



October 21 – 27, 1974

The Mini-Calculator: 15-Second Higher Math For Anyone

$$(2^{1.31}) (\sin 43^\circ) =$$

A person could solve this problem in several minutes using logarithmic and trigonometric tables, in approximately one minute using a slide rule, and in 15-20 seconds using an electronic calculator. And the calculator would be least likely to make a mistake.

That's why more and more RIT students dangle encased electronic calculators from their belts. The newer, pocket-sized calculators are fast, accurate and convenient. As their cost rises, so does their ability to perform intricate mathematical computations.

They're rapidly coming down to a price range many students seem not to consider prohibitive. The science or engineering student will spend \$169 to \$400 for a calculator to meet his needs. For the simpler mathematics requirements of a business class, a student will pay under \$100.

As the price of calculators goes lower still, there won't be much reason for a student to buy a slide rule, many professors predict.

A calculator can do more than a slide rule and more accurately. For around \$200 a person can buy a machine that adds, subtracts, multiplies and divides, computes logarithms, exponents, squares, square roots, trigonometric functions, hyperbolic functions, reciprocals, engineering notations and inverse trigonometric functions, and has storage ability.



Although no RIT instructors require that the student purchase a calculator, "the calculator has become a necessity out of sheer survival," believes Ronald Francis, associate professor of photo science.

"It's rather essential to keep up with people who have one," says Jim Fahnestock, a fourth

year photo science student.

Ken Straub, one of Jim's classmates, determined that 90 percent of the fourth year photo science class own calculators totalling \$6,900 in value. He intends to sell his nine-month-old, \$325 model for a \$795 calculator he admits is a "luxury."

"The student who uses a cal-

culator intelligently is certainly better off than the one who doesn't have one," John F. Carson, associate professor of photo science, recognizes.

"I don't know what I'd do without the calculator in statistics," says Mark Gardiner, also fourth year photo science.

Carson foresees a time when

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High School Students, Teachers To Attend Second Annual RIT Career Seminars

High school students, teachers, guidance counselors, parents, junior/community college students, and other persons interested in career selection, career-oriented academic programs and aspects of college life have been invited to attend the Second Annual Career Seminars, October 26, at RIT's Henrietta campus.

The career seminars start at 9:30 a.m. and will be conducted by RIT faculty, alumni, and professionals in industry and business. They will include workshops in the following areas of interest: accounting, audio-visual communications, biology, business administration, chemical technology, and chemistry.

Other careers that will be

described are: computer science, criminal justice, engineering technology, fine and applied arts, food administration, mathematics, medical technology and nuclear medicine technology.

Also, packaging, photography, photo marketing, photo processing, photo science, physics, printing, retailing, science and social work.

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Careers

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The purpose of the career seminars is to present pictures of job market trends and opportunities and to show what academic preparation students need to achieve specific career goals.

Don Hoppe, Dean of Admissions and REcords, said "RIT's Annual Career Seminars are of special help to students who are interested in obtaining a college education that will prepare them for the job market they will face upon graduation."

The seminars are free of charge and are open to the public.

In addition to the career workshops and guidance sessions, participants are invited to attend a football game between RIT and Rensselaer Polytechnical Institute. Admission is free.

Hundreds of people from the Rochester-area and from as far as New Jersey are expected to attend this year's career seminars event, which is held each year on the last Saturday of October.

RIT Aide Will Study Area Need For Health Workers

The Genesee region, like the rest of the nation, needs medical and allied health personnel in the primary health care delivery systems, says Dr. Edward B. Stockham.

Dr. Stockham, of Henrietta Highlands, Henrietta, will participate in a study of that need.

He recently joined the College of Science at RIT as an associate professor specializing in the allied health field.

Besides RIT's current allied health programs in medical technology, nuclear medicine technology, biomedical photographic communications, hospital dietetics, hospital management and NTID programs in medical laboratory technology and medical records, Dr. Stockham will attempt to look into the feasibility of other programs, such as the training of physicians' assistants, clinical chemistry, optometry, and respiratory therapy.

The need for allied health programs will be assessed with the help of the Genesee Region

Educational Alliance for Health Personnel.

"Because of the resources available in technical education at RIT, the Institute is capable of playing a significant role in the training of these personnel," Dr. Stockham believes.

Dr. Stockham comes to RIT after developing an innovative six-year B.S./M.D. program in family medicine at Wilkes College in Wilkes-Barre, Pa., in cooperation with Hahnemann Medical College and Hospital in Philadelphia.

