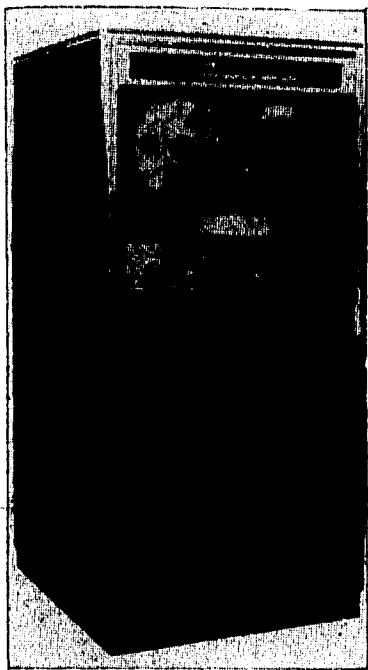


## Computer To Debut In March; Plan Programming Class

By MEL PELL

The College has purchased a powerful new IBM digital computer to be housed in rooms two, three, four, and five of Steinman Hall. Delivery of the computer, the IBM 7040, is scheduled for this February, and it will be operational by March. The computer complex, consisting of a central processing unit and twelve auxiliary units, lists for \$760,000. Prof. Ming Pei (CE) has been named Computation Center chief, and Prof. Demos Eitzer (EE) will be assistant chief.

Use of the computer will be open to all qualified teachers and students of the College. Several lecture series on programming the 7040 are planned for this term. The first cycle will be given successive Wednesdays 3:00-4:30 from October 16 through November 13. The second cycle, still tentative, will be on Thursdays 3:00-4:30 November 14 through December 19. Prof. Eitzer and Prof. Donald Brandt (CE) will conduct the respective lectures. The lecture will cover the basic principles of computer programming through use of FORTRAN (i.e. formula translation) language. Detailed explanations will be given on the use of key punches, card deck make-up and so forth in order to enable the student to prepare problems for solution by the computer. The lectures will be held in Steinman 12, and no advance registration or formal enrollment is necessary. Arrangements have also been made with IBM to give lectures for qualified persons on advanced programming of the 7040. Those taking the lecture



Magnetic Tape Unit

series this term will be able to have their sample programs run on a 7040 unit at the IBM center downtown.

Because the sensitive computer (Continued on Page 3)

## HKN Gives EE Seniors 'Special Consideration'

Eta Kappa Nu, the electrical engineering honor society, has recently provided a new admission privilege for graduating seniors. This is "Special Consideration" for certain seniors who have never been invited to pledge HKN because of their failure to attain a "B" average in their EE courses.

Under the condition of Special Consideration, a senior must be in the top third of his class; he must also give evidence that he has promise of becoming an outstanding electrical engineer. Prospective candidates who feel that they meet these two requirements must demonstrate that they do in a letter which is to be submitted to HKN.

The letter should include the following information: 1) A record of the candidate's extra-curricular activities, both on and off campus; any office or position held, including dates; details of any outstanding or original contributions made. 2) An explanation of the candidate's reasons for believing that he will become an outstanding electrical engineer and therefore merits the special consideration. 3) Any other in-

formation which the candidate feels is pertinent, such as outstanding engineering work, publications made, or honors won.

These letters must be placed in the Eta Kappa Nu mailbox (sixth floor of Steinman Hall) by Wednesday, October 16.

The requirements for admission to the College's chapter of HKN are stricter than those of the society's national organization. The national requirements are that a senior must be in the top third of his class. The CCNY chapter requires a senior to be in the top third of his class and to have an index of 1.0 in EE courses. EE juniors at the College must have an EE index of 1.2.

Bob Levin, president of HKN explained that the reason for the more rigorous requirements is probably the relatively great size of the EE graduating class. The College graduates approximately 250 electrical engineers each year. In the junior and senior classes there are therefore about 500 students. One-third of this is quite large and unlikely number for the membership of an honor society.

