DEPARTMENT OF COMPUTER SCIENCE

The Computer Science Department, College of Arts and Sciences is in its second decade of service to the University. Since 1972, the Department has offered a degree of Doctor of Philosophy. In support of that offering, the Department has become increasingly active in Computer Science research and has built a dynamic research facility of hardware and people. Teaching, however, remains the Department's primary objective and a full undergraduate computer science curriculum is offered to the University students. In addition, the Department provides a number of off-campus courses to both undergraduate and graduate students at a number of locations. Off-campus teaching includes Old Trooper University at Ft. Riley, Kansas, Command and General Staff College at Ft. Leavenworth, Kansas, and Continuing Education at Kansas City, Missouri.

The Department has 9 full-time faculty (7 with PhD), and 4 part-time faculty (2 joint with the University Computing Center), and 15 graduate assistants. In addition, 15 faculty at the University of Kansas are adjunct in the PhD program. Currently, there are 35 Master's Degree students and 10 PhD students enrolled on campus. At Ft. Leavenworth, there are some 20 additional Master of Science students enrolled in the joint KSU-CGSC program.

The PhD program in Computer Science is offered jointly by KSU and the University of Kansas at Lawrence, Kansas. Although each University awards the PhD degree to its respective students, the joint arrangement makes the facilities, hardware, and personnel of both institutions available to students. In line with the founding philosophy of land-grant colleges, the thrust of effort at K-State is toward applied computer sciences. The thrust at the University of Kansas is toward formal theory of computer science. Accordingly, the research at KSU has been oriented towards practical and applied computing systems.
RESEARCH
COMPUTER SCIENCE DEPARTMENT, KSU

The Department supports faculty research and development activities as central to a strong graduate program. Faculty specialties include language and compiler design, operating systems techniques, computer architecture, software engineering, probabilistic system, numerical computation, models, computer graphics, image recognition, and computer systems simulation and evaluation. The Department offers a strong graduate emphasis in the area of software engineering which includes the design, management and documentation of large software projects. Recent emphasis has centered on computer networks, network interfaces, and distributed networks. This recent emphasis is a reaction to the expanding use of minicomputers and microcomputers in data processing systems and the proliferation of software problems attendant thereto.

Research is conducted primarily by faculty members assisted by graduate students. Significant research is done by PhD candidates under supervision of the faculty. Facilities available in support of research include the University Computing Center, the Department Computer Laboratory, the University of Kansas Computing Facility and the University library.

The Department's capabilities to support research are growing each year. The scope of capabilities is best illustrated by the partial list of graduate courses currently offered:

- Microcomputer Programming and Applications
- Minicomputer Systems
- Software Engineering
- Design Automation for Digital Systems
- Computer Simulation
- Artificial Intelligence
- Theory of Parsing
- Computer Graphics and Image Processing
- Translator Design
- Automata and Computability
- Information Organization and Retrieval
- Numerical Solutions to Partial Differential Equations
- Operating Systems