

## THE TECH

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Friday, December 13, 1907.

### THE REPORT OF THE PRESIDENT

Every student at the Institute should be vitally interested in the report of President Noyes. From it a man can better understand his true relations to the Institute.

Dr. Noyes mentions the following points:

Advisory relations are desirable between the Corporation and the Faculty.

The individual conference system should be extended to bring all students and instructors into personal contact.

It is advisable to divide students into sections according to their ability.

The departments ought to be given additional equipment and more floor space.

The Institute should continue as an undergraduate school and work along this line to the highest possible development.

Conditions in the Institute should be such that they produce not only well trained engineers but also broad-minded high-purposed men.

Advanced specialization should be restricted to fifth year work.

As a graduate school the Institute should aim to offer advanced training to Bachelors of Science rather than to Bachelors of Art.

To retain its educational prestige, the Institute must contribute to the advancement of science through research work.

To direct development, the Institute should have a permanent president.

In order that far reaching improvements may be made in physical conditions, the Corporation should decide on a permanent location.

The tuition should be less or at least there should be a reduced fee for first-year men.

To carry on improvements the Institute must have ample funds.

A more varied training in the first two years can be secured by the establishment of free summer schools.

For the welfare of the students, the Union and the Gymnasium should be larger.

Living expenses of the students could be reduced and their school spirit could be stimulated by the establishment of small dormitories.

By outside work the Instructing staff should keep the Institute in touch with the manufacturers and the community.

To encourage assistants and instructors in practical and experimental work, this work should be a requirement in promotions and in all departments research laboratories should be formally organized.

### SHOULD HOLD TO ITS TRADITIONS.

(Continued from page 1.)

is nearly the same as last year. The number of foreign students has increased from 76 to 80, now forming 5.7 per cent. of the whole. The proportion of new students who have previously attended other colleges has increased from 19 per cent. five years ago to 29 per cent. the present year. There is no very marked change in the distribution between the several courses. The three largest courses are as in the past those in Mechanical, Civil, and Electrical Engineering, with 226, 210, and 200 students, respectively. Next comes the Course in Mining Engineering and Metallurgy with 118 students, showing this year an increase of 18 students, the largest in any course. The average age of students entering the first year is 18 years 11 months, one month greater than last year.

Other interesting statistical information will be found in the report of the Registrar.

### Developments in Instruction.

The history of the past year will be found recorded in some detail in the reports of the general administrative officers and of those in charge of departments, which are submitted with this report. To these I invite your special attention. I can speak here only of the more important developments; and first, I will mention those relating to the work of instruction.

The curricula of all the strictly engineering courses have been modified during the past two years by the omission, wholly or in part, of the second year work in modern languages; and the time gained has been utilized to increase the amount of instruction in English and history, and to give a more thorough drill in fundamental engineering subjects, especially in applied mechanics, structures, and steam engineering. It is felt that few engineers make practical use of their knowledge of modern languages, and that the general and scientific studies that have been substituted are not only more directly useful, but either have a higher cultural value or provide a better mental training.

Important progress in the direction of more advanced work has been made by greatly extending and systematizing the subjects of instruction offered to candidates in fifth-year courses leading to the degree of Master of Science. Almost every department has announced, and is prepared to offer in the next school-year, advanced courses of a somewhat more specialized character in the different fields of applied science and engineering. Thus in civil engineering further work in the design of structures (particularly those of re-enforced concrete), of railroads, and of hydraulic works, is offered; in mechanical engineering, further study of turbine and gas engines and of machine design is provided for; in architecture, advanced courses in the various branches of architectural design are announced; and similarly in all other departments advanced work has been arranged for. The broad significance of this form of development and its bearing on the character of our undergraduate courses I shall speak of later.

To graduates from other colleges a special inducement to pursue such advanced work has been offered by a recent vote of the Faculty, which permits them to enter at once upon a course leading to the degree of Master of Science without previously taking our Bachelor's degree. This course will in general extend over a period of two or three years, varying according to the previous preparation of the college student.

There are no developments of any kind which are so important as those which tend to increase the effectiveness of our undergraduate instruction in meeting the needs of the individual student. I am glad to be able to tell you that this year an important step in this direction has been taken by the initiation of a plan of individual conferences between the instructor and students in certain first-year subjects. Owing to the inadequacy of the funds available for the purpose—for it involves additional instructors of first-rate ability—it has been possible this year to put this plan in force only to a limited extent in the subjects of English and mathematics. It is, I believe, of great importance that this plan be largely extended as rapidly as our facilities admit; for it is undoubtedly true that many of the students who now fail to reach our standards, could overcome many of their difficulties if they could receive more help in learning how to study and more personal encouragement and stimulation. The conference plan also develops an attitude of cordiality and mutual helpfulness both in the instructing staff and the student body which is the essence of a healthy college spirit.

The instruction in the department of mathematics is undergoing a somewhat radical revision, in which the old divisions into advanced algebra, analytic geometry, differential and integral calculus are being in large measure obliterated, and the whole subject is being presented, irrespective of this traditional grouping, in a manner most economical and advantageous for the student, and with the help of a large number of concrete applications.

The Department of English is trying the interesting and apparently successful experiment of dividing its students into sections upon the basis of their proficiency. This makes it possible to give instruction better adapted to individual needs; on the one hand, it avoids holding back the brighter students, and on the other, it makes it possible to help more effectively those who need it most. A trial of this plan in other subjects of instruction seems advisable.

(Continued on page 3.)

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