Heads tallied; upper classes big

The combined junior and senior classes are twice as large as the freshman and sophomore classes, it was revealed by registration released Tuesday by Raymond D. Meade, registrar.

Senior class enrollment, largest in Tech history, leads with a total of 1,025 followed by the junior class with 868. Sophomores and freshmen lag with 495 and 457 respectively.

Heavy veteran enrollment in 1946 accounts for the bulge in upperclass size, according to Meade. Pent-up educational demands rocketed registration to capacity levels. The group which caused the biggest impact in 1946 now comprises the senior class.

Other registration figures released are: Day undergraduate enrollment, 2,890; graduate day, 215; total day, 3,105; evening total, 3,879; total school, day and evening, 6,984.

Fred Travis, director of admissions, reports that 314 new students have been admitted. The entering students were composed of 142 first term freshmen and 172 advanced students.

Fifth term admits for junior colleges reached 72. Fifty-seven of the incoming freshmen enrolled at the Institute of Design.

The moving up of the large veteran classes has swelled the size of the graduate school. Day and evening graduate registration showed an increase of 77.

Day undergraduate registration has dropped 456 this year. This pares enrollment down to the proposed normal of 3,000 full-time day students. Evening enrollment is running behind last year but indications are that registration will hold its own with last year's figure except at the graduate level where an increase is expected.

The size of junior and senior classes, plus the admission of a big fifth-term group, poses many administrative and teaching problems, faculty sources say. They add that the overbalance also accounts in part for the business-like character of the student body and the purported indifference towards extra-curricular activities.

CALCULATOR AT WORK: George Wilson, former associate engineer on Calculator, reads meters at console while engineers from Wisconsin Electric Power Co. set up power circuits and record data.

Power problems solved with Network Calculator

By Hal Bergen

Behind the facade of meter-dials and switches to be found in an air-conditioned room on the second floor, Main building, lies a complicated maze of electrical apparatus whose sole function is to implement a process well-known to engineering students.

Here is located the A-C Network Calculator, a device to facilitate the solution of difficult electrical and physical systems by the process of substitution. This installation, valued at over $100,000, is designed so that a measureable electrical equivalent circuit can be set up to represent the conditions of the problem under study.

The need for such calculators became apparent as the power systems of the nation grew from local direct current networks to large complex alternating current systems spanning huge geographic areas. However, individual enterprises could not use expensive equipment of this nature throughout the year and thus the cost to any one firm would have been prohibitive. This indicated the advisability of a cooperative ownership of one calculator.

Furthermore, the time required to assemble pertinent data on the problem under consideration is much longer than that actually needed for the calculator operation itself. Thus many companies found it expedient to lease time on a calculator for a minimum of time after they had gathered the necessary information. So it was that a central agency was needed to coordinate the use of a calculator shared by many groups.

Illinois Tech was the logical site for the calculator because of its central location, proximity to district offices of many manufacturers and availability of technical personnel for consultation. Eighteen organizations now share the calculator which was installed in June, 1945.

The study of electrical transmission systems is effected by actual construction in the calculator of a miniature network under study. By using a single phase to represent three phases and a higher than normal frequency, the size and complexity of the installation is reduced somewhat.

The IIT Network Calculator is a valuable time-saver in the solving of complex problems whose solutions might otherwise be prohibitively costly.