



New Registration, Schedule of Exams Released by Office

Printed Class Schedules To Be Ready Soon

Announcements of the schedule of final examinations and of the registration procedures for next semester were made today by W. E. Kelly, the institute registrar.

Lists of the exams with their corresponding date, time, place, and instructor have been posted on the boards in the main lobby. A copy is reproduced in this issue of the *Tech News* to provide ready reference for convenience of students. The last line is particularly important and should be complied with at once if it applies to any student.

Plan to Eliminate Confusion

Students are required to be on time for the exams, but early arrival is not desired. In previous years there has been crowding and unnecessary noise in the hall outside of the gym and science hall. This confusion is a decided detriment to those who are inside and struggling with an important problem. For this reason it is requested that students stay away from exam rooms until just before the exam starts. In this way they will give a better chance to those at work. Ample time, ten minutes, is provided between exams for changing classes and beginning the final. No advantage is obtained by arriving early, therefore all are requested to give their fellow students a break and arrive just on time.

Registration procedure will be about the same this year as in previous years. Bulletins from the registrar's office have already been mailed, advising the payment of bills before the final registration day, February 3. Early payment eliminates the waiting line outside the cashier's office, and will aid in securing a place in a certain professor's class before it is filled.

Registration of New Students

One new feature in the coming registration will be the mailing of class schedules rather than posting them on the bulletin board at the stairway in the lobby. This will make it much easier to make out a good schedule and will avoid the crowding which has been prevalent in the past. The schedule of classes has a program blank printed on the reverse side for convenience in picking classes.

For the benefit of new students who are not familiar with Armour registration, the procedure is as follows: Make out a tentative program. A good practice is to have one or two
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Sophs Swing It At Medinah Club

Jack Russell and his popular Melody Mill orchestra will provide their distinctive rhythm at the annual sophomore dance to be held in the Grand Ballroom of the Medinah Athletic Club on Friday, February 10, from 9:30 till 12:30. Swinging lightly through the lyrics of Miss Floe Dare on a delightfully smooth floor, all who attend are guaranteed an enjoyable evening.

After a long search for a suitable spot the Grand Ballroom of the Medinah was finally selected, not only for its beauty and accessibility, but also because of the many conveniences offered. The parking facilities are excellent, and are coupled with a convenient cloakroom and a spacious lounge.

The bids, which were issued last Tuesday, are black suede with white insert. Although 400 bids are now in circulation, social chairman Bud Murray feels sure that very few will remain unsold. Every enterprising salesman who sells seven bids will be given a complimentary bid. Bids may be procured from any members of the social committee, which consists of Bud Murray, chairman, De Money, W. Grosse, J. Hartman, and R. Ratzel, or any of the class officers.

Shawnee Hears Musical Clubs

The first social affair of 1939 was vastly enjoyed by the men of the Armour Tech Musical Clubs last Sunday afternoon. Held at the beautiful Shawnee Country Club, located just north of Wilmette Harbor in the northern suburb of Wilmette, about one hundred future engineers and their dates had an afternoon full of music, dancing, and refreshments.

One of the purposes of the affair was to afford the club members of the Shawnee and their guests the opportunity of hearing the Armour Tech glee club and orchestra, directed by Mr. Gordon Erickson.

Starting at 3:30 p.m., the concert lasted an hour. Upon its completion a reception was held among the club members and the Techawks, following which dancing took place to the music of Don Charleton and his orchestra in the Shawnee Country Club ballroom. Refreshments were also served to the musical club members and their young lady friends.

On Thursday evening, February 23, the Musical Clubs will hold their annual Goodman Theatre concert. Tickets for this concert will be placed on sale in the Main Lobby Thursday afternoon. All seats are reserved, but it is a known fact that one Goodman Theatre seat is as good as the next from a vision as well as acoustical standpoint.

Dr. Poulter to Speak to Journalists at Banquet

The *Armour Tech News* Banquet will be held on February 9 at the Student Union beginning at 6:30 p.m. President H. T. Heald, Dean C. A. Tibbals, Professor W. W. Colvert, and Mr. B. E. Goetz are expected to attend.