He served as project director of a federal contract from the Department of Health, Education and Welfare, and developed a two-year, pre-professional health science core curriculum and formal affiliation for clinical instruction with five hospitals in the Wilkes-Barre area.

The Wilkes-Hahnemann Program in Family Medicine was developed to alleviate what was becoming a critical shortage of primary health care providers in



Stockham

northeastern Pennsylvania, Dr. Stockham says.

The only similar program in the country is at the University of Missouri Medical School at Kansas City. Dr. Stockham received his bachelor's degree in biology and his Ph.D. in chemistry from the University of Pennsylvania. His doctoral dissertation was on steroid hormones of medical interest.

He worked for three years in the pharmaceutical industry in virology and molecular biology research before returning to school to work on his doctorate.

Calculator User "Is Certainly Better Off," Says Prof

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the student will feel pressured to buy one: "As more and more students get them, the faculty will include more problems that make use of them. Ultimately, we'll arrive at a situation where the student who doesn't have one will find himself in trouble."

James A. Glasenapp, assistant professor of mathematics, assigns problems that virtually have to be done on the calculator because they're "Much more realistic." If the student doesn't own one, the College of Science provides some for loan. Other colleges do the same.

Sensitive to the competitive disadvantages of the non-owner, faculty in several disciplines have met to determine if calculators should be outlawed for examinations. The decision was usually to allow calculators, but to make the mathematics on tests simple enough that the student without

a calculator could perform it easily.

"Sometimes an instructor might feel it's more fair to let none of us use them unless all the students have them," says John F. Adams, associate professor in the School of Applied Science.

One quarter to one third of the engineering students own calculators, estimates Robert M. Desmond, head of the mechanical engineering department. Within the next few years, he expects most engineering students will buy them.

Desmond tried to arrange a mass order with a major manufacturer which he hoped would bring the unit price down to less than \$100 for a calculator sophisticated enough for scientists and engineers. He received more than 500 requests from the RIT campus, but the company didn't

make the offer.

Not all instructors are delighted about the trend to calculators.

Coenraad Bakker, assistant professor of mathematics, in the College of Science, sometimes doesn't care for calculators because the student feels he must write his answer to a decimal extension when it could be written simply. And with logarithms, where the student is expected to use a table, a calculator defeats the purpose, Bakker adds.

In the College of Business, an increasing number of students are using calculators, although 90 per cent of the time the mathematics required is simply add, subtract, multiply and divide. "This is a generation that never learned how to multiply," sighs Clifford D. Brown, associate professor.

Alexander Livingston, another associate professor of business, suggests to his accounting students that "a certain facility in doing ordinary arithmetic is worthwhile to know. There's something to having your own ability."

But students don't seem to trust their own abilities.

"The student feels more confident when he sees an answer light up," observes Richard Budynas, assistant professor of mechanical engineering.

Let the person who expects the calculator to turn him into a mathematical wizard be warned. A Calculator does not help you to understand material, says Albert Erskine, assistant professor of mathematics. "Being able to use a calculator doesn't make you a mathematician," Erskine concludes.

Grad Chairman Meyer Will Exhibit In New York Gallery

Fred Meyer, art professor and chairman of graduate studies, Rochester Institute of Technology, College of Fine and Applied Arts, is exhibiting his terra cotta and bronze sculptures at Midtown Galleries, New York City, through October 26.

Meyer, who lives in Scottsville, N.Y., has had other one-man shows at Midtown Galleries and has also exhibited at the Philadelphia Art Alliance, Everson Museum in Syracuse, Memorial Art Gallery, Rochester, and Shop One, Rochester, among others.

He has had his work reproduced on the cover of Time magazine, the New York Times magazine, and Cosmopolitan. He has sculptures at Lincoln Center, New York City; Eastland Mall, Columbus, Ohio; Marine Midland Bank, Rochester.



Meyer

In 1971, he completed two murals for the new international headquarters of Sarah Coventry, Inc. in Newark, N.J.

Meyer is showing 22 terra cottas in the Midtown Galleries exhibit, including one entitled "Jack Kennedy Dates." There are four bronzes represented.



Riley

Pro Services Now Under Two Divisions

RIT's Department of Protective Services has begun a joint relationship with the Office of Business and Finance and Student Affairs.

Formerly administrated solely through Student Affairs, the department has responsibility for security and safety on all the properties owned by RIT.

In the future, Director of Protective Services, James Riley will work with both the Vice President for Student Affairs, Fred Smith, and Vice President for Business and Finance, James Buchholz. Matters of student conduct and education will continue to be the areas of concern for Student Affairs; however, traffic and parking control, special events security, grounds and building preservation, and general campus safety will be administratively related to the Office of Business and Finance.