## Lounge to Replace Storeroom; Proposed Bookstore Scrapped

By RICHARD ROSENFELD

All plans for a bookstore on North Campus are apparently dead. The proposed site for the store, the R.O.T.C. storeroom in Shepard Hall, will instead be remodeled to serve as a student lounge.

In the face of the many rumors concerning the use of the soon-to-be-vacated storeroom Prof. Albert D'Andrea (Art) made known the plans for a lounge and stated that "There are no plans to extend the bookstore." Prof. D'Andrea is in charge of building planning at the college.

President Gallagher confirmed this and added that the lounge

will be part of a complex to be remodeled, including Knittle Lounge and the Shepard cafeteria. He stated that bookstore plans were dropped because the administration felt that lounge and study facilities are more important than a bookstore, on North Campus. President Gallagher stressed the lack of available space.



President Gallagher

Mr. Ronald Garrettson bookstore manager stated that he could not understand the "brush-off" given him by the administration. "First I was told that the storeroom was to be used for a computer. Then I was informed of a plan to make a fraternity room for I.F.C. use, and now plans for a lounge."

Mr. Garrettson had proposed a combination lounge — bookstore which he noted would be built by the bookstore, saving the College nearly \$20,000. "I even had the approval of Mr. Zweifach, Business Manager of City College," he explained. In reference to a combination store-lounge, Pres. Gallagher said that he "doubted the feasibility of such a plan."

Mr. Garrettson said he urges student action to establish a North Campus store, but would not elaborate stating "I never mix in student politics."

When questioned, Pres. Gallagher said that the administration had not received any student requests for a bookstore recently although in the past Tech Council had written letters to this effect. Dean Willard Blaesser, the recipient of these requests, was not available for comment. Mr. Garrettson previously stated that he had received over 300 requests from students for a North Campus outlet.

were Drafting Eight and 108 — neither, it seems, being essential for the "new" engineer — while Drafting or Graphics Seven remains.

The addition of six credits of electives to be chosen from the humanities and social sciences was a change that many felt long overdue. In fact, it was this addition that probably evoked the loudest response from a generally taciturn engineering student body. While some students saw no practical necessity in a humanities elective, others viewed the change quite differently. For the majority it was a chance like the liberal arts students — to explore in earnest or casually some latent

(Continued on Page 4)

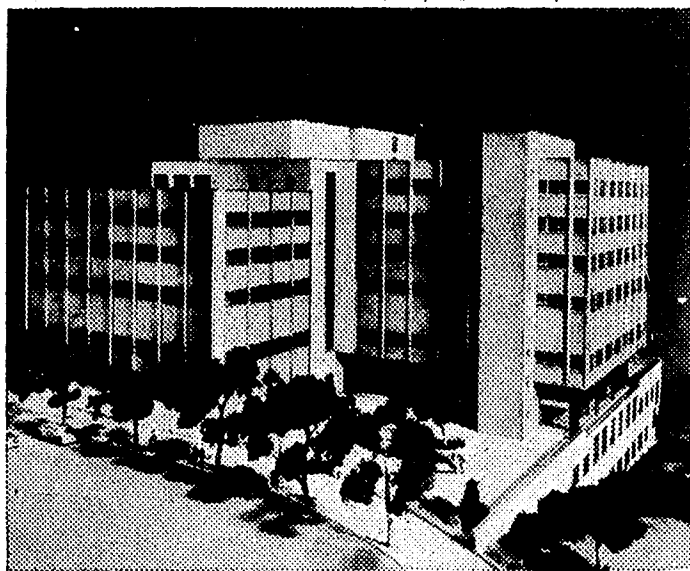
## Start of a New Era

Trend of the Future Is Set

By Ph.D's and New Tech Building

By MARTIN MILLER

If you're an engineer and quite naturally obsessed with tangibles and results, then try to evaluate this unique experience in light of the results you've obtained from time proved formulas: It's desired to have a Ph.D. curriculum approved by the State Regents, an expanded research program



"Start of a new era"

set in motion, and an added attraction for new faculty members. The solution, containing one term, comes in the form of a \$9,000,000 structure called Steinman Hall. It works, and it has happened at City College.

