

Record enrollment expected in RIT's School of Printing

The first day of classes of the 1967-68 academic year, September 28 will record the largest number of students in the School of Printing's history. Four hundred fifty students will be studying for a career in the graphic arts industry.

This will put the School at full capacity for its present downtown facili-

ties. One hundred and fifty new students will be coming into the program. Of this number 100 will be entering with no previous college work. The remaining 50 new students will be arriving at RIT from printing programs in two-year schools such as New York City Commu-

nity College, Voorhees Technical Institute, and Miami-Dade Junior College. It will take these students approximately two years to complete the work for their Bachelor of Science degrees.

Other students come from all parts of the academic world as the result of

knowledge of the potential in a graphic arts career.

The entering student of 1967 will be in a unique position to be a part of the move from a downtown location to a brand new, modern learning center at RIT's new \$54,000,000 campus.

Reporter

serving the students, faculty and staff of the rochester institute of technology

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School of Printing's technical laboratories include most modern equipment for training young men and women for positions in management, technical, production, and journalism areas of the graphic arts industry.

At RIT

School of Printing has unique program

The School of Printing at Rochester Institute of Technology is one of the few colleges 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 basic objective of the School of Printing is to prepare students for successful careers in the printing, publishing and allied industries. Programs of study are especially directed toward careers in the areas of printing technology, printing production, and printing management.

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 most important printing processes; an appreciation of the aesthetic qualities of good printing; an understanding of the appli-

(Continued on page 6)

Student may choose from four majors

The School of Printing offers four-year courses of study in General Printing, Printing Management, Journalism and Printing, and Printing Technology, all of which lead to the Bachelor of Science Degree. The degree of Associate in Applied Science is offered in each of these 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 2.00.

THE FOUR-YEAR programs prepare graduates for a wide variety of technical and management positions in the printing and allied industries. Among these are positions in administration and general

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Institute display exhibited at 35th NAPL convention

Rochester Institute of Technology is actively participating in the 35th annual convention of the National Association of Photo-Lithographers this week in Boston.

As part of the industry educational exhibit, RIT's colorful display is located

in Booth No. 278. The display was designed by Edward Coyle, assisted by Howard Green. Both are students of RIT's School of Art and Design. Photos were taken by Peter Loughnane and Richard Carpenter, public relations staff photographers.

THE BOOTH IS DESIGNED to present to convention visitors a graphic story of the Institute relative to facilities of the School of Printing and the Graphic Arts Research Center.

During the convention the booth will be manned by representatives of the college. Wearing new RIT blazers, the representatives will have available a variety of literature concerning the college, the School of Printing and the Graphic Arts Research Center.

Convention visitors are invited to stop by Booth No. 278 and visit with the RIT representatives.

AMONG THOSE FROM the Institute attending the convention are: Prof. H. H. Sutherland, director of the School of Printing; Herbert Phillips, director of the Graphic Arts Research Center; Kieth Mosley, director of Public Relations, Anthony Sears, Robert Webster, Richard McAllen, William Siegfried, Milton Nudo, Paul Hassenplug and Richard Limpert.

Alumni meet set

Concurrent with the NAPL Convention, a Dutch-treat Luncheon meeting for all RIT Alums, especially those of the School of Printing, will be held at 12:15 p.m. Thursday, September 7, in the Gardner Room of the Sheraton-Boston Hotel. Speaking will be Hector H. Sutherland, director of the School of Printing, who will report on the progress of the Institute and the new campus, as well as the printing school.

Workshops provide facts for industrial personnel

The Web Offset Newspaper Management Workshop at GARC continues to serve industry by showing supervision and management-level personnel the advantages and problems of offset lithography.

AS RAYMOND E. DIX, publisher of the *Daily Record* or Wooster, Ohio, said after attending a workshop, "Executives should attend these seminars because they will enable them to deal more intelligently with the many change-over problems they will confront." However, "Publishers who attend the web offset seminars at RIT learn that offset won't perform miracles."

By limiting each workshop to 10 participants, not only does each participant have an opportunity to become familiar with the offset process, he benefits from his contacts with other members having similar goals and ambitions. Frequently these relationships offer solutions to common problems.

WORKSHOPS HAVE AN international status with members coming from many parts of the world. England, Canada, Sweden, Brazil, Spain, Germany and the Netherlands have been recently represented, as well as management and sales personnel from most of the 50 states.

Workshops are conducted by skilled specialists from the GARC staff and RIT faculty as well as members from industry. Heading the program is William D. Siegfried, training director of GARC.

Graphic Arts Progress makes major expansion

Beginning with the January-February 1967 issue, **Graphic Arts Progress** increased its number of pages to accommodate more survey articles and more entries in the Graphic Arts Index. In recent years the changes in graphic arts have been so rapid that it has become increasingly difficult for personnel to keep up to date. **Progress** is an aid for these personnel. The survey articles present a succinct look at significant aspects of reported changes. The Graphic Arts Index is a selected list of material that has appeared in recent graphic arts literature.

