

## MAX SCHINKE HAS HIGHEST AVERAGE OF STUDENT BODY

### Class Averages Rank in Same Order As Seniority

#### STUDENT AVERAGE 84.2

To Max J. Schinke, senior electrical, goes the honor of having the highest average of any student at Armour Institute of Technology for the semester ending February 6, 1932. His average is 96.3% as compared with the average of the entire student body, a total of 814 students, which is 84.2%.

Topping the lists of the three other classes, we find James W. Juvinall, junior, with a 95.9% average; Walter E. Gunderson, sophomore, with a 95.9% average; and Donald E. Young, freshman, with a 96.1% average. Max Schinke and James Juvinall led their classes last year also. The highest man in school last year graduated. He was Alvin Auerbach, and his average was 97.5%, a straight "A".

#### Senior Class Highest

The averages of the four classes ranked according to their seniority are:

The senior class	87.6%
The junior class	85.4%
The sophomore class	84.0%
The freshman class	81.2%

In these statistics, compiled by the Office of the Deans, the grades in physical training were omitted. A credit (Cr.), either for work at the Armour Institute of Technology or for work elsewhere, was considered equivalent to a grade of "C". The following numerical values were given to the letter grades: A—97.5%; B—90.0%; C—80.0%; D—67.5%; E—50.0%; Cr.—80.0%.

#### Fire Protects Lead Departments

The ranking of the departments was:

Fire Protection Engineering	85.5%
Chemical Engineering	85.2%

(Continued on page 4)

## Soph-Frosh Dance To Be Held On April 15

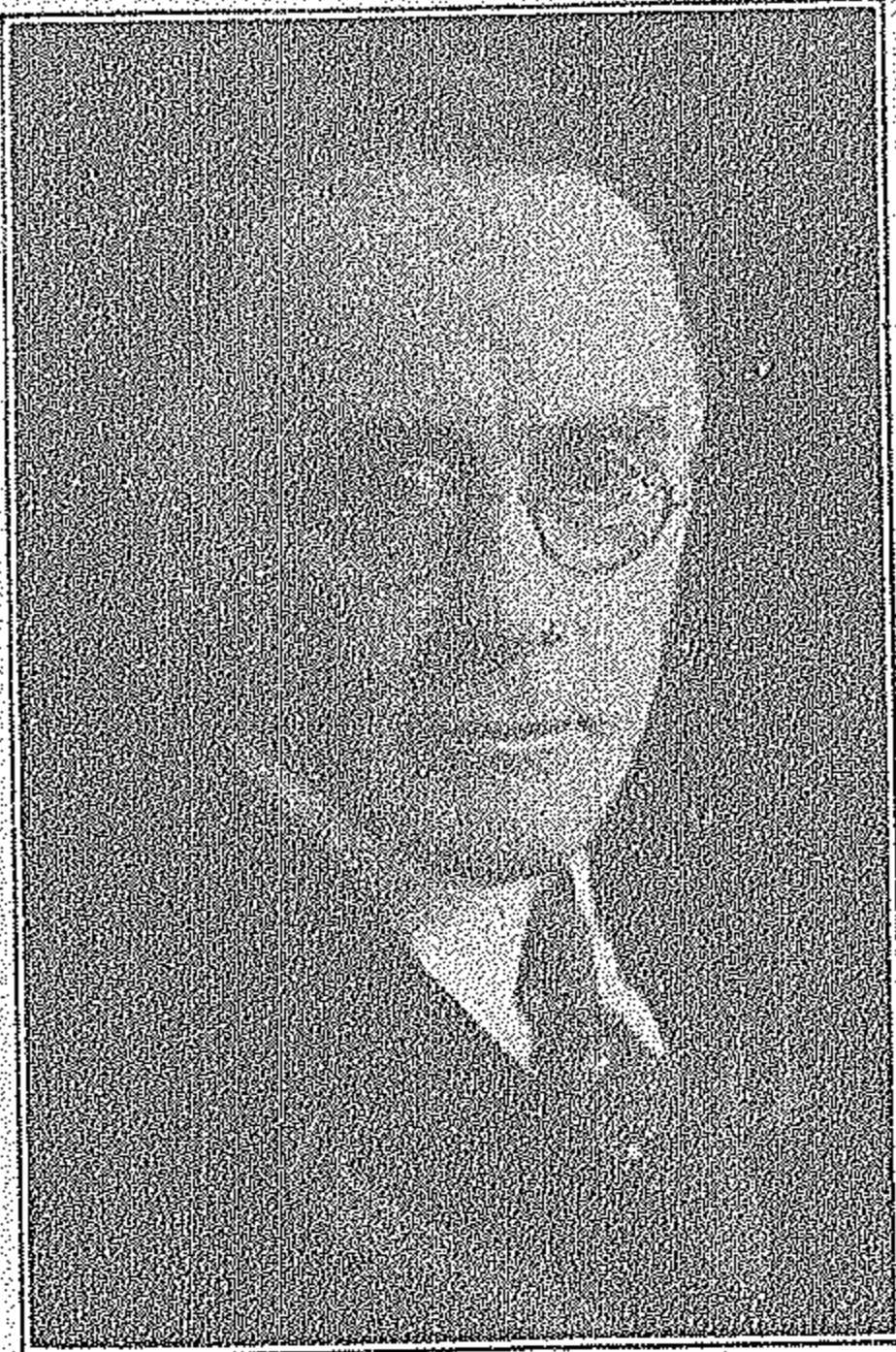
Little more than two weeks remain now before the Frosh-Soph Informal dance becomes a reality. On Friday, April 15th, at nine o'clock, Jack Chapman will flick the baton which will start the couples gliding over the floor of the Gold Room in the Congress Hotel.

The bids, which have been on sale for the last week, are going at a fine rate, and it is assured that this will be the affair that it should be when sponsored by two classes.

Quite a number of posters have been submitted by those engineers and architects who are aspirants to the free bid which is offered by the Frosh-Soph social committee for the best placard advertising their dance. The contest, which was opened a week ago, closed yesterday at 5:00 P. M., and as yet the results are unknown.

Inspired by the Development Committee's drive for publicity, the contest was instigated for the purpose of receiving posters to be used for advertising the dance around school. Within a short while the winning design will appear in the lobby of the main building and announcement of the winner on the bulletin board.

A spirit of rivalry has sprung up between the two social committees, and each is trying to prove the superiority of its class. George Wheaton, social chairman of the Freshman class, feels confident that his fellow classmates will back him in the sales drive to beat F. E. Headon, the sophomore chairman. Anyone and everyone in school is invited to cast his ballot by turning over two and a half dollars for a bid to one of the members of the social committees or to any of their representatives.



William S. Monroe

## Mr. W. S. Monroe Named To Board

William S. Monroe, President of Sargent and Lundy, consulting engineers, was named on March 6 as a new member of the Board of Trustees of Armour Institute of Technology. The appointment of Mr. Monroe was the first action in the program to enlarge and develop the corporate body of the Institute by adding professional engineers, architects, and industrial executives who are interested in engineering education as it relates to Chicago's industrial growth.

## Juniors Pledged By Tau Beta Pi

Tau Beta Pi, honorary engineering society, pledged five men at a smoker held at the Beta Psi fraternity house on Tuesday evening, March 22.

The five who reaped at this time the reward of three years' effort were: C. N. Clanton, F. P. E. '33; W. W. Davies, Arch. '33; J. W. Juvinall, E. E. '33; J. L. Kampwirth, C. E. '33; J. Moravec, M. E. '33.

