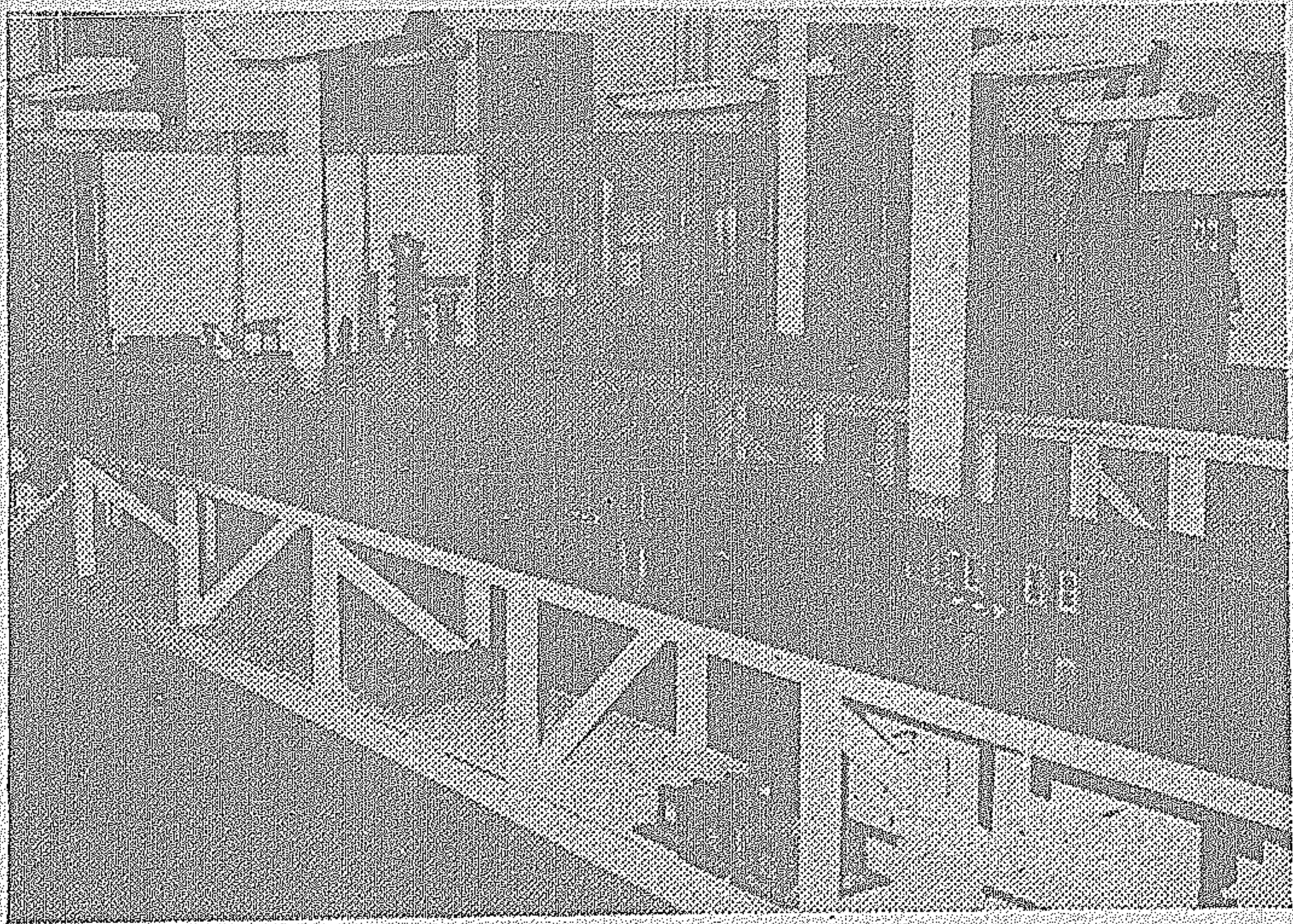


Electricals Add New Lab



The new electrical engineering lab on the second floor of the Main building at Armour is near completion. —Photo by Don Albert

Electrical Lab Receives Face Lifting; Ranked as Most Efficient in Operation

"Illinois Tech's electrical engineering laboratory now ranks as one of the most attractive, most modern and most efficient in operation," Dr. Jesse E. Hobson, head of the electrical engineering department, said this week as students began work in the new general circuits laboratory in the Main building.