A **BIMONTHLY** publication since 1954, **Progress** became a monthly with the July 1967 issue. This move provides information on a more current basis.

Progress has a small but respected circulation throughout the world. Many of its articles are reprinted in trade and company publications. Its distribution policy also provides complimentary subscriptions to libraries and educational centers.

Of great significance in the expansion program was the need for additional space for listing more entries in the Graphic Arts Index. Here, again, the change in graphic arts was reflected by the introduction of new equipment, methods and supplies. In order to handle this additional information, it was decided to use RIT's computer facilities for information storage and retrieval. This resulted in nearly doubling the number of entries normally printed in **Progress**.

IN ORDER FOR ARTICLES to be stored on a computer disc, the articles must be reviewed and keyworded. This

20 foreign students to enroll in School of Printing

The School of Printing has long been an international center for graphic arts education. Because of its modern laboratories, complete curriculum, and high quality instruction, foreign firms and governments send their personnel to Rochester for degree programs as well as special programs tailored to an individual's vocational needs.

THIS YEAR approximately twenty foreign students will be enrolled. They hail from India, Jordan, West Pakistan, Hong Kong, Thailand, Canada, Mexico, Germany, Singapore and Korea.

These foreign students return to their countries not only with knowledge of the graphic arts, but with a better understanding of the United States. Also our own students have the advantages of meeting and living with people of other countries. The experience of an education in the School of Printing is more than vocational. It helps prepare the student to be an active member of the national and international community.

means that a professional group of readers knowledgeable in graphic arts must review more than 160 periodicals that are received at the Information Service. Each article must be evaluated according to a thesaurus of keywords under which they will be keypunched on IBM cards which, in turn, are used to feed the information into a computer where it is stored according to the design of the program. When this information is needed, such as for the Graphic Arts Index, it is retrieved by using these same keywords. A printout device provides a copy of the retrieved information. Presently this printout is reduced in size and used as the copy for the Index as printed in **Graphic Arts Progress**.

70 receive degrees

Salaries reflect competition among companies for grads

June 1967 graduates from RIT's School of Printing participating in the school's recruiting program were offered from two to six positions and salaries in the \$7,800 to \$8,500 range.

This, according to Hector H. Sutherland, director, reflects the competition among companies for RIT graduates. "This competition is further emphasized by the fact more companies are beginning their recruiting earlier, some as early as December," he added.

Two-thirds of the 70-member graduating class accepted positions as a result of contacts made during recruiting sessions at RIT.

Many entered management training programs, which, according to Sutherland, is in keeping with the current trend of recruiting management trainees as opposed to recruiting for a specific job. This trend, he said, is advantageous to both the employer and recruit. Companies can develop a pool of talent and new employees can learn the total operation of the company before they must decide on a specific area of interest, he added.

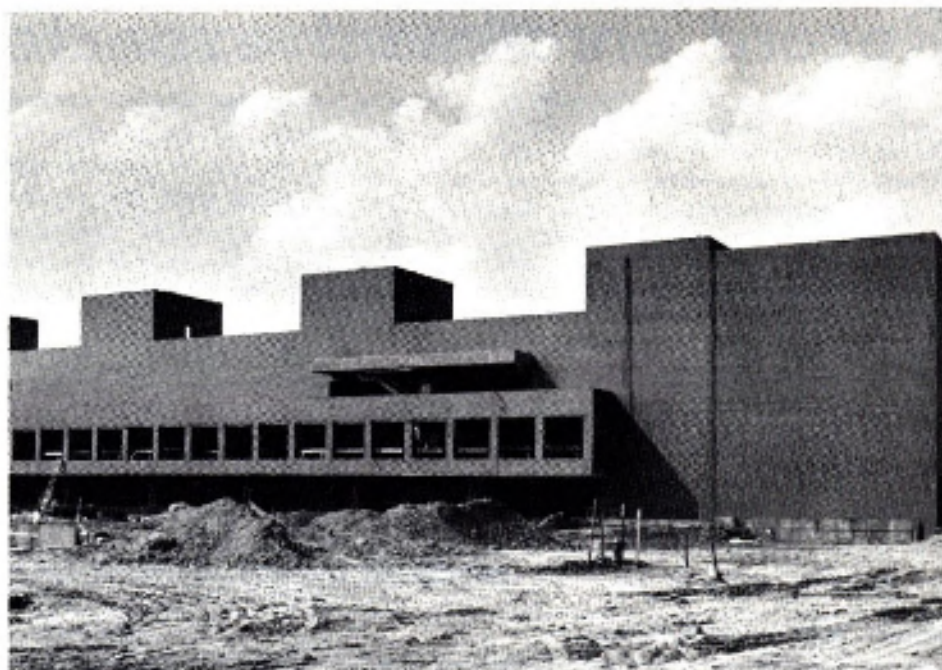
Twenty per cent of RIT's printing graduates this year will enter graduate

school in the fall, an increase over previous years. According to Sutherland, they are generally interested in very specialized areas of the graphic arts.