"The Ph.D. program and the new building," according to Dean Allan of the School of Engineering and Architecture, "is the start of a new era." But, in actuality, the start of a new era, encompassing every facet of engineering study, really got under way two years ago.

In 1961 the course content of the chemical, civil, electrical, and mechanical engineering courses was realigned in favor of the pure sciences. The trend in other schools (Yale, Princeton, etc.), as at City College, has invariably been away from the applied aspect of engineering and the more basic or fundamental approach. The accelerated pace, notably since W.W.2, of research and development in industry has created a demand for the engineer well versed in the fundamentals of his discipline. As Dean Allan said:

"The store of knowledge in science, engineering science, and technology has been growing so rapidly that in certain fields words are spoken in the effect, that if it works it's obsolete."

In response to this demand the following non-engineering courses were added to the curriculum: Mathematics 91, 92, and 93 (only electrical engineers are required to take 93); Physics 112-Analytic Mechanics, Physics 119-Atomic Properties of Matter, and Physics 120-Electric and Magnetic Properties of Materials. Courses given by the various engineering departments, where applicable, were reshaped and reevaluated with the purpose of weeding out extraneous and obsolete material. Again, some courses were merely dropped while others were added, and many courses were carried through without change. Two of the studies to fall by the wayside



# TECH NEWS

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## Graduating Seniors

You are urged to attend employment orientation meetings according to the following schedule:

**FALL SEMESTER — JANUARY 1964 GRADUATES — Engineering & Science, Thursday, October 3 at noon, Townsend Harris Auditorium.**

**Evening Students (all degrees) — Tuesday, October 8 at 6 p.m. — Finley, Room 217.**

**Liberal Arts — Thursday, October 10 at noon, Finley, Room 217.**

**SPRING SEMESTER — JUNE AND AUGUST 1964 GRADUATES — Engineering & Science, Thursday, December 5 at noon, Townsend Harris Auditorium.**

**Evening Students (all degrees) — Tuesday, December 10 at 6 p.m. — Finley, Room 217.**

**Liberal Arts — Thursday, December 12 at noon, Finley, Room 217.**

## ROTC Gets Rank Changes, New Caps

For some of us it's just another term, but for the ROTC it's a term of change. From the exterior, that is, a non-ROTCer's point of view only a few visible changes can be seen. The most obvious perhaps, is the new garrison caps which have been issued to the basic course cadets while the juniors and seniors retain their service caps.

Many changes in ranks and positions for the cadets were instituted this term. The changes are the ideas of the ROTC's relatively new Commanding Officer (less than 1 year in command), Lt. Col. P. F. Martow, who has made more openings for staff officers. Under the new program Advanced Course cadets, those in their last 2 years, will be given the positions of sergeants and those cadets who excel at summer

camp will be promoted to any of the various cadet officer ranks. The difference is in the lack of sergeants to be found in the first 2 years.

This past summer over 100 cadets from CCNY spent 6 weeks of drill and training in an attempt to become better future officers. The corps' new cadet commander is C. Colonel Allan Futernick, '64, a Military Science major who is an active member in the advanced course honor society of Scabbard and Blade, a member of Kappa Phi Omega and past member of Sgt. Kelley championship Rifle team.

This term also brought with it three new officers and a sergeant. They are Captains: Metalios and Blazes, Lt. Gatanas (a CCNY graduate), and M/Sgt. Reed.

—Heymach



**Pardon me if I sound as if the executive position I've landed deals with the whole future of the world.**



**It does.**

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As an Air Force officer, you'll be a leader on the Aerospace Team—with good pay, a 30-day paid vacation each year, educational opportunities.

How can you get started? For many, the best way is through Air Force ROTC. But if you missed out on AFROTC, or if there's no unit on your campus, you can still apply for Air Force Officer Training School. This three-month course leads to a commission as a second lieutenant in the United States Air Force.

For more information about Air Force OTS, see your local Air Force representative.