Dr. Thomas C. Poulter, Director of the Research Foundation, is the principal speaker. His subject will be on seismology and radio work in the Antarctic. Doctor Poulter, a very popular speaker, was second in command and chief scientist for Byrd's Antarctic expedition of 1933-35.

Public announcement of the staff of the *Armour Tech News* for the year 1939 will be made. R. I. Jaffee, in charge of the Banquet committee, assures us of an excellent evening of entertainment.

Dr. Reed Arranges Instrument Panel In A. C. Laboratory

Junior electricals will have a complete line of new equipment in their A.C. lab. work next semester. Since the Christmas holidays, Dr. M. B. Reed and Leonard Holmes, assisted by several students, have been working in the shop of the main electrical engineering laboratory. In order that students might get the most out of their experiments by working in small groups, six complete sets of apparatus were constructed; in this course each group will have only two members as compared with four or five as was necessary in previous years.

Among the pieces made were variable air-inductances, capacitors adjustable from 5 to 100 microfarads and a set of new inductive resistors. Fifteen new Weston meters, especially suitable for the required work were bought. Special tables on which the experiments will be performed are being made. On a backboard circuit breakers, switches, and plugs for instruments will be mounted. The laboratory work will parallel the course in A.C. Theory given by Dr. Reed.

Additional equipment has also been built for the radio engineering laboratory by Prof. A. W. Sear. Two precision radio frequency oscillators were made this semester. These oscillators, which are checked against a 1000 kilocycle frequency standard, have a range from 5 to 30,000 kc. A Western Electric audio frequency oscillator is now being modernized and a new Hays bridge is planned. Duplicate apparatus will be necessary in many cases to take care of the large classes anticipated next year.

Pres. H. T. Heald On Trip to East Coast

H. T. Heald, president of Armour Institute, left for the East last Thursday to attend two meetings of engineering interest. He will also visit several colleges enroute, and according to his plans, will contact several Armour alumni in the East. It is expected that President Heald will be back by the end of the week.

At Washington he will attend a meeting of the Assembly of the American Engineering Council. This organization was established in 1920 to serve as a central agency for the engineering profession in general. It represents more than fifty national, state, and local engineering organizations and is governed by an assembly composed of representatives of these bodies.

President Heald will then go to New York and attend the general meeting of the American Society of Civil Engineers. L. E. Grinter, dean of the graduate division, will also represent Armour at this meeting. On the way back President Heald will stop off at Philadelphia and visit the University of Pennsylvania and Drexel Institute of Technology.

Millionth of Second Photographs Taken By Two Research Foundation Technicians

Millionth of a second pictures of a bullet in flight were recently taken by Dr. F. W. Goodwin and Dr. A. O. Walker of the Research Foundation in a demonstration of the new technique in high speed photography, which they have just developed. The pictures, which were published in most of the Chicago's newspapers, showed the successive positions of a bullet as it went through a glass plate, picturing in detail the cracking, piercing and shattering of the glass.

Use Miniature Camera

The photographic principle of this remarkable accomplishment is not new, for it has been used to take similar pictures for several years. A camera, in this case one of the well known "miniature" cameras, is focused on the point at which the bullet will strike the glass and the shutter is opened. When the bullet is fired, a discharge of 38,000 volts through a partially evacuated tube occurs and the resulting flash, furnishes the illumination by which the picture of the bullet is made. The new principle is in the manner in which the discharge is brought about. The gun is aimed so that the bullet in flight will pass just between two poles of a spark gap; the gases from the firing of the bullet then discharge the spark gap, thus causing the discharge in the partially evacuated tube, which furnishes the illumination. This innovation is construed to be the first application to high-speed photography of the above mechanism causing a bullet to take a photograph of itself with no outside or independent mechanism for the tripping of a shutter or discharge of a spark for illumination.

Alter Spark Gap

The position of the bullet at time of illumination, and consequently the time when the picture is taken can be determined by altering slightly the relative positions of the spark gap poles. The current for

Tour of Eastern States Proposed by Electricals

For the purpose of visiting the leading schools and manufacturing plants of the eastern states, a trip has recently been proposed. Definite action on the trip will be carried out during the mid-year vacation. At this time the students will be able to communicate with schools having already made trips similar to the one proposed.