In keeping with the trend toward continuing education, many of this year's graduates were interested in educational programs offered by companies. "Education is becoming a more and more important fringe benefit," said Sutherland.

Positions taken by graduates represent a cross section of the printing industry. Some chose large corporations, others small family operations, and one student started his own business. Graduates can be found working for newspapers, commercial printing plants, equipment manufacturers and paper companies in a variety of capacities.

The School of Printing at RIT has 440 full-time students and a faculty of 28 professors. Bachelor of science degrees are awarded for four years of study in general printing, printing management, journalism-printing and printing technology. Students attend classes in the School's laboratories containing two million dollars worth of equipment.



Construction nears completion on Rochester Institute of Technology's new 1,300 acre campus five miles from its present downtown site. Building shown above will house the School of Printing and the School of Photographic Arts and Sciences. All facilities on the new campus will be in full use in September 1968.

Curriculum prepares students for myriad of career opportunities

Approximately 70 students graduate each year from the School of Printing, to take their place in the graphic arts industry.

From GARD to GARC

Reflecting its general expansion in size and the scope of its research, as well as to separate it from a regular teaching department at RIT, the Graphic Arts Research Department has been changed to Graphic Arts Research Center. The Research Center, the School of Printing and the School of Photography make up RIT's College of Graphic Arts and Photography.

Archer named assistant to RIT research director

H. Brent Archer has been named as assistant to the director of the Graphic Arts Research Center at RIT, according to Herbert E. Phillips, GARC director.

Serving as technology supervisor at the Center, Archer recently directed the formation of a computerized information storage and retrieval system for GARC's Information Service. In his new capacity, he will serve as industry liaison to special research projects, especially in areas of reproduction process, color reproduction systems, and other color technology areas.

As director of special programs, he is also actively involved in the establishment of a research center for GARC on RIT's new campus now nearing completion.



ARCHER

The curriculum at RIT is geared to prepare the student for a myriad of career opportunities in the graphic arts.

THE SCHOOL'S ALUMNI are found in commercial printing firms such as Case-Hoyt Corporation, Colonial Press, Mack Printing Company, R. R. Donnelley & Sons, Stecher-Traung-Schmidt, Von Hoffmann Press, and many others.

The equipment and supply portion of the industry employs a large share of the school's graduates. They can be found in Mergenthaler Linotype Company, Harris-Intertype Corporation, Miehle-Dexter-Goss Corporation, Eastman Kodak Company, Xerox Corporation and Minnesota Mining and Manufacturing Company. The paper industry is represented by such names as Mead, Kleenstick, International, Scott, and Weyerhaeuser, among others.

RIT GRADUATES ARE pursuing successful careers in the magazine and newspaper field, government book publishing, and education. Alumni records show that practically all of the School's graduates remain in the industry. Within a five- to seven-year period, the number of graduates from the School of Printing each year should double.

Women enrolled

Currently there are six young women enrolled in the School of Printing. When compared to 434 men, it is a rather small percentage, but it is the largest number ever enrolled.

The girls' interest are mainly in the design and journalism areas, but they take such courses as Offset Presswork, Linotype-Intertype Composition, Offset Camerawork, Platemaking and Typography.

Although dainty and feminine, the girls can wash up a Harris 17 x 22 as well as, and sometimes better, than any man.

GARC continues to develop technology for preprinted newspaper color by lithography

Through a cooperative research program, RIT's Graphic Arts Research Center and the Peoria (Illinois) Journal-Star continue work to solve the difficulties in preprinted newspaper color.

IN THE SUMMER OF 1963 a program was designed to serve the newspaper industry by looking at the problems involved in preprinting color by web offset and to work out their solutions. Cooperative support from the Journal-Star, paper and ink suppliers would provide an opportunity to collect and evaluate data from both the preprint and the inseting operations. Since previous preprint pioneer work had been done by gravure, the RIT-Peoria program would do the preprinting on

GARC's 4-unit ATF web offset publication press with a full complement of instrument to measure and record data.

It has been found that the mechanics of preprinting advertising and editorial matter and of properly inseting it in a regular newspaper pressrun at another location using another press is not simple. This is confirmed by numerous expensive failures of commercial attempts in the field.

THE EYEMARKS, WHICH are printed on the web at GARC establishes the preprint length. The preprint length is slightly shorter than the repeat length on the Peoria Journal-Star press. This means that the web must be stretched to match the Peoria press when in-

setting the preprinted material in the pages of the Journal's Weekender. This is accomplished by an electric eye which scans the web's eyemarks and signals a vacuum mechanism to stretch the sheet by the amount required for insertion. Care must be taken in the printing operation that all of the printed pattern has the desired preprint length with an accuracy of plus or minus 0.008 inches per page.

Successful inseting depends not only upon the use of special equipment but also upon such variables as specified paper characteristics, careful shipment and storage of rolls, and pressroom humidity. Careful control of all the elements of the system, at every step in the preprinting and inseting procedure is necessary.

Herbert Phillips, director of GARC, points out that the technical level is ahead of the knowledge level. Achieving balance between the two is a major aim of the RIT-Peoria program.