Cigars and cigarettes were available to the smokers, and everyone played in the numerous card games. Entertainment was furnished by the five neophytes, and though of a highly technical nature, it was thoroughly enjoyed by the members.

Refreshments ended a pleasant evening.

## Seniors to Be Fitted For Caps and Gowns

Measurements for senior caps and gowns will be taken next Friday morning from 9 a. m. until 12:20 p. m. E. J. Wiltrakis, chairman of the committee in charge of the caps and gowns, and his two assistants will be present in the second-floor electrical lab to take the measurements.

All seniors who expect to graduate this year are asked to appear at this time. No deposit is required at the time of measurement.

The committee in charge of the official graduating regalia consists of E. J. Wiltrakis, C. E.; S. A. Carlson, C. E.; and E. H. Chun, M. E. More definite announcements as to the arrangements will be posted on the bulletin board.

## ETA KAPPA NU CONTEST

Eta Kappa Nu, honorary electrical engineering fraternity, has announced its annual essay contest open to sophomore electricals. The purpose of this competition is to stimulate extra-curricular investigation and study in some subject allied to the general field.

The papers are to be of approximately 2000 words in length, completed and in the hands of the judges by May 20.

## Entire Development Plan, As It Now Stands, Given in Full

The following questions on the Development Plan and its Promotional Program have evolved from discussions among students and alumni. They are answered here by the Development Committee.

### The Development Plan.

#### A. General characteristics.

##### 1. What is the Development Plan?

The Development Plan is the course of action which has evolved from an exhaustive survey of engineering education and the needs of industrial Chicago, and which is designed to establish the mechanisms by which Armour Institute may continue to determine those needs, and to readjust and enlarge the physical and functional character of the Institute to meet them.

##### 2. Why is it unusual?

Industrial, business, and professional men, by organizing to define their needs, are given a voice in determining the best kind of education for the men whom they are later to employ.

#### B. Some details of the Development Plan.

##### 1. Who sponsors it and approves it?

The Plan has been sponsored by the Board of Trustees and endorsed by all of the industrial and educational leaders who participated in the studies from which it has evolved. Men whose counsel was sought include such industrialists as Samuel Insull, Britton I. Budd, and Col. R. I. Rees, vice-president of the American Telephone and Telegraph Company, in the utilities field; and such educational leaders as William E. Wickenden, President of Case School of Applied Science, Karl T. Compton, President of Massachusetts Institute of Technology, Harvey N. Davis, President of Stevens Institute of Technology, and Edward R. Weidlein, Director of Mellon Institute of Industrial Research.

##### 2. How long before the Development Plan will be completed?

Development must be measured by steps and not by years. The survey of present needs, which is the first step in the Plan, has been completed. The Promotional Program, or second broad period of the Plan, will last for ten months. Fulfillment of the entire Plan as it stands today will take about three and one-half years. Actually, however, the Plan will establish a system demanding continued attention to the needs of the area as they are evolved, and continued action to meet those needs, so that development along the most useful lines will never cease.

##### 3. How much will fulfillment of the Plan cost?

Between \$3,000,000 and \$10,000,000.

##### 4. How will this amount be expended?

As this amount becomes available, it will be applied progressively to the successive steps in the Development Plan. Approximately \$1,500,000 will be spent for land for the new campus. Buildings and equipment may ultimately require as much as \$2,000,000, although original expenditures for buildings will be only a small part of that amount. Final endowment, to be built up over a period of ten years in order to insure the yearly income necessary for operation, must be about \$7,000,000. All of these figures include variable factors which make them subject to revision.

##### 5. Where will this money come from?

Approximately \$200,000,000 is given to educational institutions in the United States each year. During 1931, three universities alone received more than \$39,000,000 in gifts. Proper cultivation and approach to prospective sources should attract the necessary support to Armour Institute.

##### 6. Does the Plan guarantee the autonomy of the Institute?

As approved by the Board of Trustees, the Plan recommends that the Institute remain independent of any other general educational institution.

### The Promotional Program.

#### A. General characteristics.

##### 1. What is the Promotional Program?

The Promotional Program, which is the second part of the Development Plan, and which has been designed to attract the general interest, attention, and material support necessary to fulfillment of the Development Plan, may be divided as follows into four parallel courses of action:

- Organization of the Board of Trustees.
- Organization of the Industrial Relations Committee.
- Organization of the Personnel and Placement Department at the Institute.
- Publicity.

##### 2. What has been done to date?

The survey of present needs has been completed. Action has been started to enlarge the Board of Trustees to 40 members; one new Trustee has been named, and the Board is carefully considering the next two or three for approval. Such problems as the new charter, internal installations and readjustments at the Institute, and final selection of a new location have been assigned to committees by the Development Committee.

(Continued on page 2)

## ARMOUR WILL PLAY HOST TO UNIVERSITIES AND COLLEGES OF MIDDLE WEST SATURDAY

### Seventeen Colleges Have Entered Teams in the Tech Relays

#### ARMOUR STUDENTS ADMITTED FREE

## FIRE PROTECTS RETAIN LEAD IN STUDENT DRIVE

Students in the Fire Protection Engineering Department, by averaging more than eleven dollars per man, have taken a decisive lead in the student drive. The Mechanicals are firmly entrenched in second place but a close race for third place is being staged by the Chemicals, Architects, and the Civils. These standings are reported from the statistics at the end of Thursday's activities.

The average of the student body as a whole is below the quota of ten dollars per man. Since only about 55 per cent of the students had pledged by the end of last week, there may be a decided change after the contributions yesterday have been tabulated. Very few students have expressed inability to pledge, but there has been some reluctance in turning the cards in signed.

#### Junior Class Leads

It is interesting to note that the Juniors and Seniors are in the lead with averages of 64 and 61 per cent whereas the Sophomores and Freshmen, who will benefit the most, are far in arrears with only 39 and 26 per cent.

First deposits on the pledges should be paid within the next ten days. The money can be turned in directly to Mr. Allison's office or it may be given to the student who took the pledge. Receipts will be issued for the money as it is paid. The same organization that took the subscription will act as collectors at the end of each month.

Stanley M. Lind, general chairman of the student campaign committee, wishes to express his thanks and appreciation for the cooperation rendered him by the faculty and the student committees of the various departmental organizations.

#### Classified Standing

Juniors	69%
Seniors	61%
Sophomores	45%
Freshmen	31%
Fire Protects	87%
Mechanicals	52%
Chemicals	44%
Architects	41%
Civils	39%
Electricals	33%

## Badger's Dean Favors Hell Week's Abolition

Historic "Hell Week" of the fraternities may soon be a thing of the past. In a letter sent to various fraternity presidents of the Wisconsin campus, S. H. Goodnight, dean of men, quoting President H. W. Chase of the University of Illinois, states that fraternities "are continuing practices which penalize and convict gangs are abandoning."

"Hell week," continues Dean Goodnight, "is hostile to every higher interest of fraternal life at the present time. Faculty members grow resentful when their students fail to appear in class, or, if they do come, are pale, sleepy, and unprepared. Parents are angered by what they call outrageous abuse of their sons and it raises new enemies against fraternities when we sorely need friends."

With the Armour Tech Relays less than a week away, final arrangements are being made to insure a successful day of competition for track and field athletes of the Middle West colleges and universities.

