nuclear Medicine, Rochester General Hospital

Ruthann Lewis, RT, NMT, Supervisor, Nuclear Medicine Technology, Rochester General Hospital, Rochester, N.Y.

Joan Minisce, ARRT, RT, NMT, Chief Technologist, Department of Nuclear Medicine, F.F. Thompson Hospital, Canandaigua, N.Y.

Robert E. O'Mara, M.D., Professor of Radiology, Chief, Division of Nuclear Medicine, The University of Rochester Medical Center, Rochester, N.Y.

Azu Owunawanne, Ph.D., Division of Nuclear Medicine, University of Rochester Medical Center, Rochester, N.Y.

Sheila D. Rosenfeld, M.Ed., RT (NMT), Educational Coordinator, St Louis Veterans Hospital, St. Louis, MO.

Roxanne Saunders, BS, CNMT Chief Technologist, Sisters of Charity Hospital, Buffalo, N.Y.

Marsha Sundman, AS, RT, NMT, Chief Technologist, Department of Radiology, Highland Hospital, Rochester, N.Y.

Sue Tokarz, BS, RT, NMT, Chief Technologist, Department of Radiology, Sisters of Charity Hospital, Buffalo, N.Y.

Herman A. Wallinga, M.D., Staff Radiologist of Highland Hospital, Rochester, N.Y. and F.F. Thompson Hospital, Canandaigua, N.Y.

David Weber, Ph.D., Associate Professor of Radiology (Nuclear Medicine), Assistant Professor, Radiation Biology and Biophysics, The University of Rochester Medical Center, Rochester, N.Y.

George A. Wilson, M.D., Assistant Professor of Radiology, University of Rochester Medical Center, Rochester, N.Y.

Howard Wolson, BS, Biochemist, Special Determinations Laboratory, Highland Hospital, Rochester, N.Y.

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Barbara King-System Programmer

Peter F. Kulpa, BS, Rochester Institute of Technology-Sr. Systems Analyst

Carol Lindsey, BA, Keuka; MS, Rochester Institute of Technology-Sr. Software Specialist (Instructor)

Andrew W. Ludwick, BS, Rochester Institute of Technology-Programmer

Sheila Maas, AAS, Alfred State-Administrative Assistant

David B. McCandlish, BA, Johns Hopkins; MS, University of Rochester-Sr. Programmer (Instructor)

Robert R. Miller, BS, Boston College-Manager; Applications Development

Nancy Simonds—Jr. Programmer

Ronald E. Stappenbeck, BS, MS, Rochester Institute of Technology-Manager, User Services; Associate Professor

Edward B. True, BS, MS, Rochester Institute Of Technology-Manager, Technical Services

Robert C. Weeks, Jr., BA, State University of New York; MS, Rochester Institute of Technology-Sr. Systems Analyst

Stephen A. Wilkins, AAS, SUC at Morrisville; BSBA, Kansas State; MS Rochester Institute of Technology-(Assistant Professor) Supervisor, Software Support

Controller

William J. Welch, BBA, Niagara; CPA, New York-Controller

David R. Moszak, AAS, Alfred State-Assistant Controller

William J. Bianchi, BS, Rochester Institute of Technology-Staff Accountant

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David B. Caiman, BS, Rochester Institute of Technology-Budget Director

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Rosemarie Gross—Assistant Bursar

Valerie A. Liotta—Supervisor of Payroll

James C. Murphy, BS, University of Rochester-Director, Payroll/ Accounting Services

Marie Nitzman—Technical Assistant, Financial Analysis

Alina Prasauskas, BA, Rochester Institute of Technology-Staff Accountant

Richard B. Schonblom, BS, Rochester Institute of Technology-Bursar

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James M. Papero, BS, Ed.M., Rochester-Associate Director