Graphic Arts Research Center is laboratory for the industry

The Graphic Arts Research Center, with a full-time staff of 25 directed by Herbert E. Phillips, is unique as the world's largest college-based research center in the field of graphic arts.

IT IS THE ONLY research center in the world having a 4-unit web offset publication press equipped with instruments for industry supported research projects. Its activities extend from fundamental science and technology to applied research, seminars for industry, workshops, and the dissemination of information.

Its functions are supported and supplemented by RIT's staff and faculty in printing; photography; art and design; mechanical, electrical, and chemical engineering; and the computer center. Its research programs, many of which are confidential, are supported by major companies throughout the United States.

The RIT Reporter

Student newspaper informs; serves in learning activities

The RIT Reporter, a web-offset newspaper, is the student publication of Rochester Institute of Technology. The paper is published weekly during the school year, and is distributed free of charge to the day school student body.

The paper is unique among college publications in the use of four-color process in editorial and advertising. It is tabloid format, and runs eight and 16 page editions.

THE REPORTER, WHILE not a School of Printing project, does make use of the school's extensive composition, typesetting, and photographic facilities. The staff of the paper is made up of students from many of RIT's schools, and this year includes photography, art and design, business, as well as printing students.

Composition is done by hot metal, as well as cold type methods, including the Friden Justewriter, the Linofilm and the Fotosetter.

Makeup of the paper is done by the conventional chase makeup when hot metal is used, and reproduction proofs are pulled of the completed pages. Key-line pastcups is used for the cold type methods.

THE VARIETY OF equipment available for composition gives the student an excellent opportunity to observe the advantages of each method.

Four-color process is used in approximately one-half of the Reporter editions. Color separations are done on the school's Fairchild color-scanner, as well as by hand separation done by the staff of the Graphic Arts Research Center.

The Reporter is primarily a student newspaper whose aim is to keep the student body informed of campus news, but it is also a learning tool. The student coming to RIT is offered the opportunity to explore and experiment with the various printing processes, and through the Reporter he can see the visual results of his work.

A tribute to "Doc" Bennett

the spirit of research

At the age of 80 "Doc" Bennett still drove to work. He spoke with the acuity and knowledge of a chemical engineer, which he was. He listened with the interest and wisdom of a philosopher, which he was. And he answered questions with the patience and sensitivity of a great teacher . . . a profession he had formerly given up many years ago. But most of all, his awareness and curiosity about objects and events had developed to a kind of spirit . . . a spirit of research.

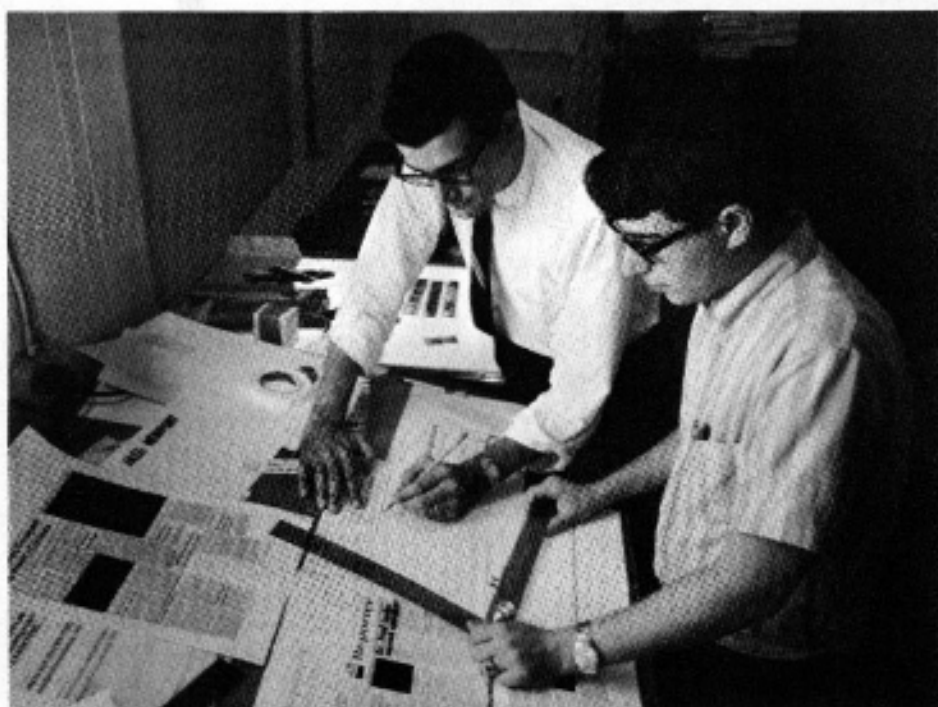
"Doc" believed that there was order to all things and to find that order was a measure of success. Certainly it was the element of discovery and application that tickled him most. Conversely he strongly reprimanded those who flagrantly disregarded simple order and good sense.