Completely remodeled since last semester, the laboratory now has a capacity of 117 students, two to three times greater than its former capacity. Illumination of the laboratory has also been improved with the installation of a fluorescent lighting system of 20 large ceiling lamps.

Increased capacity and better illumination were two main objectives in rebuilding the laboratory, Dr. Hobson explained. Other aims were to provide a better arrangement for handling students, to afford increased protection for students and equip-

ment and to give a better appearance.

The laboratory now has a brand new "face," for its walls have been painted white and the woodwork has been painted gray. Windows have been redesigned, the floor has been covered with terra cotta linoleum and the ceiling with a new coat of varnish.

New work benches have been constructed, and a total of 39 stations are available for students, with a capacity of three persons at each station. Beneath the work benches storage space for experimental equipment is provided, new equipment having been purchased for student use.

Each station is equipped with four sources of power, including direct current generators, storage batteries, alternating current generators and a special supply source which may be one of several types. Twelve stations possess an added source of power for three-phase current experiments.

Affording better protection to students and equipment, automatic breakers have been installed around the circuits at each position, replacing fuses formerly used.

Compactly arranged on the west side of the new laboratory is an instrument room containing six equipment racks, a mechanic's shop and a calibrating table. Six fluorescent-lighted show cases, in which are displayed devices used in electrical engineering, separate the instrument room from the main laboratory.

A demonstration relay panel board, (See ELECTRICAL LAB on Page 6)

Illinois Tech ASME 3rd Largest in U.S.; Wants to Be First

Third largest student branch in the United States—that's the record of the Illinois Tech branch of the American Society of Mechanical Engineers.

"IIT should be first! To reach this goal we must have the cooperation of all sophomore, junior, and senior mechanicals, both civilians and navy," says student chairman James Cubbage.

Information concerning this drive is posted on the bulletin boards in Machinery Hall and Main Building.

Popular Mechanics Has Feature Article On Research Foundation in New Issue

"Industry's Mr. Fixit" is the title given the Armour Research Foundation at Illinois Institute of Technology in an article featured in the September issue of the magazine, "Popular Mechanics."

The Foundation rated a four page illustrated layout which explains the purpose of the Foundation as an aid to industry and features some of the

Saunders' Graduate Work With Spectograph Disproves Long-Standing Condensation Theory

A whole industry may be affected by the latest research accomplishment of Robert H. Saunders, graduate student and assistant in chemistry, who has disproved textbook theories and discovered a new set of organic compounds.

Mr. Saunders has achieved this success in his work on the aldol condensation which is already an important commercial process.

Beginning with spectrographic analysis using the Raman effect, Saunders, under the direction of Dr. Maurice J. Murray, has worked for

ASME Semester Program Outlined

Patents, young engineers, precision measuring instruments—these topics will all be presented to the members of the American Society of Mechanical Engineers in the coming semester.

At the first meeting on August 20, Alexander Bailey, chief engineer of the Commonwealth Edison Co., will discuss "The Young Engineer in Industry."

"The Story of a Patent" will be unrolled by Prof. John I. Yellott, chairman of the mechanical engineering department of IIT, at the meeting of September 10.

The October 1st meeting will bring to IIT J. Gabriel of the Acme Industrial Co., makers of precision measuring instruments.

Pi Nu Epsilon to Pledge Members Wednesday

A meeting of Pi Nu Epsilon, honorary musical fraternity, has been announced by O. Gordon Erickson, musical director of IIT. The meeting, which is to be held in the office of Mr. Erickson at 5 p.m. Wednesday, will involve the selection of pledges for the current semester.

Physics Most Popular Course at IIT, At Least from Numerical Standpoint

Physics is the most popular course at IIT . . . if figures don't lie.

For fourteen hundred students, or two-thirds of the total IIT day-school enrollment, will be taking physics, beginning next week. To the 1100 students already studying this subject, 500 more will be added when the Army classes begin, Dr. James S. Thompson, head of the physics department, revealed today.

Responsible for this unprecedented load is the fact that all Army and Navy students must have one year of physics, and all civilian students are required to take the subject in their first year. To meet the demand, the staff of the physics department has been increased to 36 members, and plans have been made to operate the sophomore-freshman laboratory 10 to 13 hours a day.