Homecoming Weekend II Planned By Students

They'll choose a Mr. and Ms. RIT instead of a Homecoming Queen at Student-Parents Homecoming Weekend II, scheduled for the Henrietta campus October 25, 26, 27.

Sponsored by Student Association in cooperation with College Union Board, Greek Council, Centra, and other campus organizations, Weekend II is designed as a "full weekend of activities for students and their parents," said Lisa Bleier, third year Communication Design stu-

dent who is heading the weekend's activities.

RIT's traditional Alumni Homecoming was held October 4, 5, and 6 in conjunction with dedication of the new NTID facilities.

"But it wasn't really a Homecoming," Ms. Bleier said. "There was no queen chosen, no football game, no dinner. So the students decided to have another one."

She said all students, their parents, and alumni are invited.

Carolyn Rankin Named To Public Affairs Post

Carolyn P. Rankin of 96 Ledgewood Drive, Greece, has joined the Public Affairs Division at Rochester Institute of Technology as a communications associate.

Her responsibilities include communications programs for the College of Fine and Applied Arts, the College of General Studies, the Institute College, the Division of Student Affairs, the College of Graphic Arts and Photography, the Board of Trustees and the Nathaniel Rochester Society.



Rankin

She was educated at Mt. Holyoke College in South Hadley, Mass., and the University of Rochester, where she received a bachelor of arts degree.

She was formerly at RIT as assistant director of publications in 1969-70.

Mrs. Rankin has been communications chairperson of the Greece Democratic Committee and has participated in Greece Community Redesign, the League of Women Voters, and the Greece Performing Arts Society.

She and her husband, James, have two children.

Probation, Parole System To Be Studied In Criminal Justice

Probation and parole—two topics which have generated considerable public interest in recent years—will be reviewed in an all day institute on criminal justice to be held at the Inn-On-The-Campus, Friday, October 25.

Sponsored by RIT and the New York State Probation and

Parole Officers Association, the conference is entitled, "Probation and Parole. . .critical analysis."

Prominent Washington (D.C.) attorney and author, Ronald Goldfarb, will address conference participants in the morning session. In the afternoon, Milton Rector, president of the Nation-

al Council on Crime and Delinquency, will lead discussion.

The conference, open to the public for registration, is designed to encourage an exchange of ideas regarding prisoners' rights, the effectiveness of the case-workers' role, and recidivism.

"This is the third year of the conference," says John Ballard,

director of the department of criminal justice, and we are finding that this day gives us a good chance for critical introspection."

Inquiries about the conference can be directed to John Ballard at RIT.

Events

what's happening

Monday, October 21

9 a.m.-5 p.m.—CPA's Accounting for non-profit organizations. M-2. Contact Bill Gasser at 2312.

1 p.m.—Interview tih Hallmark Carda; Printing, Mgmt & Technology. Sign up in the Job Placement Office Mezzanine CU.

1 p.m.—Interview tih Westinghouse Electric Corp.; BS & MS Electrical, Industrial and Mechanical Eng.

1 p.m.—Interview tih Wallace Business Forms; BS Bus. Admin., Printing Mgmt, Printing Tech.

2 p.m.—Soccer, RIT at Roberts Wesleyan.

5 p.m.—CUB Meeting. Alumni Room CU.

6:30 p.m.—STS Special Edition Production, Photo Bldg TV Studio, 4th floor.

8:30 p.m.—Rochester Philharmonic Concert. SUNY at Geneseo. Wadsworth Aud.

7-8 p.m.—RIT Chorus meets. Multi-purpose room.

Tuesday, October 22

1 p.m.—Interview with Mutual Benefit Life; BS & MS BA, BSW, BS Retailing, BS Accounting. Sign up in Job Placement Office, Mezzanine CU.

1 p.m.—Interview tih Hallmark Cards; Printing, Mgmt & Technology.

1 p.m.—Interview with Packaging Corp of America. BS BA, IE, Printing Mgmt. & Tech. Packaging Sci.

1-2 p.m.—Christian Science Conference. Everyone Welcome.

12 noon & 1 p.m.—"The Palace of Terror" Nickelodeon Theatre. \$.05. Ingle.

6 p.m.—Lecture "Freedom and Determinism: Skinner and His Enemies, and More" by Dr. Jame Koenen. Nazareth College Arts Center. Room 14. (limited seating) FREE.

8:15 p.m.—"Atlantic, Myth or Real," The romantic lost continent of Atlantis will be discussed by Eiler Henrickson, Prof. of Geology, University of Minn. At Memorial Art Gallery. FREE.