**U. S. Air Force**

## Join Tech News

A new year in school will bring new experiences for everyone, especially freshmen. The area of extracurricular activities is where many of these will be found. Extracurricular activities are an important part of college life. They add the fullness which can make college different from a mere continuation of High School. Although often labelled a "subway school," the College still offers many activities which supplement and complement the strictly academic sphere. Students engage in club activities chosen and directed by themselves, publish newspapers and magazines relatively free of censorship, and control their own fee monies. These activities teach individuals to direct and assume responsibility for their own affairs. Equally important, extra-curricular organizations provide a base for the college community, the feeling of belonging to and being part of City College which cannot be gotten by coming to class and then running home. What anyone gets out of college is proportional to the efforts he puts in. With this in mind, we urge all students to take an active interest in extra-curricular activities.

Of course the activity closest to our hearts is TECH NEWS. Do join TECH NEWS. Our friendly editors will take you to their hearts. No experience is necessary; we will teach you everything you need to know. Interview VIP's, see your name in print, fight over editorials, become aware of what is going on around you. All you need do is come to Shepard 207 tomorrow at 1:00, and you can join the world of newspapers.

## In Honor of Those...

We agree with the sentiment expressed by the Student Council resolution asking President Gallagher to officially set aside time during the Thursday break for five minutes of silence for the children who died in Birmingham's bomb blast. However, we feel that the president of the school should not have been asked to make it official.

The college as a whole should not be used for displays of this sort. If Student Government wants to set up a demonstration, they are at liberty to do so. The university as an institution is supposed to be traditionally aloof from official social demonstrations. It was not wise of Council to ask the president to break this tradition.

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# INTROSPECTION

By FRANK MARTINES

Now that the warmth and leasure of summer has faded and the usual scramble for the choice programs and the good teachers has ended, school work has, as per usual, ushered back into our routines. But with the beginning of a new term comes the task of once again determining just how accurate our friends' tips were about the teachers we chose. While still groggy from those lazy, hazy days of summer, we'll all begin the watching and waiting, trying to penetrate the personality of that inscrutable man with the chalk dust all over his pockets. What measure of man will he be? Educator, professional, or both? What really constitute the good teacher?

In endeavoring to answer these questions, one must note that while the accomplished professional engineers of the faculty do enhance the prestige and reputation of the school and do perform invaluable research, this person does not constitute the total or good teacher. The engineering approach to life — engineering discipline as it were — acquired from these individuals in the form of manner of reasoning, of bearing, and of business-like and mature approach to problems is essential but a poor substitute for such things as making a point understood and establishing rapport between students and faculty. This lack of patience, guidance, understanding, and congeniality afforded to the students, is the primary reason that so many of us find ourselves in the unenviable position of dropping engineering. A classroom should be a place for enjoyable learning and not a place for serious business.

Despite this, there are some who would tenaciously argue that this consideration is flimsy and ought to be judged materialistically; that the fine reputation attained for the School of Engineering & Architecture by the many degrees and accomplishments garnered by the faculty is of primary importance. This, however, is not entirely true and follows logically from the acceptable fact that a teacher's worth can only be measured by his ability to teach. His ability to keep abreast of his field through productive research programs or further education serve no purpose other than injecting a degree of timeliness and practicality into the courses he must teach. Engineering teachers should bear this in mind and thusly should devote the majority of their interest and concern to the field of education not to engineering research. Writing "teacher" on one's income tax form does not necessarily make one a teacher.

Unfortunately, however, one cannot assess this problem so easily by stating what should and should not be. What really constitutes the total or good teacher is elusive and at best, barely definable. But one thing is for certain, whatever measure of man he should be, it definitely is not the pragmatist that far too many engineering teachers actually are. Teaching, unlike engineering, is not rigidly defined. It is rather a humanistic relationship involving situations that should be judged on their own individual merits. It is not something that can be equated mathematically to yield results such as school reputation and prestige. This only students can truly achieve. It is attitude and responsibility; acceptance on the teacher's part that he is to impart knowledge at all costs. It is dedication; awareness on the teacher's part that the minds he molds must be handled with care lest the molds be chipped. It is satisfying labor; an atmosphere of mutual work and discovery. But most important of all, teaching is that friendly informal chat between student and teacher or that quiet hello when passing on the street.