#### 17 Teams Entered Up To Date

Six additional entries were received in the past week, and a few more are expected in the next four days. Entries up to date are: Grinnell College, Butler University, Lake Forest College, Thornton Junior College, University of Wisconsin, DePaul University, Monmouth College, University of Chicago, University of Indiana, Purdue University, Carleton College, Illinois State Normal, Bradley Polytechnic Institute, University of Missouri, Millikin University, Northwestern University, and Armour Tech.

#### Armour Men to Get Tickets Thursday

The entrance fee for the public has been fixed at 50c, but arrangements have been made to admit students from Armour and from the University of Chicago free. Armour men will get their tickets by presenting a tuition receipt at the cashier's office, second floor main building, on Thursday March 29. The ticket number will correspond to the registration number of the student.

Professor Schommer has arranged the following program, which will be followed as closely as possible to provide sufficient time for every event.

#### Order of Events Afternoon

- 2:30 Meeting of track coaches and managers at the office of Bartlett Gymnasium.
- 3:30 Preliminaries: 70 yard dash.
- 3:45 Preliminaries: 70 yard high hurdles.
- 4:00 Preliminaries: 70 yard low hurdles.
- 4:15 Preliminaries: 880 yard relays (Six teams to qualify for finals).

#### Evening

- 7:30 Semi-finals: 70 yard dash.
- 7:30 Pole vault.
- 7:30 High jump.
- 7:40 University 2 mile relay.
- 7:50 Finals: 70 yard dash.
- 8:00 College 2 mile relay.
- 8:00 Shot put.
- 8:10 440 yard run (First race.)
- 8:15 440 yard run (Second race.)
- 8:20 1 mile run.
- 8:30 College 880 yard relay.
- 8:30 Broad jump.
- 8:40 University medley relay.
- 8:55 Finals: 70 yard high hurdles.
- 9:05 880 yard run.
- 9:15 College 1 mile relay.
- 9:25 Finals: 70 yard low hurdles.
- 9:35 University 1 mile relay.

The program allows ample time for the evening meal, and also provides for a get-together of the coaches and managers of competing teams at 2:30 P. M. in the office of Bartlett gymnasium.

#### Medals On Display At Spauldings

The awards have been completed and are on display at the Spaulding Brothers' sporting goods store. Medals will be given to the winners of individual events, a gold medal for first place, silver for second place, and a bronze medal for third place. In addition, medals will also be given to the individuals of the winning relay teams taking first three places in each division. All the medals have the same design, a group of five runners with the words "Armour Tech Relays" at the bottom.

The meet has been given public notice. (Continued on page 4)

# Armour Tech News

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Nothing great was ever achieved without enthusiasm.

Emmerson—Essay "On Circles."

## The Armour Tech Relays

On Saturday, April 2, a large number of trains and buses will bring a much larger assemblage of the outstanding track and field stars of the Middle West together at the University of Chicago's field house to compete for further honors under the auspices of the Armour Institute of Technology. In this, the first of an annual series of relay carnivals to be sponsored by Armour, men who will compete in the Olympic Games this summer will gain further experience.

You, as Armour students, have been extended a cordial invitation to attend this meet. As an evening of entertainment for you and your friends, this meet cannot be paralleled. It is the forerunner of many years of track competition to be sponsored by your alma mater. It is a track gathering of national importance and its influence will also be felt in international circles before the year has drawn to a close.

A few of you will be privileged to compete for Armour in this pageant of trackmen. By far the largest group of you will occupy the stands as spectators. But do not forget that the audience at this meeting will be an extremely important body.

With the sporting pages of the papers containing many notices of the entries as they are received and with a continually larger space being given to its news releases, it's vital that you ask your relatives, friends, and neighbors to see a contribution of your school to national sporting life.

Again this relay carnival is foretelling the place of Armour in sports in the years to come. Because of the nature of our schedule in school, we are about to concentrate our efforts on a track team in an effort to make that team the best in the country. Athletics, a vital part of the Armour Plan, will center about the developing of a track squad of major importance.

With its diversity of events calling for men of many different types, track is ideally suited to the needs of engineering. Clearly realizing this, the men who are to control a large part of the future destinies of Armour are backing this idea of a team of national import. Although the present squad is not expected to hang up any phenomenal records at the meet this year, it will do its share. Your attendance at the first annual Armour Tech Relays will be an item that will give you considerable pleasure in years to come. It will be our privilege to see you at the Fieldhouse on April 2.

O. T. B.

# "The Slipstick"

Cleave to "The Slipstick"; let the Slapstick fly where it may.

### READY-AIM-FIRE AWAY

When Preacher Breh gets hot on his topic entitled "Engineering and Happiness" there just hain't no telling where he'll end up. We heard all about the waters of the Red Sea last time.

Hear'd Stan Livingstone playing the piano last Tuesday eve. Reminds us of the fact that Stan used to have a collection of pianos, or was it piano stools, or was it piano keys, or was it Stan at all.

Joe Lagan of late has been propounding his Scandihooovian theories to a select group of followers, but they don't believe a word he says.

Grosser and Dickey are soon to announce improvements in the Morse Code, as per their research with a ten cent buzzer. They may be reached in the drafting room in the Mission building at any hour of the day or night, including Sundays and holidays.

Eskey attends a huge track meet every Sunday. He usually places quite high in the main event. Ask him for details.

Well!! Well! Bill Jost and a broken arm. He might try to give you a plausible story but we warn you, DON'T BELIEVE IT!!

P. H. Korrell still holds the record as target for crasers.

And now the school's big bass drum boasts a big slit the size of a manhole. Who done it? Who done it?

Frye, Jost, and Stocklin attended the A. I. E. E. convention in Milwaukee some time ago. They told us a few things about the convention but nothing about Milwaukee. They could not have spent all their time in the Public Library.

O. G. Linnell pursues a phantom objective in Valparaiso quite often, so we hear. It is said that nothing is known about this objective which is slowly becoming mythical because of a lack of details.

Can't imagine what's happening to the fire protects? Not a peep out of 'em for a week. "Sorry" must have whipped them into line.

That fool "Steam Shovel" is loose again this week. We can't see what in tarnation good they think they are. All they do is swipe our stuff.

Well, well, Ratner is loose again. Last week when cookin' up a chunk of lumber he just about choked us out with his boiled fish order.

We notice that JULIUS Moravec has taken an interest in out-side activities. We could hardly believe our eyes when we saw him at the last two assemblies. Not only that but he was at the A. S. M. E. too. Nice going, "Red", keep it up.

We have just discovered why "Whispering" Christoph was fired from his job last summer. He had a good job in a boiler shop and did his work well but he talked so loud it bothered all his fellow workers.

Mrs. Clanton's Boy always pounded dents in her cooking utensils so she sent him away to Armour. Now little Carl takes it all out on the kettledrum.

Have you noticed Young Stehno running around with a salt shaker in hand? He is trying to get enough feathers for his cap to merit his inheritance of the Big Brother's title, "Chief".

"Willie" Holland insists on pokin' his hand in the torsion machine in Mech Lab. We hope he succeeds in twisting it off some day.

Ever try aiming a rusty revolver at "Dave" Cornwell? He don't like it a bit.

Davis can make some of the prettiest art poses when he goes to sleep. If you haven't seen him you are missing something.

And our good friend Willard has been led to believe that "the current is actually in phase with the voltage, haw haw."

Need any limburger cheese? See Newt Cammon. He specializes in it.

The barbers threaten to go at it again. If plans materialize old man Hess will be minus a moustache.

And with this last attempt at "Puttin'-em-on-the-pan" we relinquish our hold on "The Slipstick" with all its stale jokes to our successor, Mr. Diamond S. Dickey M. E., '33. We know he'll like the job and we hope he gets all of the co-operation we have enjoyed.

