

Computer Center Is Scientific Advance

Prepares YU Students For Modern Age

By Jack Tucker

With today's rapidly expanding technology, automation is becoming of prime importance. Machines are constantly replacing men in many aspects of industry, business, and science. With this increase in automation the need for qualified operators for these new machines also increases.

One such valuable instrument that is rapidly coming into prominence is the electronic computer, a machine which can calculate in minutes a problem that would take man weeks to solve.

To cope with the growing need for qualified operators, last January the University established a Computer Center containing an IBM 1620 Digital Computer.

Under the direction of Dr. Thomas D. Fok, civil engineering, the Center is designed for instructional purposes for both University faculty and students.

Initiated at the beginning of this semester, classes in computer fundamentals are being taught by Dr. Fok and his assistant Prof. Michael Solomon, civil engineering.

Currently there are 45 engineering students enrolled and 11 faculty members from the Engineering and Business Administration Schools. The course is of a technical nature, consisting of three hours of lecture in which the fundamentals are explained and one hour of lab where the students get actual practice on the computer.

Dr. Fok explained that it requires about six weeks to become familiar with the numerical code system

and operational procedure of the computer.

Information cards are taken in at the rate of 250 per minute and answer cards are punched out at 125 per minute.

To multiply two numbers, for example, the operational program to be inserted into the machine must include the following: order to take in first number; order to take in second number; order to multiply the two numbers; and order to punch out the answer. All information is in the form of a numerical code which the computer is designed to follow.

The computer can perform no calculation for which it has not received an order. The sequence of calculations must also be listed. The major part of the work involved in operating a computer is, therefore, the actual designing of the program which it is to follow.

Once these programs have been compiled and processed in the computer, they are filed in a library for future use and reference. At present, Dr. Fok has compiled about ten programs and several others have been compiled by various students.

One noteworthy example compiled by Dr. Fok is the "maximum deflection (sag) of a bridge under truck loading." About 5 hours were required to compile the program, however the computer, when given the specific data; can calculate the answer in less than 30 minutes.

Dr. Fok added that "it would require a 'good' engineer 2 to 3 weeks to work this problem without the use of a computer."

It is proposed that by next semester classes will include science and business students as well as engineering students. Instructors from these departments are presently being trained for the purpose of instructing students in their respective departments in the use of the computer.

Dr. Fok said, "We are expanding slowly, but we are expanding steadily. In the future, it is hoped that the computer center will be utilized to its fullest capacity, both by the University and area indus-

try. It is our goal to create a functioning center that will benefit both."