## Computer...

(Continued from Page 1)

ements require a controlled temperature and humidity atmosphere, the room housing the computer complex will be air conditioned. The computer maintenance fee provides for a full time M technician to care for it.

The IBM 7040 has a 16,384 word capacity and an average computation time of 8 microseconds. Magnetic tape speed is 36 inches per second. With 566 characters per inch, the 7040 can handle 20,000 characters per second. Answers can be obtained at the rate of 800 pages per minute; there are 132 characters to the line.

According to Prof. Pei, who has been testing a 7040 at IBM's


computer center downtown since May, the computer is more powerful, faster, and easier to use than the digital computer the College now has. He expects that most student problems will be run through the new computer in much less than a minute. In order to make efficient use of computer time, three key punches will be in operation.

The computer will definitely be used in graduate work, and Prof. Pei feels that it should also be used in undergraduate work in the School of Engineering. However, it is still too early to say what role it will play in any curriculum. This question is presently under consideration by the various departments.

**IEEE**

Tomorrow the IEEE will feature professors Abromowitz, Meth, and Taub speaking on topics of importance to EE's. The meeting will be held in the Steinman auditorium, and new members are welcome.

**IF YOU CAN READ THIS THEN READ TECH NEWS**



**On Campus** with Max Shulman

(By the Author of "Rally Round the Flag, Boys!" and, "Barefoot Boy With Check.")

### WORDS: THEIR CAUSE AND CURE

Today let us take up the subject of etymology (or entomology, as it is sometimes called) which is the study of word origins (or insects, as they are sometimes called).

Where are word origins (insects) to be found? Well sir, sometimes words are proper names which have passed into the language. Take, for instance, the words used in electricity: *ampere* was named after its discoverer, the Frenchman Andre Marie Ampere (1775-1836); similarly, *ohm* was named after the German G.S. Ohm (1781-1854), *watt* after the Scot James Watt (1736-1819), and *bulb* after the American Fred C. Bulb (1843-1912).

There is, incidentally, quite a poignant little story about Mr. Bulb. Until Bulb's invention, all illumination was provided by gas, which was named after its inventor Milton T. Gas



who, strange to tell, had been Bulb's roommate at Cal Tech! In fact, strange to tell, the third man sharing the room with Bulb and Gas was also one whose name burns bright in the annals of illumination—Walter Candle!

The three roommates were inseparable companions in college. After graduation all three did research in the problems of artificial light, which at this time did not exist. All America used to go to bed with the chickens, and many fine citizens were, alas, severely injured falling off the roost.

Well sir, the three comrades—Bulb, Gas, and Candle—promised to be friends forever when they left school, but success, alas, spoiled all that. First Candle invented the candle, got rich, and forgot his old friends. Then Gas invented gas, got rich, bankrupted Candle, and forgot his old friends. Then Bulb invented the bulb, got rich, bankrupted Gas, and forgot his old friends.

Candle and Gas, bitter and impoverished at the ages respectively of 75 and 71, went to sea as respectively the world's oldest and second oldest cabin boy. Bulb, rich and grand, also went to sea, but he went in style—as a first-class passenger on luxury liners.

Well sir, strange to tell, all three were aboard the ill-fated Lusitania when she was sunk in the North Atlantic. And strange to tell, when they were swimming for their lives after the shipwreck, all three clambered aboard the same dinghy!

Well sir, chastened and made wiser by their brush with peril, they fell into each other's arms and wept and exchanged forgiveness and became fast friends all over again.

For three years they drifted in the dinghy, shaking hands and singing the Cal Tech rouser all the while. Then, at long last, they spied a passing liner and were taken aboard.

They remained fast friends for the rest of their days, which, I regret to report, were not many, because the liner which picked them up was the Titanic.