Years ago, while he was teaching at Cornell, one class of students rigged a device that would dump a quantity of water through a hole in the ceiling as he sat at his desk below it. A timing device would allow the students to witness the event with overt innocence. Through some mis-measurement, however, the water fell to the floor beside him. He observed the water on the floor, the hole in the ceiling, as well as the chagrin of several students. He was not concerned with their plot, but lectured them about their crude approach to a simple project.

When he moved to Rochester in 1933 and decided to buy some property, he found 25 acres where the natural water supply was not suitable for drinking purposes. The price of the land was reasonable since nobody wanted it. The "unusable" water challenged Doc's ability to solve problems. He bought the land, of course, and immediately designed a filtering plant. It worked so efficiently that neighbors soon asked for, and received, plans and instructions for building their own filtering equipment.

Doc was this kind of man. With degrees from Vanderbilt and Cornell, eight years of teaching experience, 30 years of self-employed commercial research and consulting activities, and 16 years of research at RIT, his pleasure continued to be discovery and application, which could be passed along to others.

In November of 1966 he collapsed at his Penfield home following his routine of enjoyable outdoor chores. While recovering at the hospital he remained in character by insisting on knowing the chemicals in his medicine. Although he continued to keep in contact with his lab at the Graphic Arts Research Center, he was scheduled formally to resume his work on a mat coating project on January 16, 1967. On January 12, Dr. Charles W. Bennett, 80, known by everyone as "Doc," died of a heart attack . . . a common man with an uncommon spirit . . . the spirit of research.



Close faculty-student relationships and small class sections stimulate faster and better learning. Prof. A. V. Johnson works with student doing page layout in the newspaper production laboratory.

RIT NEW CAMPUS PRO



(Top Left)—Administration Tower as seen from southern edge of academic complex. The College Alumni Union is to the right while the College of Business wing is connected to the left of the Tower. Just visible in the left of the picture is the eastern end of the Graphic Arts Building.

(Top Right)—View from Administration Tower's sixth floor toward ice arena-gymnasium complex and dormitories in the distance. Note the lamp-lined walkway which connects student housing and dining facilities with main academic area.

(Bottom Left)—A closeup view of the walkway from the academic complex to the student housing facilities. View here shows western portion of main dining - housing accommodations on the new campus.

(Bottom Right)—The building housing the College of Graphic Arts and Photography and the College of Fine and Applied Arts is the largest on RIT's new campus. It triples in size present campus facilities with some 421,000 square feet of floor space available for instruction and research.



GRESS

To continue to develop its services to the educational needs of its community and as a nationally recognized leader in its chosen fields, Rochester Institute of Technology is creating a \$60 million, all-new campus on a 1,300 acre site on the southern edge of the City of Rochester, New York.

This will include the most modern facilities for projected expansion in both student enrollment and educational programs. Full provision is being made for complete campus community living: in accommodations, social and recreational activities, and an expanded sports program.

Plans were drawn for an anticipated doubling of the present daytime enrollment to approximately 6,000 and evening students numbering 15,000 by the mid-70's. Present trends indicate this projection was most realistic. Full occupancy of the site is expected by the start of the 1968-69 academic year.



Summer session

Over 30 courses in printing technology and management were offered during the six-week summer session of the School of Printing. The session began on June 26 and continued through August 4.

Many of the courses provided teachers with an opportunity to earn in-service credit in the category of professional improvement and related activities, according to Prof. Joseph Bowles, program coordinator.

Prof. Noga named IGAEA secretary

Joseph L. Noga, assistant professor in RIT's School of Printing, was recently named Executive Secretary of the International Graphic Arts Education Association. Noga will be responsible for the business management of the organization and for the direction of educational programs sponsored by IGAEA. He will also serve as managing editor of the *Visual Communications Journal*.

The new secretary received his B.S. degree from Central Connecticut State College and earned an M. S. degree in Supervision and Administration of Secondary Education at the University of Bridgeport, Bridgeport, Conn.

Before joining the RIT faculty as an instructor in Photographic Reproduction in 1965, he was chairman of the Industrial Arts Department at Brien McMahon High School, Norwalk, Conn., where he taught Graphic Arts and Professional Photography. He also taught special programs at Norwalk Community College.

He has been an active member of several local and state Industrial Arts and Graphic Arts organizations. He has developed programs for Graphic Arts Workshops for teachers and has innovated new programs in the area of visual communications.

❖ School of Printing

(Continued from page 1)

of science and engineering in the graphic arts; a knowledge of theory and practice in the various aspects of management; skills in communications; and an understanding of the student's professional and general environment as a means of developing himself as a well-rounded individual and a responsible citizen.

❖ Student may

(Continued from page 1)

management, production management, sales management, estimating, cost and financial control, process and plant development, technical writing, and graphic arts research. In addition, one major prepares graduates for a variety of positions in the community newspaper and industrial publication fields.

Faculty engaged in constant self-improvement program

The faculty of the School of Printing possesses a rare combination of industry experience, academic excellence and teaching skill.