Of the fourteen hundred students, approximately 1100 are at the Armour campus; 400 taking sophomore physics; 208, the freshman physics.

The 500 ASTP students, whose classes begin next Monday will also take the freshman physics course.

In addition, freshman physics is taught to some 300 Navy students at the George Williams campus. This

one and a half years investigating the exact reaction which occurs when aldehydes condense or form a polymer with treatment by a dilute alkali which acts as a catalyst.

With the completion of spectrographic analysis, chemical experimentation was begun. It was found that an intermediate compound was formed with the condensation of aldehydes, but when heated, it broke down under the influence of the catalyst and heat into an aldol and aldehyde.

The fact that the process is not 100% efficient first led researchers to suspect another reaction, but no important success was achieved until Saunders detected and isolated some of the intermediary compound for certain aldehydes.

The new compound need not be rare, but a special method of procedure had to be used to separate and purify them. In fact, the main problem faced by Saunders was

War Cuts Arx to 35; Ring Is Discontinued

The war has taken its toll in the department of Architecture at IIT, causing a 30% decrease in enrollment from last semester. Thirty-five students are now enrolled in the department, while last semester the number was from 45 to 50.

With only two active members remaining in the honorary architecture fraternity, The Ring, it has been decided to discontinue the activities of the society for the duration.

IIT Chem Profs Conduct Research at Columbia

Professor Hugh J. McDonald and Doctor Melvin L. Schultz, instructors in chemistry at IIT, have both been engaged in war research work at Columbia University since June.

showing that such a compound existed at all. It could not be obtained using general chemical practices.

Enough of the fourth member of the new series, called 3, 3-dimethyl-2, 6-diisopropyl-4-hydroxy-1, 3-dioxane, is now on hand to enable many more of its properties to be determined.

One paper on the new discovery has already been published in July of this year. Another will be published in August.

Saunders has not confined his research to the aldol condensation alone. Before he began his present work, he published, as a co-author with Dr. Murray and Dr. Forrest F. Cleveland, three other papers on:

"Raman Spectra Evidence for Hindrance of Resonance by Ortho Substitution";

"Raman Spectra of Some Aromatic Carboxyl and Nitro Compounds"; and

"Association Effects in the Raman Spectra of Thiophenol in Donor Solvents."

Saunders is now writing his thesis, based on his latest research, for a Ph.D. in chemistry. He has already passed the written and oral examinations.

The Hercules Powder Company of New Jersey has offered him a position which he may accept after obtaining his degree.

New Rubber Tester Added to ChE Lab

A new rubber tester has just been acquired by the chemical engineering department at Illinois Tech. The device was purchased in order to facilitate the work on rubber now carried on at the institute.

The machine is designed primarily for testing the tensile strength of rubber, but can be used for other purposes such as testing yarn or cord, or in friction determinations.

Besides merely measuring the stress, the rubber tester is also capable of drawing a stress strain diagram, or a hysteresis curve. The device is designed for a maximum load of 100 pounds. Thus, depending on the size of the die used to cut the sample, stresses of 3200 or 6400 pounds per square inch may be obtained.

The tester was ordered nine months ago, but delivery could not be accomplished until now.

Plans for Pledging to Be Made by Eta Kappa Nu

Eta Kappa Nu, the honorary electrical engineering fraternity, will hold its first meeting of the semester this Wednesday, to make plans for pledging and other activities for this term. The fraternity has been waiting for the meeting of the Inter-Honorary Fraternity Council today before resuming activity.

Tech Time Table

Tuesday, August 3
2:00 p.m.—ITSA meeting in Faculty Club of St.U.

5:10 p.m.—Orchestra Auditorium.

Wednesday, August 4
5:00 p.m.—Pi Tau Sigma—Faculty Grill.

Thursday, August 5
5:10 p.m.—Pi Nu Epsilon—Music office.

5:10 p.m.—Glee Club—Auditorium.

Friday, August 6
10:10 a.m.—Sophomore Class meeting—202 M.

10-11 a.m.—ASME election of treasurer—Student Union Hall.

2:00 p.m.—Phi Lambda Upsilon—406 M.



Noon finds the balcony of the auditorium on the Armour campus crowded. Students are gradually getting the habit of using this "new" lunchroom. Until better facilities can be provided in the cafeteria, the balcony will continue to be used. —Photo by Don Albert