

COMPUTER SCIENCE: CSUF'S NEWEST SCIENCE DEPARTMENT

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The Department of Computer Science has a large assortment of computers that are readily accessible to students.

The newest and one of the most promising departments in the School of Natural Sciences at CSU, Fresno is the Department of Computer Science, finally a separate department from Mathematics after a slow evolution of computer courses.

The Department of Computer Science got its start seven years ago as a single course offered by the Department of Mathematics in FORTRAN, a programming language designed for engineering and scientific problem solving. As student interest increased, the Math department added more computer oriented courses and began to look for new faculty with degrees in computer science. "We had faculty that were interested," said computer science professor Walter Read, "but if it were not for the students, there would be no program."

Computer science finally split from the Department of Mathematics when the university administration approved the creation of a Department of Computer Science for the 1985/86 academic year. Currently, the new department has eight full time faculty members with research interests in a number of fields including natural language programming, programming language semantics, automata theory, software engineering, operating system design, and computer science education.

Despite the recent birth of the department, it is in very good shape as far as equipment is concerned. The department has a VAX 11/785 minicomputer, an AT&T 3B5 minicomputer, a micro-computer lab with IBM PCs and two terminal labs, which permit access to the campus computer network. The VAX was obtained with the help of a donation from the Digital Equipment Corporation, and the AT&T minicomputer was a gift to the department.

The department is also now part of a national computer network. Professor Brent Auernheimer recently received a

grant from the National Science Foundation to link CSU, Fresno with CSNET (Computer Science Network). CSNET includes about 170 university, industrial, and governmental research organizations.

Through CSNET, Auernheimer is able to use a computer in his office to communicate with any other computer in the system. Auernheimer feels that the field of computer science is changing so fast that networks like CSNET are necessary to keep up with developments. "So much is happening [in computer science] you can't wait for it to be printed in a magazine."

This fast developing nature and pervasive influence of the computer has also translated into more student interest. Currently about 250 students are enrolled in the department, and the number is expected to increase in the future. Students begin by taking core courses, then they are allowed to concentrate on different areas of interest, like computer architecture and artificial intelligence. The department has a strong theoretical orientation, which is expressed in the courses offered. "Some of the courses are halfway between science and engineering and some are very theoretical," said Professor Read. "What kinds of questions, can you answer on a machine? . . . that's the real theory of

computing." CSU, Fresno is also one of the few places in the country that offers a course in human-computer interaction — a new field dealing with how people learn programming languages.

The department is designed both for students who are employment oriented and those who are graduate school oriented. Graduates find work with high tech companies in areas such as computer design, systems analysis, database design, and technical programming. "We started to get a lot of students from high school who wanted to write video games. Now a lot of them are at Ridgecrest or China Lake [Naval Weapons Research Center]," said Professor Read. Although many computer science graduates find work outside the Fresno area, there is a developing job market in Fresno. For graduate studies, students must also leave town, although the department may offer a masters degree in computer science in the near future. A minor in computer science will also be available soon.

Although the department is young, it offers a very comprehensive degree program. A co-op program is available where students work full time one semester and attend classes the next. An active student chapter of the Association for Computing Machinery (ACM) is also on campus with many activities for students to participate in. So even though it is a new department, the Department of Computer Science has already become a valuable asset to the School of Natural Sciences at CSU, Fresno.