Brenda Gumbs, BA, SUNY Oswego; MS, SUNY Albany-Compensation Administration

Leslie Berkowitz, BA, Utica College-Training Administration

Marva Tyler, BS, Chaney State-Student Employment Administration

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Physical Plant

William H. Mets, AAS, NYSU at Farmingdale; BS, U or R-Director

Lodewyk Boyon, AAS, Grotius College-Assistant Director for Energy Conservation

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Clifford E. Velte, BS, Tri-State University-Director of Physical Plant-Eisenhower Campus

Donald G. Burkhardt, ABA, Rochester Business Institute — Budget Administrator

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James L. Fox, BA, Florida State University-Director of Business Services

William H. Batcheller-Assistant Director of Business Services

Apartment Housing

Edward O. Ingerick—Manager

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Ellen Tonelli, AAS, Monroe Community College-Tradebook/ Gift Dept. Manager

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Craig A. Neal, AAS, Morrisville; BS, Oklahoma State University-Manager, Grace Watson Cafeteria

Joan M. Johnson, AAS, Morrisville; BS, Rochester Institute of Technology-Manager, Dining Commons

Stephen F. Scherer, AAS, Rochester Institute of Technology-Assistant Manager, Dining Commons

Gary Gasper, AAS, Morrisville-Manager of the Cellar, Corner Store

Ice Arena

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Lawrence Thibault—Purchasing Agent

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Edward Steffens, BS, MBA, Rochester Institute of Technology-Director

Carole Bower—Assistant Director

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D. Robert Frisina, BA, Westminster College, Fulton, Mo.; MA, Gallaudet; Ph.D., Northwestern University-Senior Vice President

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James G. Miller, BS, The Pennsylvania State University-Executive Director of Admissions and Financial Aid

E. Louis Guard, BS, SUNY at Buffalo-Director of Admissions

Beverly M. Miller, Administrative Assistant

Joan M. Barrett, BS, Rochester Institute of Technology-Assistant Director of Operations

Barbara Bell, BA, Indiana University; MS, Syracuse University-Minority Counselor

Joseph Dengler, BS, Rochester Institute of Technology-Associate Director/NTID

Peter Farrow, AB, Eisenhower College-Assistant Director/ Eisenhower

David Finney, BA, Westminster College; MA, Bowling Green State University-Associate Director

Robert French, AB, Eisenhower College; MA, Syracuse University-Admissions Coordinator/ Eisenhower

Arthur C. Friedel, BS, Rochester Institute of Technology-Assistant Director

Richard Fuller, BA, Ithaca College; MA, Bowling Green State University-Assistant Director

George C. Hedden, BA, SUNY at Buffalo-Assistant Director

Conrad Hinckley, AB, Eisenhower College-Assistant Director/ Eisenhower

Edward Lincoln, AB, Eisenhower College-Admissions Counselor

Dorothy Lowe, BS, SUNY at Buffalo; Ed.M., University of Rochester-Coordinator of Women's Projects

Pamela Neureuther, BA, SUNY at Oswego-Admissions Counselor

Alumni Affairs

Jack Smith, BA, University of Pittsburgh-Associate Vice President, Institutional Advancement

Stacy Baier, BS, Rochester Institute of Technology-Coordinator of Alumni Relations

Rosalind Hawkins, Administrative Assistant to the Director of Alumni Affairs

Communications

Jack Smith, BA, University of Pittsburgh-Associate Vice President, Institutional Advancement

Karen Beadling, BA, Antioch College-Coordinator of Publications

Ed Bouwmeester, Graphic Designer

Liz Cain, Administrative Assistant to the Associate Vice President

James Castelein, BA, SUNY at Brockport-Coordinator of Photography

Lorie Hammond, AAS, SUNY at Cobleskill; ASS, Rochester Institute of Technology-Publications Assistant

Walter Kowalik Jr., AA, Genesee Community College; BA, SUNY at Buffalo-Senior Designer