Pending further investigation of the advisability of joining the W.S.E., action by the A.I.E.E. to adopt it as a member organization has been postponed. The next meeting will serve as a business meeting and general discussion of the significance of the W.S.E. as an affiliated organization.

Dance Class Members Elect Their Officers

During the meeting in the West room of the Student Union on Monday, January 9, the dance club held elections for the positions of president and vice president. The votes of the majority of the members established James W. Duncan as president and Charles McAleer as vice president.

The president was chosen from the advanced class, which meets from 4 to 5 o'clock, and the vice president was chosen from the beginner's class which meets from 5 to 6 o'clock. This was so arranged that each group may be represented in the executive body of the club.

For more effective advancement in dancing procedures, the members were organized into groups. Each group is composed of five or six members. These groups will receive personal attention from Dan Stone, the professional instructor.

Due to a popular vote the Dance Club meeting date has been changed. From now on it will meet on Wednesdays instead of Mondays, as has been done in the past.

Lab Testing Device Claims Increase in Rate of Filtration

Among the experiments being conducted by the graduate students in the water filtration laboratory, there is one on water filtering that has been receiving quite a bit of attention. The object of the experiment is to increase the quantity of water filtered per unit of time. R. I. Leland and J. H. Fellouris are the two graduate students who are conducting the experiment. They are working on this subject for their thesis.

At the present time almost all large filtration plants located in cities, towns, and large universities use a standard method to purify their water. Chemicals are used first in an attempt to eliminate any harmful organic matter and most of the impurities that it might contain. This involves precipitation by chemical reaction. The water then passes through large settling tanks and some more of the larger impurities are settled out. The water next passes into a tank containing approximately 30 inches of sand which eliminates the remaining impurities.

Leland and Fellouris state that only the top one inch of sand really does the work in cleaning. Their plan is to introduce sub-surface filters so that the capacity of the system will be increased. These filters consist mainly of perforated filters inserted down into the sand. The water emerges from these filters at a level some distance below the top. In this way a lower level of sand can be filtering water at the same time.

The equipment with which they are conducting the experiments was donated by Ira H. Jewel, a maker of sub-surface filters.

NOTICE

This is the last issue of the *TECH NEWS* for the present semester. The next issue will appear on Feb. 7.

U. S. To Establish Precision Lab Here for War Department

Jewelry Committee Approves Contracts

Samples of Keys and Rings To Arrive Next Month

After eight weeks of hard work, the senior jewelry committee has completed the first part of its work. A contract for the rings and keys has been awarded to George H. Spies, Incorporated, of Chicago. In all, nine companies were considered in the bids which were presented. The committee regarded quality, price and reliability of the company as the main points of consideration.

Committee chairman Abe Zarem regrets that a junior was not appointed to the committee so that the work of the next graduation class committee would be made easier. He feels that a better understanding of the work would have made the decisions easier. There is a great variation in the prices due to the fact that seven different stones and various types of silver and gold settings are available. Keys are also available to those seniors who prefer them. Samples will be ready in about a month and the first orders will be taken at that time. The rings to be available are:

Gold, 8 pennyweight, 10 karat; Onyx or Sardonyx, \$12.00; Ruby or Spinel, \$12.75; Garnet, Tourmaline, or Sapphire, \$13.75. For ten pennyweight rings, \$2.00 will be added to the above prices.

Rhodium plating will be used on the silver rings, which will cost \$5.00 to \$5.75. The cheaper rings are to have onyx and sardonyx stones, while Spinel and ruby stones will be used in the \$5.75 rings. Engraving of the monogram "A.I.T." or fraternity Greek letters will be done for \$3.00. Prices for the keys are as follows:

Ten karat, onyx or sardonyx, \$5.50; 10 karat, spinelle or ruby, \$6.25; sterling, onyx, or sardonyx, \$4.00; sterling, spinelle, or ruby, \$4.75.

Additional information regarding the jewelry can be obtained from the jewelry committee.