We wish to thank the following men for their contributions which have helped to make the column what it is: Rad, '35 'er, Numb-de-plumb, Chemiker, Futt Futt, Francois, and any other who we may have omitted.

So long, men, and good luck to you, "Hurricane."  
THE BONGNEER.

## INDUSTRY SERVED BY INSTITUTE FOR EXPERT RESEARCH

A small furniture manufacturer was dissatisfied with the polish he had been using to finish his products. His competitors were making a better polish at a lower cost, and his business was seriously threatened. The experimenter in his own small laboratory was producing no results, and finally advised him to take his problem to an industrial research institute. He borrowed a few thousand dollars, went to the institute, and was given the full services of an expert research chemist working with the finest equipment in the country. In less than six months the director of the institute returned to him with a new polish and advised him to patent it. The manufacturer was delighted with his results, and the suggested patent was taken out. That was five years ago. Today, that man is no longer in the furniture business. He is selling his patented furniture polish to manufacturers all over the world; he and his stockholders have made millions. He invested in scientific research.

**Industrial Research Romantic**  
That, of course, is an unusual story—a stroke of fortune. But every industrial research institute has several such stories, and hundreds of similar cases in which more than complete satisfaction has been returned.

As it is exemplified in Mellon Institute of Industrial Research at the University of Pittsburgh, the industrial research institute is organized to do applied scientific research on the specific problems of industry. Although much the same type of work is done in the industrial research institute and the graduate department of the college of engineering, the purpose of the latter is to provide an education in research methods and work, while the purpose of the former is solely and simply to produce results for industry. Any educational value which the work itself may contain is incidental. According to Dr. Edward R. Weidlein, Director of Mellon Institute, this difference in motive or purpose is the greatest one between pure and applied scientific research. The second important difference is that applied science must pay its own way and produce results; pure science need do neither.

**Specific Problems Solved**  
In many graduate schools, of course, students and faculty members are working on problems for industry. But frequently these are emergency problems—modern competition in industry may demand that a research problem be given immediate attention. And the graduate school, with education as its primary aim, cannot bring all of its resources to bear on any such problem. Furthermore, many of these problems are proprietary in nature; a manufacturer may come to the graduate school with a research problem very similar to one which has already been submitted to the school by one of his competitors, and results achieved should belong to the company which first originated the problem. But the graduate school of science, which may be receiving support from both companies, cannot well refuse to do work for either of them. Thus it must restrict its applied research to problems of broad scope and general interest.

**Problems Gain Concerted Attention**  
In the industrial research institute these difficulties are eliminated. It can give full time to any problem submitted, and it gives industries the use of equipment they could never maintain themselves, and the services of men whom they could not afford to employ. Moreover, inasmuch as the industrial research institute, unlike the graduate school of the engineering college, is under no general obligations for its support, it is at liberty to turn down any problem submitted if work on it might be detrimental to the interests of an earlier client.

**Unlimited Number of Problems**  
There is no lack of such problems to handle. Mellon Institute is paid over \$1,000,000 each year by industries all over the country. The Paper Institute at Appleton, Wisconsin, was established by the paper companies of that area to do research work in paper composition and inks. Industrial executives in

the Chicago area have long felt the need of such a service, and many of them have expressed an enthusiastic endorsement of the proposed industrial research institute to be affiliated with Armour Institute of Technology.

In addition to the direct service which such an institution can perform for specific industries, it may be valuable to industry as a whole in many secondary capacities. It provides the finest training possible for scientific and technological industrial executives. Dr. Weidlein complains that industry is constantly taking away his best men as fast as he can train them. The industrial research institute also serves as a consulting center where the scientific research men employed by industry may receive assistance in their own work.

### Engineering College Aided Indirectly

The engineering college benefits indirectly from the work done by the industrial research institute. Men from the graduate school of the college may proceed into the institute and get an intensive training in technological industrial management; there they are furnished with an objective of usefulness to industry which is a constant stimulus to their work. Furthermore, the industrial research institute is an excellent means of attracting interest and attention to the college; Mellon Institute, according to officials of the University of Pittsburgh, has been worth millions to the University as an advertisement, and it has always paid its own way!

**Will Develop Independent of College**  
Plans for the incorporation of the Industrial Research Institute to be affiliated with Armour Institute call for a corporate membership of about six men who shall also be members of the college corporation. Men who (Continued on page 4)

## Theatre

Are you good at playing the game of Sherlock Holmes? We thought we were until "Zombie" came along and upset our conceit in a great big, decisive way. This mystery thriller, now showing at the Adelphi, is one which keeps you guessing up to the last few minutes of the last act and it certainly has an O. Henry ending if a play ever had one.

The locale is in the mountains of Haiti where Jack Clayton and his wife Sylvia Clayton (Pauline Starke), live on their plantation. It is this plantation which becomes the objective of the master mind who is even willing to commit murder in order to secure his ends. The tools which he uses to further this unsavory work are the animated corpses of the natives who are apparently dead except for the fact that they move about mechanically under the influence of a powerful hypnotic spell.

In the course of events, Jack Clayton falls under the spell of this power and is buried for dead. His subsequent resurrection and doings are something which keeps the audience on the edge of their seats and we'll wager that if any of them pass a cemetery on the way home, they probably will make a detour after seeing the "zombies."

The play is natural and believable all the way through, and is characterized by a complete absence of dull spots from the time the curtain rises in the first act till it falls on the astonishing climax in the third.

Hunter Gardner as a young doctor friend of the Claytons and George Regas as the overseer give a very good accounting for their respective roles, as do all the others.

## Students' Questions Answered By the Development Committee

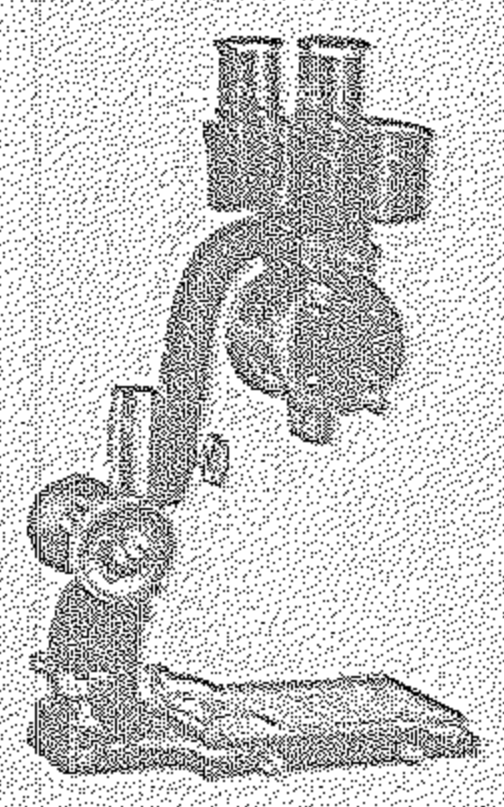
(Continued from page 1)

Special presentations of the Development Plan are being prepared as the first step in obtaining capital from industry, foundations, and individual benefactors.