John Massey, BS, Rochester Institute of Technology-Director of Publications

William McKee, BA, Syracuse University-Assistant Director, Media Relations

Donna Mihalik, BA, Duquesne University-Communications Coordinator, Writer/Planner

Megan Neumann, AB, MLS, Indiana University-Production Assistant

Barbara Power, BA, Butler University-Communications Coordinator, Writer/Researcher

Carolyn P. Rankin, BA, University of Rochester-Director of Media Relations

Rod Reilly, AAS, Rochester Institute of Technology-Photographer

Susan Tew, BA, College of Wooster-Communications Coordinator, Writer/Researcher

A. Sue Weisler, BFA, Rochester Institute of Technology-Photographer

Lynda Whalen, BFA, Rochester Institute of Technology-Graphic Designer

Carolyn Zaroff, BA, George Washington University-Communications Coordinator, Writer/Planner

Development

Donna Lee Day, BA, MA, University of Windsor-Development Staff, Eisenhower College

Eleanor M. Hayes—Development Staff, Eisenhower College

Marlene Markwitz—Office Manager

William H. Mathews, BA, Hobart College; MA, New York University — Research Associate

Norman Miles, BA, University of Rochester; MA, Syracuse University-Director, National Development

Edward J. Moran, BA, Hillsdale College-Executive Director of Development, Eisenhower College

Peter W. Odenbach, BA, Bellarmine College-Manager, Development Operations

Albert J. Ossman, Jr., BA, MA, DSS, Syracuse University-Development Staff, Eisenhower College

John H. Potter, BA, MA, University of Missouri-Director of Planned Giving

JoAnn Thompson—Development Staff, Eisenhower College

Financial Aid

James G. Miller, BS, The Pennsylvania State University-Executive Director of Admissions and Financial Aid

Parvesh Singh, BS, Jiwaji University; MBA, University of Scranton-Director of Financial Aid

Jim Winter, BS, MS, SUNY Albany-Assistant Director of Financial Aid

Jane E. DeMallie, AA, Monroe Community College; BA, Utica College of Syracuse University; MS, SUNY Albany-Financial Aid Counselor

Molly Diem, Administrative Assistant/BEOG Coordinator

Rae Lynn C. Romano, BA, SUNY at Oswego-RIT/NTID Financial Aid Counselor

Elena Turchetti, BS, SUNY at Brockport-Financial Aid Counselor/CWSP Coordinator

Government Affairs

William H. Williams, AA, San Jose City College; BA, San Jose State University; MS, Syracuse University; Ph.D., Syracuse University-Director

Deborah M. Stendardi, BA, SUNY Cortland; MPA, SUNY Albany-Coordinator of Government Relations

Veterans Affairs

James G. Miller, BS, The Pennsylvania State University-Executive Director of Admissions and Financial Aid

Eugene F. Clark Jr., Director

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; Professor

Robert H. Minetti, BA, St. Michael's College; M.Ed., University of Vermont; Ph.D., Michigan State University-Assistant Vice President for Campus Life

Paul R. Kazmierski, BA, B.Ed., M.Ed., Duquesne; Ph.D., Syracuse-Associate Dean for Learning Development Services (Professor)

Stanley D. McKenzie, BS, Massachusetts Institute of Technology; MA, Ph.D., University of Rochester-Assistant to the Vice President for Judicial Affairs

Elaine M. Spaull, BA, George Washington University; MA, Georgetown University-Assistant to the Vice President for Student Affairs and Coordinator of Complementary Education

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Ann M. Hayes, Director of Orientation and Special Programs

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Bruce E. Proper, BS, Ithaca-Director, Physical Education, Intramurals and Recreation (Associate Professor)

Louis W. Spiotti, Jr., BS, Ithaca; MS Ed., SUNY at Brockport-Acting Director of Athletics (Assistant Professor)

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Earl W. Fuller, BS, Waynesburg College; M.Ed., Pittsburgh-Varsity Wrestling Coach, Varsity Golf Coach, (Professor)