The full-time faculty of twenty-eight men is constantly engaged in a program of self-improvement. Currently Professors Craig, Frazier and Provan are completing their work on Masters degrees at the University of Rochester in the education field. Professors Guldin and Hacker are enrolled in a Ph.D. program in Mass Communications at the University of Iowa. They will receive their doctorates in the near future.

ALONG WITH FORMAL programs, members of the faculty are constantly in touch with industry on new developments in techniques and equipment. During the past year faculty have been in training at Mergenthaler, Fairchild, and representative firms in the gravure field.

John Yule joins staff as senior research scientist

John A. C. Yule has joined the staff of RIT's Graphic Arts Research Center as senior research scientist.

A former research associate with Eastman Kodak Co., Yule will work on fundamental research projects in the fields of color theory, science, specification and reproduction systems.

YULE, WHO INVENTED colored mask film and was co-inventor of pre-screened film, received a bachelor of science degree in chemistry from the Royal College of Science, London.

He is author or co-author of over 35 papers dealing primarily with color reproduction and halftone theory. He also holds a number of patents on the photographic aspects of color reproduction, color scanners and halftone screens.

Squire named director of special projects

Ralph I. Squire has joined the Graphic Arts Research Center at RIT as director of special projects.

In the newly created position, he will develop and direct the Institute's expanding activities in the area of composition.



SQUIRE

A former technical associate with the School of Printing, Squire rejoins the RIT staff following six years with Intertype Co., a division of Harris-Intertype Corp. With Intertype, he was national service manager.

ALSO EXPERIENCED in the field of photography, he served as aviation photographer in the Navy, and was manager of film processing at Dynacolor Corp., Albion, New York.

Squire, who has contributed to *Printing Production* magazine, is a member of the National Association of Service Managers and the American Society for Training and Development.



Increasingly, young women are finding challenging and excellent employment opportunities in many areas of the graphic arts. Currently six women are enrolled in the School of Printing's fulltime degree programs.

Evening College classes to begin September 20; variety of courses offered in School of Printing

Evening courses of the Institute are open to all men and women who are qualified by previous education or training. Programs leading to the Associate Degree are offered in Applied Science, Business, Industrial Management, Industrial Technology, and Photography. These programs are designed to be completed in four or five years of evening study, but must be completed within eight years.

THE DIPLOMA of the Institute is granted to students who successfully complete any one of the diploma programs. These programs normally require three to five years of study. Each diploma program is carefully planned to include the basic courses in a specialized field and is organized so that the adult student will get the maximum benefit for a minimum expenditure of time and energy.

The 1967 Evening College session begins Wednesday, September 20.

In the School of Printing the following courses are being offered:

Hand Composition, Letterpress Presswork, Linotype and Intertype Machine Maintenance, Linotype and Intertype Op-

eration, Technology of Typesetting, Typography and Letterpress Printing.

Color Separation Camerawork, Offset Camerawork, Offset Layout and Stripping, Offset Platemaking, Offset Presswork.

Estimating, Labor Relations for the Printing and Publishing Industry, Law of the Press, Paper and Printing, Production Control for Printing and Typographic Layout will also be offered.

Flexography course

A two-week survey course in flexography was given in RIT's School of Printing, July 10-21. The program was aimed at printing industry representatives and others who needed a fundamental background in flexography for sales or executive activities.

THE COURSE INCLUDED elementary principles, basic techniques, and related information in the flexographic field. The course was in charge of Prof. Donald Ritchie, with assistance from industry specialists.

ROCHESTER INSTITUTE OF TECHNOLOGY
65 Plymouth Avenue South
Rochester, New York 14614

Please send me information on the following printing programs:

..... Special programs

..... Summer special programs

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Name

Street

City Zone State.....

Due to knowledge

Computer used for storing and retrieving information

The field of graphic arts, like all industry, has experienced a flood of data and general information in the so-called information explosion. Some of this has been basic knowledge. Much of it has been information concerning some form of application to, modification of, or com-

bination with other fields of knowledge. All of it is stored in the Information Service at GARC as a service to industry and education.

HANDLING INFORMATION in the graphic arts, however, is somewhat more complicated than in other fields.

One problem arises in the transitional terminology of graphic arts as it moves from a craft to its own technology. For example, using the Library of Congress classification, the only way that some books on lithography can be classified is to list them as art. In the real world, so to speak, there is a great deal of science and technology in the lithographic process and this information should be appropriately classified under this category.

In order to handle the vast amount of information in graphic arts and to properly categorize most efficiently, the Information Service at the Graphic Arts Research Center developed a computer system called GAIN, an acronym for Graphic Arts Information Notation. Under this system information from the 160 periodicals, hard-bound books, reports, and brochures is selected and stored on computer discs. Retrieval is accomplished by a computer search which is fed to printout equipment. Obviously the usefulness of information retrieval will depend on the resourcefulness of the programming and the amount of stored information that is available.

Maximum use of the retrieval function is the purpose of the entire program. Depending on the design of the programming, many kinds of information can be quickly retrieved in many formats. GAIN can produce three major types of retrieval as well as several modified types.