- B. Details of the Promotional Program.**
1. How much will the Promotional Program cost?  
To carry on the promotional work for the next ten months, involving as it does intensive preparation, organization, and publicity activity, the operating budget of the Institute must be increased \$60,000.
  2. How many alumni participate now?  
This Promotional Program has been planned out in detail. Alumni can give the greatest assistance at the present time by underwriting the \$60,000 which the Institute must spend during the next ten months to carry on this work.
  3. When may this money be paid?  
Your subscription may be completed any time within the next eight months.
  4. Who have contributed so far?  
The Board of Trustees have paid the entire cost of the survey, and of the Promotional Program as far as it has gone. The Faculty Division of the Special Gifts Committee has reported seventy-seven subscriptions to the promotional fund amounting to over \$12,000.
  5. What has been done with the funds raised five years ago?  
The \$250,000 paid by alumni at that time has been used to maintain the Institute.

# BAUSCH & LOMB FOR PRECISION

In this machine age, industry must depend on metals for certain unvarying characteristics. The Bausch & Lomb Binocular Microscope for metallurgical analysis provides America's industrial chemists with an auxiliary analytical instrument.



BAUSCH & LOMB OPTICAL COMPANY ROCHESTER, NEW YORK

### REAL NEED EXISTS FOR INTERMEDIATE TECHNICAL SCHOOL

Between the secondary schools and the engineering colleges there exists a gap which is not satisfactorily filled by present institutions of engineering education in America today. Industry places a constant and heavy demand upon engineering education to provide men who have something more than the general educational training they have received in the high-schools, but who need not have the broad scientific education to which the engineering college course is devoted. In Germany, for example, this gap is filled by the *maschinenauschulen*, or "machine-construction schools", in France by *L'Ecoles darts et Metiers*, or "schools of arts and crafts", and in England by the *Technical Institutes*.

#### Much Need For Technical Institute

In America, however, the development of equivalent technical institutes has not kept pace with the demand for men of such training. All too often, as a matter of fact, men whose purposes would be amply served by this grade of training, who wish to become supervisors and production managers in industry, technically proficient but not professionally and scientifically educated, find their way into the engineering college when perhaps they do not have sufficient scholastic ability, and in such numbers that the standing of many of these colleges has been materially lowered, class "mortality rates" are high, and the pace for the higher grade student in the college must be adjusted to fit the capacities of men who do not really belong there.

#### Technical Institute To Be Training School

The secondary schools, and above them the engineering colleges, are distinctly educational institutions, while the technical institute is rather a training school or "practice ground" for specific trades and occupations. Perhaps the functional scope of the technical institute can best be described by quotations from the report of the Study of Technical Institutes made by the Society for the Promotion of Engineering Education in 1930-31.

#### What Is a Technical Institute?

- "It is a school of post-secondary character, but distinct in character from the college or university in the American sense of those terms.
- "Its purpose is to train men for callings and functions which occupy a position between the skilled crafts and the highly scientific professions.
- "It caters principally to persons who, either through previous or collateral experience in industry, have found their bearings and desire intensive preparation for chosen lines of progress.

#### Varied Training Offered

- "It offers training both for technical pursuits, concerned with planning and control, and for supervisory pursuits concerned with operation and maintenance. The engineering college more largely emphasizes the former, the technical institute the latter group.
- "Being intensive in purpose, its courses are of shorter duration than those of the professional colleges. They are essentially *terminal* or *finishing* rather than *preparatory* courses.
- "Being a school without academic standardization, its admission and graduation requirements are less formal than those of the colleges and stress capacity and experience more than credit units.

#### Emphasizes "Doing" Not Studying

- "Its methods of teaching are relatively direct, with a strong emphasis on *doing* as distinct from *book-study*.
- "Its teachers, while possessing adequate scholarly preparation, are chosen primarily on the basis of practical experience and personal sagacity, and ability to teach through programs of orderly experience.
- "Its entire scheme of instruction follows much more closely the actual usage of indus-

### Professor Schommer Initiated by A. X. S.

Professor Schommer of the department of chemical engineering was initiated into Alpha Chi Sigma, the professional chemical fraternity at Armour, on Friday, March 18. His many and varied activities prevented an initiation at the regular time.

He was one of the petitioners for the Armour chapter, Beta Psi, which was chartered in 1930.

#### TRUSS CLUB NOTES

The Truss Club takes great pleasure in announcing the pledging of Victor Peterson E. E. '33.

At the last regular meeting of the organization, James Leonard M. E. '33 was elected treasurer to succeed Ted Ladzinski, whose term has expired. Warren Sandstrom, captain of the boxing team, has been appointed pledge captain. We believe that Warren will be able to hold the pledges well in check.

A smoker was held on Friday, March 18th. Hearts seemed to be the popular game of the evening in that eleven men played in one game for several hours before becoming tired.

try than that of professional engineering schools.

#### Need For Men Imperative

The need for men who have this type of training is imperative. Employment analyses in industry show that while the graduates of first-rate engineering colleges constitute 2.2 to 3 per cent of total industrial forces, men with technical institute training are 6 to 8.3 per cent of total forces. Further analysis by the S. P. E. E. showed that the first need is approximately one-third filled by existing colleges, while technical institutes in America today supply only one-fiftieth of the demand for their graduates! Investigation of the Chicago area proved to Trustees of Armour Institute that nowhere is this need more strongly felt than here in Chicago. Industries are suffering from their enforced employment of men who are inadequately trained for skilled technical positions. To quote from the S. P. E. E. report, "Admittedly, a considerable part of the present demand on the engineering colleges could be filled by technical institute graduates, and often with greater satisfaction to both parties, if an adequate supply existed. Thus relieved, the college could emphasize more truly professional aims and standards."

#### Two Distinct Faculty Bodies

Since the technical institute and the college of engineering cover different fields, attract different men, teach by different methods, and have curricula which are not alike either in length or in content, it is the consensus of engineering educators that the administrations of the two schools should be independent and that they should be separately established.

The present buildings and equipment at Armour Institute are well suited to the purpose of a technical institute. The location is excellent. It is generally agreed that the entire plant is inadequate to the needs of a first-rate college of engineering. All of these facts are considered in the Development Plan. Trustees feel that a technical institute giving the kind of training herein outlined is a vital part of the educational structure which must serve the needs of the Chicago industrial area. They recommend that a technical institute corporation be formed as an independent unit in this structure, and the corporation purchase the present plant of Armour Institute.

#### Sufficient Support Assured

It should not be difficult to attract support to the technical institute. When the corporate body is organized and able to make a clearly defined statement of its aims and purposes, it will have an immediate and strong appeal to all large industrial firms in this area, and to the thousands of men who need the training it will have to offer. The nature of the courses given in the technical institute is such that operation is inexpensive. In many such schools, as a matter of fact, tuitions pay the entire cost of operation, and endowment or subsidy is unnecessary. Thus the technical institute in Chicago affiliated with Armour Institute, will become a working reality with a minimum of promotional effort and original expense.

### ARX NEWS

Bill Davies had an article in the March issue of the *Armour Engineer* on "Designing the Modern Skyscraper." His illustration of the Palmolive Building also was very effective.

Bill however, refuses to clear up the mystery of the principle of the "pest and lintel", he mentioned in his article.

Roy Skubic has lost his standing now. He received a First Mention in the recent Life drawing judgment and Professor Krehbiel complimented him by saying his work equaled professional work. Every one is bidding for places near Roy in Life now.

During the recent heavy snowfall, the Senior Archers must have felt like orphans of the storm. The wind was driving the snow against the windows of their drafting room and thru the many cracks around them into the room itself. It is an unforgettable feeling to have snowflakes trickle down one's back.

The Sophomores seem to have designs upon the Freshmen for the coming initiation. They have been suggesting things to the Juniors who have charge of the affair.

### Revise Constitution For Musical Clubs

Step by step the constitution of the Armour Tech Musical Clubs is being revised. Although the nature of the document requires a slow, deliberative period in which to consider its revision, the process is being carried on as rapidly as is proper.