7 p.m.—RIT Jazz Ensemble, Multi-purpose room, CU.

Wednesday, October 23

11 a.m.—Faculty Staff Bible Study, Held weekly, College of Science Room 2254. Led by RIT faculty member. Contact L. Fuller x2516 or J. Runyon x2513.

11 a.m.—Mechanical Engineering Seminar. "Acoustic Wave Guides—sound attenuation in acoustically lined ducts" By Dr. Sung-Hwan Ko, Research Physicist, Naval Underwater Systems Center, New London, Conn. College of Engineering Room 1030.

1 p.m.—Interview for International Harvester. BS Acc., BA. Sign up in Job Placement Office.

1 p.m.—Interview for Field Enterprises Educational Corp. All Majors.

1 p.m.—Interview with Packaging Corp of America; BS BA, IE, Printing Mgmt & Tech, Packaging Sci.

4 p.m.—Soccer, RPI at RIT.

Thursday, October 24

1 p.m.—Interview with Otetiana Council, Boy Scouts of America; All Business Majors. Sign up in Job Placement Office.

1 p.m.—Interview with New York State Electric and Gas, BS EE, ME, ET.

12 noon—Women's Discussion Group, Mezzanine, CU.

2 & 8 p.m.—"Lost Horizon"—One of the most widely acclaimed films in the history of moviedom. The lavish spectacle of a lost world, the fabulous Shangri-La. Starring Ronald Coleman, Jane Wyatt. Rochester Museum and Science Center. \$1.

4:30 p.m.—Happy Hour. Mezzanine CU.

7:45 p.m.—"Siddhartha, Godspell" at Plymouth Spiritualist Church. Free drawing for portable TV. Donation \$4. Call Joanne Ollerenshaw for more info. at 244-4854.

Friday, October 25

9 a.m.-5 p.m.—CPA's, Bank Auditing, M-s. Contact Bill Gasser at 2312.

4:30 p.m.—Happy Hour, Mezzanine, CU.

Saturday, October 26

8 p.m.-Midnight—Gospel Singing Festival, Ingle Aud. Contact Herb Eaton at 275-3688.

Continuing Events

"Ores and Metals"—Exhibit, Rochester Museum and Science Center (through November 21)

"An Iriquois Village"—Rochester Museum and Science Center. A new multi-media show about the transition from archaeological digs to the construction of a diorama. (Shown daily through November 15)

"The Glass of Fashion"—Rochester Museum—Outfits from the Museum's exceptional costume collection, together with fashion dolls from the Strong Museum. (through Feb. 14)

4th Annual Tropical Fish and Decorative Aquarium Show. —Sponsored by the Rochester Aquarium Society. Midtown Mall Shopping Center (October 28-November 2)

"Faculty Collects"—An unusual exhibit of arts and crafts from he personal collections of the faculty and staff of the College of Fine and Applied Arts, RIT (Through Oct. 25)

"War of the Worlds"—Orson Well's classic radio program is rebroadcast in the Star Theatre. 7 p.m.—Strasburgh Planetarium (through October 27)

"Commercial Web Offset"—Gannett Building, All day, contact Judy Trokington at 2757. (Oct 30-Nov 11)

"Streak Photography"—College Union Exhibit. RIT faculty—Andrew Davidhazy. Through Oct. 26.

"College Union Exhibit"—John Massey—RIT Public Affair Photography. (Oct 27-Nov 2)

"Dracula, the Vampire"—Strasburgh Planetarium. "It's not camp, it's just plain gory" "A properly frightening experience." (October 31 every night except Mon & Tues through Nov. 10)

Fall Direction 1, Exhibition, Gallery East, Monroe Community College (Oct 7-27 weekdays 10 a.m. to 3 p.m.)

Through Nov. 3—Decalcomania, exploring the possibilities of ceramics and decals, Rochester Memorial Art Gallery.

Oct 21-Oct 25—Photographs by Antonio Toscano and R. Skip Kohloff—MFA Gallery, 9 a.m.-5 p.m.

Oct 19-31—"The Haunted House" sponsored by Junior League—Monroe County Fairgrounds. Weekdays 3-8 p.m., Sat & Sun 10 a.m.-8 p.m., \$.60.

Oct 15-Nov 8—Nancy Hanger, Embroidered paintings. Wallace Library Gallery.

News and Events is published every Friday during the academic year by Rochester Institute of Technology and distributed free of charge to the Institute community.

Items for publication should be received the Friday preceding publication.

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