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John P. Buckholtz, Jr., BS, SUC at Cortland-Assistant for Curriculum Planning and Development, Physical Education (Assistant Professor)

Douglas J. May, BS, SUNY at Brockport, MS, University of N. Carolina at Chapel Hill-Varsity Soccer Coach, (Assistant Professor)

William H. Nelson, BS, SUC at Brockport; MS, University of Oregon-Assistant Athletics Director for Men, Varsity Basketball Coach, (Assistant Professor)

Daryl C. Sullivan, BS, Rocheste Institute of Technology-Coordinator of Intramurals, (Assistant Professor)

Peter J. Todd, BS, SUC at Cortland-Varsity Track Coach, (Assistant Professor)

Raymond C. Bell, Trainer, (Instructor)

Janet E. Jones, BS, MS, SUNY at Brockport-Varsity Women's Track Coach, (Instructor)

Brian Mason, BS, Clarkson College-Varsity Hockey Coach, (Instructor)

Ann Nealon, Varsity Women's Tennis Coach (Instructor)

Kathy Robords, BS, SUC at Cortland-Women's Varsity Swimming Coach, Women's Varsity Softball Coach (Instructor)

Ray Rostan, BS, SUC at Cortland; MS, Ithaca College-Varsity Lacrosse Coach (Instructor)

J. Roger Dykes, Director, Sports Information

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Gaillard Ashley, BS, University of Northern Colorado; MA, University of Connecticut-Counselor, (Associate Professor)

Carolyn Buntich, BS, SUC at Broc kpo rt - Psyc ho m etrist

Laura Cann, BS, Smith; MS, SUC at Brockport-Counselor (Instructor)

Linda Garfinkel, BS, Purdue University; MA, SUC at Brockport-Psychometrist

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Rhona Genzel, BA, City College of New York-Supervisor ESOL Program

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Higher Education Opportunity Program

Charles W. Hetzel, BA, Beliot College; MS, University of Wisconsin-Director

Warren Crichlow, BS, MS Ed., SUC at Brockport-Assistant Director

Denise Riley, BA, SUC at Brockport; MA, Michigan State University-Counselor

Michael Jordon, BS, M.Ed., SUNY Brockport-Counselor

Sally Fischbeck, BA, University of Rochester-Developmental Mathematics Specialist

Residence Halls

M. Joseph Donohue, BA, MA, Michigan State University-Coordinator of Residential Life

Laurel Contomanolis, BS, SUNY Cortland; MA, Bowling Green State University-Area Complex Director

Nancy Hargrave, BS, Ithaca College; MS, Indiana University-Area Complex Director

Roseanne Judd, BA, SUNY Geneseo-Assistant Coordinator of Administrative Services

William Moore, BA, St. John Fisher; MS Ed., SUNY Brockport-Area Complex Director

Eleanor Rosenfield, BA, Ohio State University; MS, Indiana University-Program Support Specialist

William VanderClock, BA, M.Ed., University of Maine-Area Complex Director

John Weas, BA, MS, Indiana University-Residence Life Specialist

Student Health Services

Richard Perlmutter, BA, State University of New York at Buffalo; MD, University of Pennsylvania

W. Patrick Bernal, Jr., BA, University of Virginia; MD, University of Virginia School of Medicine

Joseph P. Kutchukian, BA, Columbia University; MD, Universite de Lausanne

Richard Schuster, BA, University of Pennsylvania; MD, University of Rochester

Sheila Leavitt, AB, Bowdoin College; MD, University of Rochester

Ellen Wolf, BS, MNP, University of Rochester; RN, Mount St. Mary's School of Nursing

Helen Brabant, RN, University of Rochester School of Nursing

Mary Hansen, BS, MS, University of .Rochester; RN, Rochester General Kbspital School of Nursing