The constitution has been rewritten and approved, in general, by the officers of the musical clubs and by Mr. Allison. The next step which has been begun is the reading of the document, several sections at a time, to each organization at their respective practices.

Any objections or suggestions are to be recorded at that time and will be incorporated later. When the final draft is accepted by the various organizations and again by Mr. Allison, it will be submitted to the A. T. A. A.

With the final approval of the A. T. A. A., the new constitution will go into effect. In order to insure a fair treatment in the new constitution members of all the musical clubs are urged to be present at the rehearsals when the document is to be read.

### INTERFRATERNITY MEETING

Under the direction of Edwin H. Chun, chairman of interfraternity athletics, a meeting of representatives of the fraternities was held last Thursday, March 24, in the Tau Beta Pi rooms.

The group met for the purpose of discussing interfraternity baseball. They also made out a schedule for this year's competition.

Tomorrow, March 28, the interfraternity council will hold a meeting at the Delta Tau Delta house, 3155 South Michigan Ave., at 5:30 p. m.

The main topics under consideration are the rushing regulations and certain parts of the constitution.

### Large Band Organized To Play for Relays

There will be an initial rehearsal of the Band tonight to prepare for playing at the Invitational Meet next Saturday evening. Every member is asked to be present.

If as many men report as have signified their intention to do so, there will be at least thirty pieces. This number is necessary to play the marches and college songs effectively in a place such as the Field House at the University of Chicago.

Any man who has not reported but who wishes to play may do so by reporting at this rehearsal even if he has not his instrument here today. There will be rehearsals tomorrow and Friday. The band will play during Saturday evening but not at the preliminaries in the afternoon.

### Modest Sophie Zilch Disdains Iowan Honor

Another member of the now famous or maybe notorious family of Zilches has brought added honor to the paternal name. Sophie Zilch, a cousin or perhaps a maiden aunt of the Zilch brothers, Joe and Oscar, was selected as queen of the Mecca Ball, the annual frolic of the engineers at the University of Iowa.

It may be recalled that in the recent election for the best looking and most whatnot senior at Armour, the two brothers, Oscar and Joe rated second best in two divisions. Fraternity politics or perhaps the mild winter kept them from the top position. Oscar or 'Ockie' as he is more familiarly known was rated as the second most intellectual senior in the Institute while Joe ranked as second most popular.

The law students and engineering students are traditional rivals at the University of Iowa. When the engineers prepared for their recent frolic, the legal experts decided to volunteer their services to make the event more interesting. They even went to the trouble of preparing handbills announcing the selection of Sophie Zilch as queen and circulated the said handbills as widely as possible.

This friendly cooperation caused a dilemma, however, as the engineers had already selected another queen and arrangements had been made with this candidate in mind. However as Sophie did not show up on the night of the ball, perhaps because of her innate modesty, the affair was run off smoothly.

Upon investigation, one striking fact was noted. The *Daily Iowan* reporter had as difficult a task locating Miss Zilch for interview as did the *Armour Tech News* sleuth in finding Joe and Oscar in the registrar's files.

### Students Battle Over Coed Queen

Three students with gunshot wounds and a fourth in the hospital with a possible skull fracture make up the casualty list in the bitter feud between University of Missouri engineers and law students.

Because the law students kidnapped a coed, so that she was unable to reign as queen of the engineers' ball, the engineers sought revenge. They attacked one of the girl's abductors, who drew a gun and shot three before he was beaten unconscious.

### A. I. Ch. E. Holds Annual Smoker

The long awaited A. I. Ch. E. smoker was held at the Theta Xi house last Thursday, March 24, at 8:00 p. m. It was well attended, and every minute of the time was well spent with some of the numerous games going on.

Among these games were poker with phoney mazuma, bridge, euchre, and roulette. Considerable interest was shown for the miniature roulette wheel operated by W. Hollmann, and many tried their hand at breaking the bank. His activity as croupier was rewarded for the game ended with all the mazuma in his possession.

Hidden talent among the members was brought forth when Paine and Hodgson gave their versions of numerous popular and classical tunes on the baby grand piano.

A high point of the evening came when president Stockman announced the first call for refreshments. The presence of plenty of coffee and various kinds of sandwiches was welcomed by everybody. A picture of the group for the Cycle was snapped by Editor Schodde.

#### GRADUATE WED

Among the late list of graduates succumbing to the lure of marriage is Eugene A. Pensinger '24. He was married to Agnes Dullum on February 27, 1932. The newly-weds reside at 4904 Jackson Boulevard.

### Needy Student Fund To Be Established

It has been found that many students in the numerous colleges and universities throughout the United States actually suffer from want of food in order to continue their education.

This is a deplorable situation and steps must be taken to rectify such conditions. It has recently been suggested by the *Maroon* of Loyola University in New Orleans that some fund be established to help such students, and the *News* has taken action to provide a means for helping them.

We ask you to place one penny in the *Tech News* fund box in the school lunchroom every time you buy a meal there. Every cent will be used to provide food for needy Armour students, if any are to be found in this predicament; otherwise, the money will be turned over to some church to feed the poor people of its district.

### THE STEAM SHOVEL

Bob Rychlik finds himself in the position of the young boy who played truant on a school holiday. He accidentally on purpose forgot to attend Schommer's class in engineering chemistry on a day it didn't meet.

Our platform for the week is "a new Easter bonnet for John Schommer." The hat which he now wears was in the process of development during the time of the Pharaohs. Having matured to a ripe old age we recommend that he bury it.

Spring fever came in like a lion and went out as meek as our junior fire protects. They dared to yawn while in Professor Paul's class in hydro. Write your own story.

It must have been the depression or the anticipation of an early spring that caused Frank Henke, soph electrical, to run barefoot around school.

L. Phillips wishes to refute all rumors that he is in the interior decorating business or has anything to do with the sign on Federal Street near 34th.

Mention is made of a junior fire protect who spent his spare time unscrewing light bulbs in juice lab lamp racks. His full name is Arlaja Afta Orensensa.

Notice—to those who are searching for the writer of this column. He is an ex-champion heavyweight boxer of Cicero, Gary, and points west.

The sophomore fire protects plan to cut Professor Freud's organic chemistry class again next week. Ha! Ha!

#### Advertisement

Wanted—Jokes just a wee bit off color.

The *Armour Engineer*.

Diamond Dickey, known as D. S. D. to Slipstick readers, puns in real life. . . "Barnacle Bill" Davies the gallopin' Arch is cast as a sailor in the next dramatic debauch of the *Armour Players*. . . Tom Jones will make a good lodge man; he gets on every committee and in every activity which will countenance a freshman. . . Warning. Don't accept any of Ed Staron's checks. He checked our Hyrdo problem last week and we suffered the greatest humiliation at the hands of Professor Paul. . .

Thoughts while riding to school. . . Wonder what I'll take the next thermo quiz for, or will it take me? With fellows like Fuhrer around what chance has the average man got? . . . Something ought to be done about these brilliant boys in colleges. . . Iowa elects Miss Engineering from the girl friends of their men students. . . Wonder how that would work at dear old Tech.

### Fraternity Notes

#### BETA PSI

A smoker was held by Tau Beta Pi, honorary engineering fraternity, at the Chapter house on Tuesday evening, March 22.

A surprise party was staged Sunday afternoon, March 20, in honor of Brother Cordes who reached the ripe age of 21 years on that date.