What a pity that Marlboros were not invented during the lifetimes of Bulb, Gas, and Candle. Had there been Marlboros, these three friends never would have grown apart because they would have realized how much, despite their differences, they still had in common. I mean to say that Marlboros can be lit by candle, by gas, and by electricity, and no matter how you light them, you always get a lot to like—a filter, a flavor, a pack or box that makes anyone—including Bulb, Gas, and Candle—settle back and forswear pettiness and smile the sweet smile of friendship on all who pass!

Etymology is not the business of the makers of Marlboro Cigarettes, who sponsor this column. We deal in rich tobaccos and fine filters. Try a pack soon.

in just one year the trend is clear...

# DECI-LON

the engineering - science line rule

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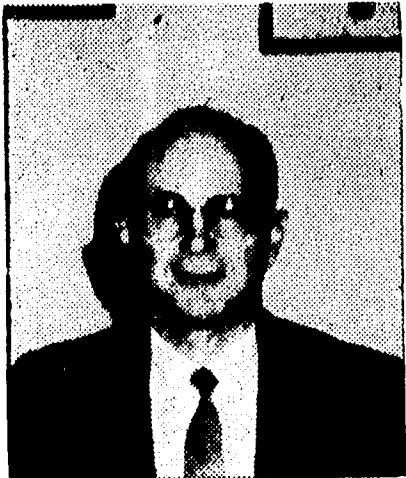
KEUFFEL & ESSER CO., Hoboken, N.J.

## Tech Progress . . .

(Continued from Page 1)  
or passing interest. After one year, general consensus favors the addition.

### A Long Road

The present state of things, for the most part, followed a long and tortuous course. In 1952 President Gallagher recommended that the engineering school's plant be expanded. He specifically proposed that a modern building be constructed to house the engineering laboratories and offices. What ensued in



Dean Allan

the next ten years would rival Jackie Gleason's "Poor Soul" for laughs and heartbreak.

Work got under way in 1957 and almost immediately difficulties were encountered in the demolition — not the construction — of the building occupying the site at the time (Army Hall). Solid rock, not entirely unexpected, was encountered and a large amount of blasting was required. Between 1959 and 1961 strikes, work stoppages, and bad weather inevitably delayed the completion date. But the coup-de-grace, or almost, occurred with the building ninety per cent complete. The contractor reneged on his contract and walked off the job. He (more appropriate names have been used) claimed that costs were running higher than anticipated, and consequently, the city should make good. For several months all work was at a standstill. In September 1962 the engineering building, Steinman Hall, was opened to classes.

Though some extra class room space was acquired when Steinman Hall was opened its primary purpose has been to provide better laboratory and research facilities. New electronics and communications laboratories were installed with the latest equipment. Not to be outdone, the civil engineering department has set up a complex of sewerage and hydraulic labs. The nuclear reactor has been given a permanent home in the sub-basement of the Hall after a rather incongruous stay in the confines of Lewisohn Stadium. Even the library moved into newer and more spacious quarters, providing better service with a more conducive study area.

There can be little doubt that if you're going to have a Ph.D. program you will need research and laboratory facilities. This is exactly what the new building accomplished. Dean Allan has stated that the faculty was prepared to initiate the program three ago, but approved was not given by the State Regents until last year. The program gets under way this term. Though approval of the program was not given solely on the basis of the existence of Steinman Hall, it may be safe to assume that it helped matters along.

Last term the college purchased the I.B.M. 7040, an eight-hundred thousand dollar computer complex (described elsewhere in the

paper). The computer will be used by any department in the college requesting its use. If you haven't guessed or heard yet, the computer will be housed in the venerable Steinman Hall.

A rolling stone gathers no moss, but it can start an avalanche. This term several new people were added to the faculty; people, most likely, who liked what they saw at City College. The chemical engineering department attracted from industry, by offering him a full professorship, Mr. E. Katz, an expert in computer mathematics. The electrical engineering department garnered an ex-top student, Mr. Ared Manasse. Asst. Professor Manasse recently completed his graduate work at Princeton.

Things are looking up in the school of engineering and this is only the start of it.

