Aeronautical Engineering Division, Recently Created, Grows Swiftly

Twelve Will Graduate in June But Big Beginning Class Brings Total Students to 237

When the department of Aeronautical Engineering completes its first graduate unit in the College of Engineering and Architecture next June it probably will graduate about 12 students as its first full-time class, according to John D. Akerman, head of the new division.

Last year, five students were given the degree of bachelor of aeronautical engineering. At that time the aviation courses were offered as part of the work of the mechanical engineering department under the guidance of Dean O. M. Leland of the College of Engineering and Architecture.

At the beginning of the present year a separate department was set aside and during the fall quarter, 237 students were enrolled in the course. The difference in the enrollment and the number of students expected to graduate, Professor Akerman points out, is due to the fact that mathematics is extremely important in aeronautics, and a large percentage of sophomore and junior students are unable to complete the requirements. The difference is also partly due to the growing enrollment of freshmen.

The department has two planes donated by the Navy which are used for ground work. Five aircraft engines also have been given to the University by the Navy Department and various motor concerns for laboratory use.

During the school year classes are taken through various Twin City aircraft concerns in order to become familiar with problems of maintenance. Courses are also offered on lighter-than-air craft and the principles of dirigibles and balloons are studied. The airplane laboratory class, the only one of its kind in the United States, meets in the Experimental Engineering building and on the Municipal flying field a certain number of hours during the spring quarter.

A wind tunnel for aerodynamical research on airplane models is located on the second floor of the Engineering building. Charles Boeheim, assistant professor of mathematics and mechanics, who studied this phase of aerodynamics at Gottingen, Germany, under Professor Frndel, is in charge of this work.

Spring quarter work consists of flight training for senior students during which time they learn flight characteristics of different types of planes. Because the purpose of the course is to train engineers rather than professional pilots, students receive dual and solo training in several different types of machines.

After the completion of this course students are able to pass the Department of Commerce tests for private pilot's license, except those who have some physical defect. Men who are not physically qualified to do solo flying receive the same training as the others except that they are accompanied during their flights by an instructor.

Practical flight training is given by licensed instructors and costs the student only a nominal sum for registration fee. The remainder of the expense has been covered by the University.

An interesting survey was made by Professor Akerman on the student viewpoint with respect to the course and the reason why young men today are interested in the University's aeronautics course. Few students signify a desire to become professional pilots, according to the questionnaires filled out by freshmen this fall. The majority are interested in the engineering and operative phases of the industry.

According to Professor Akerman the present aeronautical industry is filled with mechanical engineers who have studied the subject as a sideline. Some of these men have seen the need for highly specialized knowledge of their field and are returning to schools where they can devote their entire time to acquiring it.

Other industries are beginning to see the need for trained aeronautical engineers to utilize the facilities and experience developed in this new field in the past 20 years.

Some of the fields which realize the advantages in employing engineers trained in aeronautical subject are those of geology, metallurgy and the automotive industry. Insurance companies and manufacturers of photographic equipment are also beginning to see the need for men trained in this field. Insurance companies are using the engineers to study the problem of aero-insurance.

Professor Akerman is a graduate of the aeronautical school of Moscow and the University of Michigan. During the World war he served as a scout pilot in the Russian air service attached to the French Army, where he fought on the Western and Italian fronts. Following the war he became chief engineer for several nationally known airplane companies. Some of the planes developed by him are now in use on the Chicago-Twin Cities passenger and airmail lines.

At present he is continuing his research in the field of popular safe aircraft.