● STRAIGHT FILE LISTING

The Graphic Arts Index published in *Graphic Arts Progress* is an illustration of Straight File Listing. This is a computer printout that is used as reproduction copy. It eliminates the need for typesetting and can be accomplished within a few minutes instead of days. Each entry is preceded by a numerical identification and the entries are printed out in numerical sequence. Regardless of the order in which they were stored, they are printed out under the appropriate category in the Index. It should be noted that this type of retrieval can be modified for a printout on Index Cards. These cards are compatible with

library and reference systems. A set of cards may include all entries that have been stored, or the set may include all entries that have been stored, or the set may include only specific categories as requested by the subscriber. The 3" x 5" Index Cards can be delivered with each issue of *Graphic Arts Progress* and any number of sets may be purchased.

● SELECTED KEYWORD LISTING

A second type of output allows information to be retrieved according to the keywords that were used in the storage operation. It can be seen now that keywording is an important and critical part of storage and retrieval by computer. This type of retrieval permits a literature search and printout in a manner of minutes.

● KEYWORD USAGE LISTING

A third type of retrieval will be useful for subscribers of *Progress* if they wish to bypass the use of the computer and make their own visual search of the Index. In this retrieval output all of the designated keywords will be listed alphabetically. The identifying number of all entries pertaining to the keyword will be listed under each keyword. This number is used to locate the entry in the Index which gives the name and source of the article.

The Information Service will publish this Keyword Usage Listing as a supplement to the regular Index in future issues. Also, a listing quite similar to this one will be incorporated into the annual index.

Seminar schedule announced

A full schedule of graphic arts seminars—ranging from one-day sessions to firmly-established annual events which run for several weeks—has been set for 1967-68 by the Extended Services Division of RIT.

Basically, the programs will be conducted by faculty members from the College of Graphic Arts and Photography, with other experts recruited for special phases of technical seminars.

MORE THAN 600 persons attended graphic arts seminars conducted on the campus during the past year. Preliminary indications point to a sizeable increase for this year's programs.

Programs which will be offered again this year include:

Web Offset Newspaper Management Workshops: one week programs for administrators, sales personnel, publishers, editors, engineers and technicians to familiarize themselves with the process of web offset as used for newspapers. Conducted by the RIT Graphic Arts Research Center, sessions this fall will be held October 9-13, November 6-10 and December 4-8.

Engineering Your Package into Production: a two-day seminar which covers a wide range of packaging problems and their solutions from early design consideration to re-appraisal of package performance in the field. The next seminar is scheduled of May 16-17, 1968.

Densitometry for the Graphic Arts Industries: a three-day seminar designed to develop an understanding of the use of densitometry in printing production and quality control. The next program will be held June 19-21, 1968.

FLEXOGRAPHY Short Course: a two-week summer program in flexography for representatives of the printing and allied industries. It is an introductory survey of flexography including elementary principles and basic techniques.

Introduction to Hot Metal Paste-Up:

Faculty promotions

Five members of the faculty of the School of Printing at RIT have received promotions in rank. Dr. Leo F. Smith, vice-president of Academic Affairs, has announced.

Those receiving promotions, effective at the beginning of the 1967-68 college year are:

Mark Guldin and Rufus Short to associate professor, and Clifton Frazier, Paul McKinnon and Joseph Noga, to assistant professor.

Prof. Short directs in-plant survey

A market study of the in-plant printing industry will endeavor to supply much needed information on the size, nature, and future of this rapidly developing and technically sophisticated segment of the graphic arts industry.

The study is being directed by Professor Rufus C. Short of the RIT School of Printing, and is jointly sponsored by the school and the *In-Plant Printer* magazine. It is expected that the findings of the study will be published in that magazine later this year.



SHORT

THE IN-PLANT PRINTING industry, although largely hidden from view, has grown very large and is expanding faster than the more easily recognized commercial printing and publishing industry. The industry's primary role is to reproduce visual information for transmittal throughout all kinds of organizations, and its rapid growth can be attributed to the growing complexity of these organizations and their products. Printing produced by in-plant shops is not sold, but is used internally by the parent company.

Professor Short has been a member of the faculty of the School of Printing for six years. During this time, he has taught several subjects in the management area. Prior to joining the faculty, he was employed in the commercial printing industry for ten years. He holds degrees from Williams College, Carnegie Mellon University, and the University of Rochester.

a one-day workshop designed to introduce and acquaint composing room personnel and production managers with the various techniques, applications and uses of hot metal paste-up as applied to newspaper ad makeup.

Orientation in the Graphic Arts: a two-week seminar for groups from printing and allied industries, designed to embrace the basic processes of the printing industry through lectures, discussions and demonstrations.

PAPER-INK-PRESS Workshop: a two-day seminar designed to familiarize sales personnel and technical representatives in the paper and ink fields with the web offset process and particularly with printing on coated paper with high gloss ink.

In addition, courses are offered each summer during the School of Printing summer session, and special short-term courses can be arranged throughout the year for companies interested in specific phases of the graphic arts.