## New Freshman Orientation Program Gets Good Start

By ALAN GRIMALDI

Last term, the School of Engineering and Architecture instituted a new Freshman Orientation program. Instead of the usual lecture type classes with about one hundred students, the new program consists of small informal groups headed by a faculty advisor.

This term, the entire College started the new program. Now, instead of faculty controlling the classes, they will be assigned to Upper Class Advisors. Each advisor will handle a class in the same field as his major.

The old Freshman Orientation classes often could not really suit the purpose of 'easing the transi-

tion from High School to College' because of their size. Personal communication was nil. The lecturers became involved in unimportant issues and the tantamount issues were neglected. It is hoped that the new program will bring the class and advisor closer together. The new program will provide for a maximum of personal contact with the advisor and his class. It is hoped that each will not exceed twenty persons. More advisors are needed especially in the School of Engineering.

The program is being coordinated by Arthur Porwick. Dr. McCaan, also coordinated a good deal of this program.

Freshman Day, September 4,

was highlighted by the new program. Arthur Porwick, Dr. McCaan, and Dr. McCaan, and the U.C.A.'s supervised the day. Except for an hour delay in testing the day ran smoothly. South Campus held the largest crowd of entering Freshmen in years.

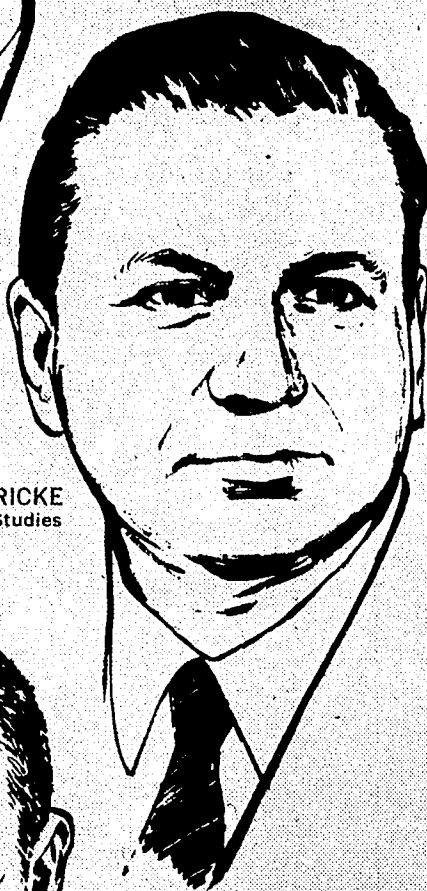
Organizations such as House Plan, fraternities and Sororities, political organizations, religious organizations, and the papers held recruiting drives. Talks by men in the ROTC, Student Government and by the faculty reminded us of the old program. This will not be the case this year. The Engineering groups have been separated from the rest of the school.

Volunteers contact Dean White, Dr. McCaan or Arthur Porwick.

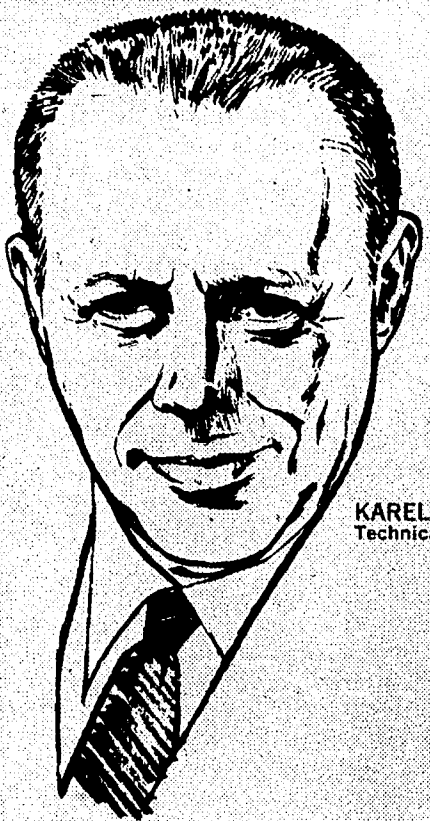
### ENGINEERS - SCIENTISTS



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