#### THETA XI

Many of the Brothers spent the Easter holidays at their respective homes.

Brother C. R. Marsh, x'33, spent the week-end in Chicago. He is now attending Normal University at Normal, Illinois.

#### KAPPA DELTA EPSILON

George Rosenthal has been appointed social chairman for the coming year by President Tuchinsky. The new chairman is now busy making plans for the Annual May dance.

#### PHI KAPPA SIGMA

The House Dance which was given last Saturday was very successful. The boys are now preparing for a Spring Informal to be given at the house Friday, April 1st. Due to the fact that flunk notices will soon be out, we have hired Dave Cunningham and his Gloom Chasers to supply the music.

### Chemicals Visit Plant For Oil Hydrogenation

An inspection of the Armour and Company oil and lard plant was made by the senior chemicals last Thursday. At the plant the party was met by Mr. Fischer, a former graduate of Armour and, at present, research engineer for the plant.

The main feature of the inspection was the manufacture of lard, the principal grades of which are known as neutral lard, kettle rendered lard, prime steam lard, and compound lard. Leaf lard, as taken from the hogs, is sent to a cooling room to remove the "Hoggy" flavor. It is then put through a hashing machine and run into a water jacketed kettle where it is melted at a temperature of 126 degrees. Introduction of steam insures complete removal of odor.


Refinement of lard with fuller's earth was also demonstrated to the chemicals. Fuller's earth is an earth containing shells as its main constituent and proves to be valuable in the bleaching of lard and oil compounds.

Another feature brought to light was the refining of crude oil. The process is most generally carried out by the addition of caustic soda to the oil, accompanied with vigorous stirring and heating to a high temperature. The resulting sediment is collected and used for the soap trade, while the oil itself is filtered and sold as "yellow oil."

Professor Bentley, who conducted the trip, said that because the inspection was one hundred per cent educational he believed the men profited a good deal by it.

#### WOMEN HEAR SCHERGER

Among the long list of women's organizations to whom Professor Scherger has spoken recently are the Sisterhood of the South Shore Temple and the Women's Club of La Grange. His topics were, respectively, the Jew and Gentile, and Religion and the Bible in a Changing World. A large gathering attended each of his lectures.

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# ARMOUR RELAYS SCHEDULED FOR SATURDAY, APR. 2

(Continued from page 1)  
ity by the Chicago papers and also by the college papers of those schools competing in the meet. From all indications, the meet should be the most important indoor competition this year.

In 1929, the U. of C. won an easy victory with 8 first places out of eleven events. One hundred college athletes competed in that meet. The second invitational meet was won by Armour. The Tech team was led by Captain Don Paul, '30, who won the shot put with a record heave of 46 feet 9 inches. This tied the Bartlett Gym record held by Weaver of Chicago, and it was not broken last year.

Last year Loyola defeated the U. of C. team by seven points, although the Midway team took five out of a possible ten first places.

This year, it is not only possible but probable that new records will be set in every event. In the first place, the 50 yard dash, 50 yard low hurdles and 50 yard high hurdles will be replaced by similar events at longer distances. Therefore, the best time in each of these events will be an Armour Invitational record, and without doubt, each of the events will be run in very fast time.

All of the middle distance records are expected to fall because of the large number of crack athletes competing in these races. It can be seen in the list of Armour Invitational records, that each of the middle distances were run in the best time in 1929, and therefore, these records have stood for three years. Following are the invitational records which will stand until Saturday, April 2.

INDOOR INVITATIONAL TRACK RECORDS	
50-Yard Dash	
East, Chicago, 0:05.5 in 1931.	
220-Yard Dash	
Root, Chicago, 0:25.2, in 1929.	
50-Yard High Hurdles	
Black, Chicago, 0:06.6, in 1931.	
50-Yard Low Hurdles	
Hayden, Chicago, 0:06.4 in 1931.	
440-Yard Dash	
Schulze, Chicago, 0:52.3, in 1929.	
880-Yard Run	
Williams, Chicago, 2:03.0, in 1929.	
1 Mile Run	
Letts, Chicago, 4:31.0, in 1929.	
2 Mile Run	
Jackson, Chicago, 10:02.0, in 1929.	
Shot Put	
Paul, Armour, 46-9" in 1930.	
High Jump	
Nelson, Butler, 6'-2 3/4" in 1929.	
Pole Vault	
Bangert, Chicago Normal, 11'-4" in 1930.	
Two-Thirds Mile Relay	
Jontry, East, Ramsey, Cameron, Chicago, 2:13.2, in 1931.	

As for the one mile and two mile runs, the records of which were also set in 1929; these records should be lowered considerably. Brocksmith of the University of Indiana, who ran the mile run in record time at the Western Conference meet, is competing in this distance Saturday. There are many fast men entered in the two mile run, and Brocksmith may be pushed in the mile run.

In the shot put event, Captain Don Paul's record may or may not be broken, but indications tend to lean toward the former result. The high jump record is under similar circumstances, but Nelson of Butler, who set the record at 6 feet 2 3/4 inches in 1929, will compete Saturday, and his best effort this year has exceeded the 1929 record by several inches. The pole vault record will be replaced by a Big Ten record, which may be two feet better than the 1930 invitational mark.

Due to the fact that a large number of relays are being run, new relay records will be set in each division. Another factor in the all-around record breaking is the superb track at the new U. of C. fieldhouse which affords all the athletes sufficient opportunity to show their speed. See you at the Armour!

## TECH SHORTS

### ARMOUR RELAYS

Armour's name will be emblazoned on all of the sports pages of the Chicago newspapers this week because of the Fourth Annual Armour Invitational Track Meet and Relays to be held next Saturday at the new University of Chicago fieldhouse.

Five Big Ten universities, including Chicago, Northwestern, Purdue, Indiana, and Wisconsin, have definitely sent in their list of entries.

Michigan, Iowa, and Notre Dame will probably enter their complete teams also.

Grinnell College of Iowa, Carleton College of Minnesota, and the University of Missouri are the smaller college out-of-state entries already received.

### Preliminaries Start at 3:30

The meet will officially start at 3:30 P. M. when the starting gun for the 70 yard dash preliminaries will be fired.

### STUDENTS URGED TO ATTEND

All students are urged to attend the meet. No admission will be charged to either Armour or the University of Chicago students.

Spectators at the meet will be able to see some of the best athletes of the Middle West in action, and also the potential candidates of the United States' Olympic track team.

Tech's baseball squad will probably be practicing outdoors this week. Coach Kraft will then cut the squad to twenty-five men for the first game.

A tentative game is scheduled with Chicago Normal college for one week from Thursday at Ogden field.

### Baseball League Starts April 16

The first league baseball game for Tech will be on April 16 at North Central college, Naperville, Illinois.

Last year Armour defeated North Central twice by the score of 5-2.

Armour's boxers won their fourth match of the season, defeating Culver 4 1/2-3 1/2.

This is the fourth match that Culver has lost in fifteen years, the others being to squads from West Point and Annapolis.

### Boxers at Valparaiso, Friday

The boxing team will have its final match of the current season next Friday at Valparaiso, Indiana.

Tech's team should easily win the meet according to pre dope. They defeated them in the Armour gym three bouts to two, Marcus, MacDonald, and Sandstrom winning their matches.

Illinois Wesleyan college won the Little Nineteen swimming championship with a total of 62 points, winning all first places. Armour's swimmers have beaten this team in a dual meet by a 45-30 score.

Several of Armour's tennis stars have been practicing in Tech's gym in the past few days.

