

IT @ Sacramento State: Technology that's working

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Boom or bust, two things remain constant in California—the insatiable demand for information and the means to attain it. Sacramento State is leading the Capital Region in providing the well-trained workforce who can meet those technology needs. Under President Alexander Gonzalez' leadership and the "Destination 2010" Initiative (www.csus.edu/destination2010), Sacramento State is making rapid strides to become a premier metropolitan university and a destination campus for the West.

The region's high-tech industries rely on the university to supply skilled engineering and computer science graduates, while institutions ranging from construction to education, government to media, medicine to environment are finding Sacramento State students have the tools to tackle the new technology that keeps California working.

Technology now extends to virtually all phases of business and commerce. Across the curriculum, Sacramento State is preparing students to apply that technology. The impact of information technology on the state goes well beyond the dot.com era. The Capital Region is the site of several large technology companies which depend on the talents of Sacramento State graduates. But the area's other employers are also heavy consumers of information technology expertise.

Sacramento is the home of dozens of state agencies and branches of U.S. departments, all of which are large-scale IT users. These government offices also provide data and services which are increasingly being delivered using information technology. Countless other organizations need employees who can

apply technology to workplace environments not traditionally associated with high-tech.

One of the advantages a Sacramento State education provides is access to fully-stocked, state-of the-art laboratories. Contributions from high-tech heavyweights like Intel and Hewlett-Packard ensure the University's engineering labs have the latest hardware and software.

In addition to building-wide wireless access, Riverside Hall which houses the engineering program boasts six distinct labs where students can concentrate on high-tech specializations. Students interested in advanced microelectronics circuits have a \$1 million YAG laser, on loan from Defense Microelectronics Activity, at their disposal. (Is this still true?) And Sacramento State's recently established Center for Information Assurance and Security addresses the important issue of information security and focuses on protecting the confidentiality, integrity, and availability of information, systems and network resources, and the privacy of student, faculty, and staff in the College of Engineering and Computer Science.

Sacramento State recognizes that as important as it is to teach students how to use technology in the classroom, it's just as important to be able to use it in the "real world." Strong ties between Sacramento State students and area tech businesses are often formed well before graduates venture into the job market. Hundreds of students take part in a variety of paid internships each semester.

Sacramento State is also proactively working with several high schools and community colleges in the region to ensure that there is a steady stream of qualified students in the pipeline to help meet emerging workforce needs. For example, our innovative Accelerated College Entrance Program allows qualified high school students to take college level classes for credit while still in high

school. More than 25 high schools in the region participate in ACE engineering and computer science courses.

In today's world, digital communications and information access technology extend to virtually all phases of business and commerce. In all phases of the curriculum, Sacramento State is preparing students to apply that technology and will be a key element in the growth and development of the high technology sector in the region.



Dr. S. K. Ramesh is Professor and Chairman of the Electrical and Electronic Engineering department at California State University, Sacramento. He has served as the Department Chair since 1994, leading a department with 20 full-time faculty members and over 600 students. As Special Assistant to the Provost he provides continuing leadership for the University Initiative on Information Technology with a priority on the promotion of faculty to engage in applied, sponsored research and contracts. His work has helped showcase the University's capacity in Information Technology to businesses and industry in the region. Ramesh has held positions of increasing responsibility within the IEEE (Institute of Electrical and Electronic Engineers) at several levels including Chair of the Central Area of IEEE Region 6 serving over 20,000 members from 2000 - 2004. He is the President of the CSUS Sigma Xi Chapter, the Scientific Research Society, and serves as a member of several boards including SARTA and MTI. He has helped establish numerous partnerships with

industry and government including the Defense Microelectronic Activity (DMEA). He has been recognized with several awards for Outstanding Teaching and Community service including the 2004 IEEE Region 6 Community Service Award and the 2000 Person of the Year Award from the Sacramento Engineering and Technology Regional Consortium.

Dr. Ramesh teaches courses in Optical Engineering in the Distance Education Program, and his research interests span the areas of high speed (Terabit/sec) optical communication systems, devices and electronic circuit design. He has several publications to his credit in these areas including a book chapter. For additional information please visit his web site at <http://www.csus.edu/indiv/r/rameshs/>