Elizabeth Ames, MS, University of Rochester; BS, Stanford University-Nurse Practitioner

Julie Leonardo, BSN, University of Rochester; MSN, University of Rochester-Nurse Practitioner

Keith Delano, AAS, Rochester Institute of Technology-Certified Emergency Medical Technician

Records and Institutional Research

George E.D. Brady, BA, Ed.M., University of Buffalo-Dean

Faculty and Staff Emeriti

Hans J. Barschel, Professor Emeritus, Art and Design

Harold J. Brennan, Dean Emeritus, College of Fine arid Applied Arts

Harold J. Brodie, Professor Emeritus, Mechanical Engineering

Mary E. Burnet, Professor Emeritus, Business Administration

Murray A. Cayley, Chaplain Emeritus, Student Personnel Services

Frank A. Clement, Professor Emeritus, General Studies

Warren C. Davis, Professor Emeritus, General Studies

Silvio DeCristofaro, Professor Emeritus, College of Continuing Education

Mark Ellingson, President Emeritus

Rose K. Fewster, Associate Professor Emeritus, Business Administration

A. Frank Geist, Associate Professor Emeritus, Mechanical Engineering

Mykola Hadsinskyj, Professor Emeritus, Physics

Sherman Hagberg, Professor Emeritus, Mechanical Engineering

Frances H. Hamblin, Professor Emeritus, General Studies

Edwin O. Hennick, Associate Professor Emeritus, General Studies

Kenneth C. Hickman, Director Emeritus, Distillation Laboratory

Edwina B. Hogadone, Dean Emeritus, College of Business

Georgie C. Hoke, Department Head Emeritus, Food Administration

Clayton E. Hughes, Professor Emeritus, General Studies

Charles W. Hunt, Associate Professor Emeritus, Printing

Marion L'Amoreaux, Associate Professor Emeritus, Reading and Study Clinic

Alexander S. Lawson, Professor Emeritus, Printing

George H. Lecain, Professor Emeritus, Mechanical Engineering

Earle M. Morecock, Dean Emeritus, College of Applied Science

Russell A. Norton, Professor Emeritus, College of Continuing Education

Egidio Papa, Assistant Professor Emeritus, General Studies

Robert D. Pease, Dean Emeritus, College of Continuing Education

Donald L. Ritchie, Professor Emeritus, Printing

Donald C. Robinson, Department Head Emeritus, Electrical Engineering

Paul Schuleshko, Professor Emeritus, Mechanical Engineering

Gerhard Schumann, Professor Emeritus, Photographic Arts and Sciences

Leo F. Smith, Vice President Emeritus, Academic Administration

Vernon R. Titus, Professor Emeritus, Management

Hollis N. Todd, Professor Emeritus, Photographic Arts and Sciences

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

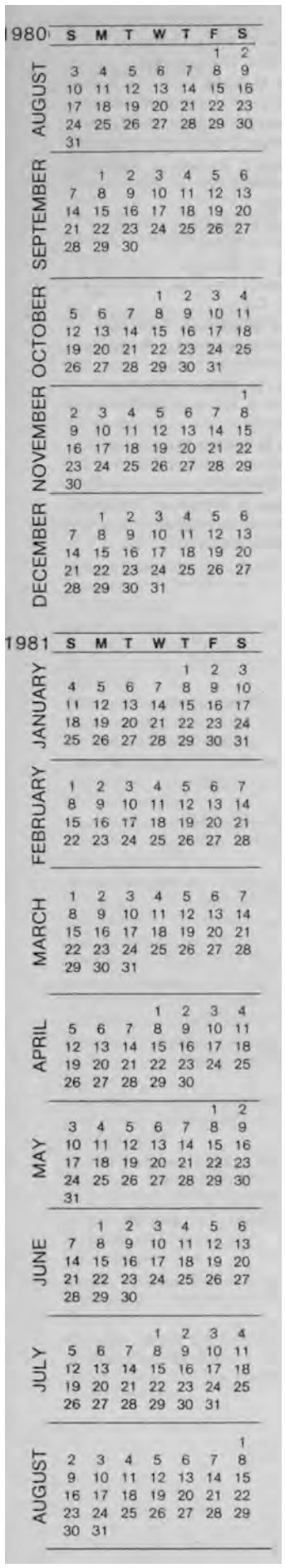
Frans Wiidenhain, Professor Emeritus, School for American Craftsmen