Columbia Yacht Club Site of Greek Dance

A formal interfraternity dance will be held on the night of Saturday, January 28. This dance which is limited to fraternity men alone is going to be held at the Columbia Yacht Club. This Club, which has just recently been redecorated, is situated at Randolph and the Lake just opposite the Naval Reserve Armory. Decorations and the design of the Club is in the motif of a ship both inside and outside. The dance is the first to be held in the redecorated atmosphere.

Sufficient parking space furnished with attendants is assured. Music is going to be furnished by the orchestra of Pierson Thal, an orchestra that has been featured at another Armour occasion. Bids are priced at \$3.00 each and include the cost of parking.

Details for the dance are being handled by a committee of C. DeMent of Phi Pi Phi, R. Dodge of Pi Kappa Phi, and T. Collier of Phi Pi Phi. The dance will be strictly formal, and will begin at 9:30.

Board of Trustees Hold Initial Meeting in Union

For the first time this year members of the Board of Trustees of Armour Institute of Technology held a meeting a week ago Monday in the newly completed Student Union.

The members assembled at the Chicago Club and were brought out to Armour by bus. After a brief dinner the regular January meeting was held. Following the meeting an inspection trip of the Institute was made. The trustees were divided into groups and conducted through the various school and research laboratories, following which there was an informal gathering in the Student Lounge.

Armour Approves Plans To Install Gauge Apparatus

Plans for the installation of a U. S. Army gauge checking laboratory at the Institute in collaboration with the Army Ordnance department in Chicago, have been approved by the Chief of Ordnance, school officials, and officials of the Research Foundation which will have jurisdiction over the project.

New York University also maintains a laboratory for the war department. The government reserves the right to use the equipment at any time, but the Institute will have the privilege of using the equipment.

Uses Precision Instruments

Fully equipped, the laboratory will make possible measurements to within two millionths of an inch using the Van Keuren Light Wave equipment, used to determine wear on Johanssen precision measurement blocks or other instances where great precision is essential. A measuring machine with a capacity of from 0 to 4 feet, measures lengths to the one hundred thousandths of an inch. A screw thread testing machine, built by the Bureau of Standards, a profile projector of the same make, and accessories make possible the closest determination of the characteristics of all types of screw threads.

Armour Has Use of Equipment

The New York laboratory, after which the new laboratory will be patterned, provides a Sheffield comparator with graduations to the 25-millionths of an inch and a Hartness optical profile comparator. There is also a wide angle binocular microscope and a tool maker's microscope with attachments for determining the characteristics of small threads to the ten thousandths of an inch. There are several sets of Hoke, Johanssen and Bureau of Standards precision measuring blocks and a large assortment of verniers, inside and outside micrometers, surface plates, straight edges, a super-micrometer with attachments and accessories for determining the pitch diameter of Acme and 60-degree screw threads. Sine bars and fixtures to check angles to the accuracy of a second; still parallels of assorted sizes, box parallels, precision level, cylindrical squares,
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Co-ops Winter Dance on Feb. 3 Bids Cost \$1.50

The Co-op Club's Winter Dance, to be held on Friday, February 3, 1939, now promises to be the most successful affair ever sponsored by the organization. As was announced in last week's *Armour Tech News*, Al Trace's orchestra will furnish the music and the Student Union will provide the setting.

Al Trace has been highly praised by the many students who have heard him play. Well-liked also is Trace's featured soloist, Ruby Abbott.

Al Trace and his "six silly symphonists" are featured regularly at the Hotel Sherman's Old Town Room and at the College Inn. On New Year's Eve the orchestra played for a gay crowd who willingly paid \$5.00 per person to hear them welcome the new year. On January 5, Al played for a program of the *Tribune's* advertising department, appearing with many celebrities that included Joan Davis, popular movie comedienne. The orchestra has also appeared on the stage of the State-Lake theatre and is heard over the Columbia Broadcasting System.

To further assure the success of the occasion, elaborate plans are being made for the decoration of the auditorium. The committee has been assured that the full facilities of the Union Building will be available for the evening.

The price is \$1.50 per couple. Bids are available at the office of the registrar, in the bookstore, and in Mr. Lease's office in Chapin Hall, as well as from Co-op Club members.