### Quadranglar Meet Today

Armour's track squad will engage in a quadrangular meet at five o'clock tonight with Morton, Crane, and Chicago Normal at the University of Chicago fieldhouse.

Five outdoor meets with Elmhurst, "V" College, Lake Forest, Milwaukee State Teachers, and Bradley Tech have already been scheduled.

Captain Chuck Jens will enter the shot put event in the C. A. A. U. championships tomorrow night at the 124th Field Artillery armory. He won a third place medal last year.

A medley distance relay team will also be entered in the college relay competition.

## Tech Boxers To Meet Valparaiso

Armour Tech's crack boxing team will meet Valparaiso in the Hoosiers' gym for the last meet of the season. The match will be held Friday evening, April 1. The first bout of the evening is scheduled to begin at 7 o'clock.

The card as announced by Manager Ustryski will consist of five boxing bouts and possibly two wrestling matches. The affair promises to be interesting with the Armour pugsters gunning for the fifth victory of the season.

A little over a month ago Armour and Valparaiso fought it out in the Tech gym. The home pugilists succeeded in winning three of the five bouts, thus giving Armour the decision by a score of 3-2.

### Armour Boxers Confident

The Armour boxers have every reason to feel confident that they can defeat Valparaiso again. Just ten days ago the Tech pugilists did themselves proud by defeating the championship Culver squad, which has been defeated only four times in fifteen years, and had taken eight of ten bouts against Valparaiso this season.

The following Armour men have been matched for the Valparaiso encounters: Captain Sandstrom 126 pounds; Schavilje 125; Marcus 145; McDonald 143; and Heckmiller 154 pounds. The two wrestlers for Armour are Talaber 155; and Tiensuu 145. Their opponents had not been selected before the *Armour Tech News* went to press.

## Industrial Research Institute Is Outlined

(Continued from page 1)

have recently been approached for membership in the college corporation have indicated that there is a keen interest in the industrial research institute. Development of the Institute, except for the corporate overlap, will be entirely independent of the college. The Director of the Institute will be responsible to his corporate members, and will have no connection whatever with the President of the college.

Inasmuch as the industrial research institute will be paying its own way after two or three years of operation, trustees feel that as soon as the \$75,000 or \$100,000 necessary for building and equipment can be obtained, the institute should be established and should start to operate. The staff may be built up gradually as industry demands and is willing to pay for specialized work. It seems probable, therefore, that the industrial research institute will be completed and operating within two years.

### Mellon Institute Does Work At Cost

Mellon Institute of Industrial Research does all of its work at cost. For every \$1,000,000 paid in to the Institute, Dr. Weidlein estimates that over \$5,000,000 worth of results is turned back to industry. It seems entirely reasonable, therefore, that a small charge—perhaps ten per cent—be made by the institute here. Trustees plan to use this income to establish fellowships in the graduate school of the college of science and engineering similar to those maintained by the alumni research foundation at the University of Wisconsin. Men holding those fellowships work to originate problems which have industrial or commercial application. As fast as these problems are solved, the results are patented and the income from the patents is turned over to the University. The yearly income from these patents at the University of Wisconsin has been over \$800,000. As it is planned for Armour Institute, any such income will be divided equally between the graduate and undergraduate schools of the college, and trustees believe that eventually it will be used to build up endowment.

Thus in addition to the direct services which it may perform for industry and for the college, the industrial research institute may be seen as an important means of support for the whole new educational structure; indeed, it may be the means by which that whole structure will become permanently independent.

## Track Team to Meet Three Colleges Today

Armour's track team has entered two other meets for this week besides the relays. The first of these two meets will be a quadrangular meet with Crane, Chicago Normal and Morton on Tuesday. This will take place at the University of Chicago field house at 5 o'clock.

The other meet will be the Central Amateur Athletic Union track-meet, which will be held tomorrow at 5 o'clock in the 124th Field Artillery Armory at 52nd and Cottage Grove Avenue.

Captain "Chuck" Jens, who took third last year in the shot put, will enter that event, and the relay team will compete in the 1 1/8 mile medley relay. The relay team will be composed of E. E. Sademan, one mile; S. Lind, one half mile; and either K. S. Hirsch or J. Roberts will run the quarter mile, depending upon who makes the best time in the quadrangular meet. The 220 yard dash will be run by Kreuzenkamp. Last year the relay team took third place with the University of Chicago first.

Most of the Big Ten track teams will enter men and their relay teams. The Illinois Athletic Club, last year's team champions, will be entered. Sentman, lately of Illinois, who holds the records for the hurdles in the Big Ten, is now with the I. A. C., and will probably be entered in the Central A. A. U. meet.

Coming indoor and outdoor track meets are schedules as follows:

- March 29—Quadrangular meet Crane, Chicago Normal, Morton and Armour.
- March 30—C. A. A. U. Meet.
- April 2—Armour Relays.
- April 9—Elmhurst College.
- April 26—Y. M. C. A. College.
- April 30—Lake Forest.
- May 7—Milwaukee State.
- May 14—Bradley Tech.

## Class Averages Somewhat Lower

(Continued from page 1)

Mechanical Engineering	84.6%
Electrical Engineering	84.0%
Civil Engineering	83.6%
Architectural Engineering	82.7%
In the following groups the lists are arranged according to the seniority of their establishment at the Armour Institute of Technology:	
<b>Honorary Fraternities (Scholastic)</b>	
Tau Beta Pi	92.92%
Pi Tau Sigma	91.88%
Eta Kappa Nu	91.88%
Chi Epsilon	91.62%
Phi Lambda Upsilon	92.26%
Salamander	92.35%
<b>Honorary Fraternity (Non-Scholastic)</b>	
Pi Nu Epsilon	88.6%
<b>Honor Society</b>	
Sphinx	89.56%
<b>Professional Fraternities</b>	
Scarab	89.11%
Alpha Chi Sigma	88.10%
<b>Social Fraternities</b>	
Phi Kappa Sigma	84.83%
Delta Tau Delta	82.33%
Theta Xi	82.88%
Sigma Kappa Delta	87.71%
Phi Pi Phi	83.63%
Rho Delta Rho	86.90%
Sigma Alpha Mu	81.11%
Triangle	85.27%
Beta Psi	83.15%
Kappa Delta Epsilon	88.53%

The average of all the students belonging to the Phi Kappa Sigma, Delta Tau Delta, Theta Xi, Sigma

## Rifle Club Gets New Equipment

Now that the backstops on the rifle range have been repaired, the classes in Chapin Hall recline at ease. Until recently, the students were puzzled as to whether it was Al Capone visiting the Institute, or the riflemen getting in trim, as the old backstops had become so delapidated that the impact of the bullets was very audible throughout the building. K. L. Hackley, with the able assistance of Claude Blankenship, took charge of the repairing of the range and replaced the old backstop by newer and more modern equipment.

Kappa Delta, Phi Pi Phi, Triangle, and Beta Psi fraternities (fraternities that rent or own their own chapter houses) is 84.6% for this semester. The average of all other students is 83.8%.

This is a summary of the scholastic standing of the members of the freshman, sophomore, junior, and senior classes of the college of engineering and architecture, who were in attendance during the first semester of the school year, 1931-1932. In this computation, for the first time, the averages of all the classes were figured by the scheme which gives the grades more or less weight according to the number of semester hours in the course.

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# Armour Tech Relays



SATURDAY, APRIL 2, 1932  
University of Chicago Field House

Preliminaries at 3:30 p. m.

Admission 50c

Finals at 7:30 p. m.

Armour men admitted free