Lou Heitkamper, *Tell City (Indiana) News*; Bob Smith, William Recht Co.; Wendell Orr, *Stuart (Florida) News*; and Bill Cicconetti, *Wooster (Ohio) Daily Record* listen as GARC pre-press technician Dennis Norman explains a point in platemaking.

Scholarships available

Scholarships available to students in the School of Printing number approximately 25, and range in value from \$250 to \$1100. Some of these awards may be continued beyond one year depending upon the records made by recipients.

Competitive scholarships are offered through the National Scholarship Trust Fund of the Education Council of the Graphic Arts Industry.



A pioneering facility in research and development of web offset process color printing, the Graphic Arts Research Center is constantly working on a variety of experimental projects involving innovations and new approaches, methods, and techniques to improve color printing.

GARC-Peoria newspaper color study program now in fifth year

In 1967 RIT's Graphic Arts Research Center entered the fifth year of a newspaper-color program with the Peoria (Illinois) Journal-Star. The research program is exploring and evaluating web-offset "SpectaColor" preprints for newspaper advertising and editorial matter.

In the preprinting procedure, GARC's Web-Offset Laboratory uses its ATF press to preprint high-quality, multi-colored advertising or editorial matter. After being wound into rolls, the preprinted material is delivered to the Journal-Star. The Peoria paper, by means of special equipment, inserts the material into its weekly run of the tabloid Weekender in exact page register.

AS A RESULT OF ITS research agreement with GARC, the Journal-Star became the first paper to explore preprinting by web offset. It decided to pioneer in the field in order to upgrade the quality of its editorial color and to pro-

vide advertisers with magazine-quality color.

Several ink, paper, and equipment companies, intrigued by the potential of the project for other newspapers, have cooperated in the GARC-Peoria research.

Preprints prepared by GARC have been run at Peoria at least once a week since August 15, 1963, with the record showing 99 percent success.

HOWEVER, BOTH Herbert Phillips, director of GARC, and Frank A. Green, research and production manager of the Journal-Star, point out the necessity for solving the difficulties of the process and for educating the industry about its requirements.

Since research results are available to the industry, the GARC-Peoria, Specta-Color program is proving beneficial to newspapers interested in the applications of web-offset preprinted color.

message from RIT president

On behalf of Rochester Institute of Technology, I am delighted to have this opportunity to extend warmest best wishes to the membership of the National Association of Photo Lithographers.

The Institute is pleased to have the opportunity to be represented here at the association's 35th annual convention and industry educational exhibit.

As RIT looks forward to occupancy of its new campus next year, I anticipate ever-increasing opportunities for the Institute to respond to the expanding educational and research needs of the industry.

Continued success to each of you and your organization in the years ahead.

Sincerely,
Mark Ellingson, President
Rochester Institute of Technology

in appreciation

Rochester Institute of Technology is proud to have a part in this, the 35th annual convention of the National Association of Photo-Lithographers.

As we make preparations to move to our new campus we re-affirm our desire to serve the graphic arts industry in the tradition of the past, and to accept the challenge which will come with the future.

As an institution of higher education, we feel a great deal of pride in having the opportunity to participate in this industry exhibit and convention. We extend best wishes to members of NAPL and again emphasize our belief that the knowledge that will preserve the rights and dignity of the individual can best be conveyed through the intelligent use of the printed media. And upon this premise and the occasion of this convention, we take pleasure in paying tribute to an industry which we are privileged to serve through our educational, research and information services.

We invite you to visit with us at Booth No. 278, and welcome you to see our new facilities in Rochester which will soon be completed.

Institute is a result of need for educational and cultural facilities

The Rochester Institute of Technology is a privately endowed, non-profit, gift-supported institution. Its roots go back to the founding of the Rochester Athenaeum in 1829 by a group of civic leaders who saw a need for an educational and cultural institution in the frontier village which later became the city of Rochester.

The needs of Rochester's growing industries for capable technicians and supervisors led, in 1885, to the founding of Mechanics Institute. The merger of the Rochester Athenaeum and Mechanics Institute came only six years later, as a pioneer educational effort to prepare each student for competence in both his occupation and his civic life.

THE ROCHESTER Institute of Technology, as it was renamed in 1944, has pioneered in many fields of education, including mechanical drawing, home economics, photography, printing, crafts,

and graphic arts research. Its cooperative education program was one of the first in the country.

The Institute now includes five colleges offering specialization in 12 professional or technological areas, a College of General Studies, and Graphic Arts Research Center in addition to its Evening College. Enrollment in the day school includes more than 3,500 students from 39 states and many foreign countries. The Evening College includes an enrollment of over 9,000 students, making a total of approximately 12,500 students.

RIT IS CURRENTLY developing a new and expanded campus on approximately 1,300 acres in suburban Rochester. The new facilities will provide for doubling the present enrollment in both daytime and evening divisions and for extending and strengthening the academic program. The estimated cost of this development, including additions to endowment, is sixty-three million dollars.