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

1980-1981 Institute Calendar



Fall Quarter 1980-81	To Aug. 15	CCE Mail-In Registration for Fall
	To Aug. 29	CCE Walk-In Registration for Fall
	September 2, 3	CCE Open Registration for Fall
	September 3	Move-In Day-New Resident Students
	September 3-7	Orientation for New Students
	September 5	New Student Registration, Day College
	September 5, 6	Graduate Student Registration
	September 6	Returning Student Registration, Day College
	September 8	Non-Matriculated Student Day College Registration
	September 8	Classes Begin-Dayand CCE
	September 9	Physical Education Registration
	November 14	Last Day of Classes (Day College)
	Nov. 17, 18, 19, 20	Exam Week
	November 22	Last Day of Classes (CCE)
	November 23-29	Fall/Winter Break
Winter Quarter 1980-81	Oct. 27-Nov. 7	CCE Mail-In Registration for Winter
	Oct. 27-Nov. 18	CCE Walk-In Registration for Winter
	November 24, 25	CCE Open Registration for Winter
	December 1	Day College Registration (Undergraduate and Graduate)
	December 1	First Day of Classes (CCE)
	December 2	Non-Matriculated Student Day College Registration
	December 2	First Day of Classes (Day College)
	December 3	Physical Education Registration
	December 20	Last Day of Classes Before Christmas Break
	January 5	Classes Resume After Christmas Break
	February 3	Teaching Effectiveness Conference (No Day College Classes)
	February 24	Last Day of Classes (Day College)
	Feb. 25, 26, 27, 28	Exam Week
	February 28	Last Day of Classes (CCE)
	March 1-8	Winter/Spring Break
Spring Quarter 1980-81	February 2-13	CCE Mail-In Registration for Spring
	February 2-27	CCE Walk-In Registration for Spring
	March 3, 4	CCE Open Registration for Spring
	March 9	Day College Registration (Undergraduate and Graduate)
	March 9	First Day of Classes (CCE)
	March 10	Non-Matriculated Student Day College Registration
	March 10	First Day of Classes (Day College)
	March 11	Physical Education Registration
	May 18	Last Day of Classes (Day College)
	May 19, 20, 21,22	Exam Week
	May 23	Last Day of Classes (CCE)
	May 23	Commencement
	May 24-31	Spring/Summer Break
Summer Quarter 1980-81	Apr. 27-May 8	CCE Mail-In Registration for Summer
	Apr. 27-May 22	CCE Walk-In Registration for Summer
	May 26-27	CCE Open Registration for Summer
	June 1	Day College Registration (Undergraduate and Graduate)
	June 1	First Day of Classes (CCE)
	June 2	Non-Matriculated Student Day College Registration
	June 2	First Day of Classes (Day College)
	June 3	Physical Education Registration
	July 3, 4	Holiday (No Classes)
	August 11	Last Day of Classes (Day College)
	August 12, 13, 14	Exam Week
	August 15	Last Day of Classes (CCE)

Dates of various Summer Sessions to be announced.

REGISTRATION SCHEDULE FOR DAY COLLEGE-1980-1981

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

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F.G	4:00	11:00	9:30	11:30	T.U.V	1:00	4:00	2:30	10:00
H, I, J	8:30	1:00	10:00	8:30	W, X, Y, Z	1:30	8:30	3:00	10:30
K, L	9:00	1:30	10:30	8:30					