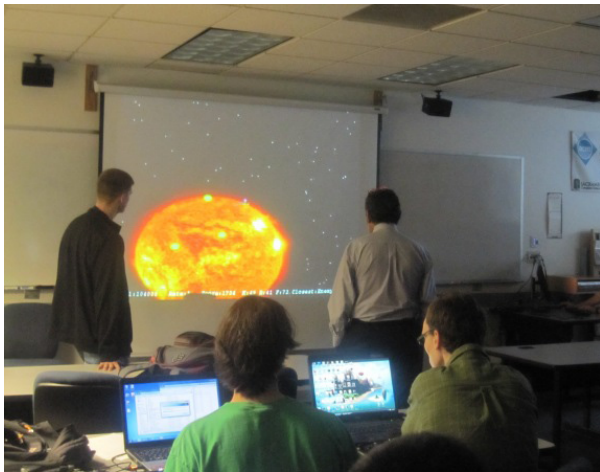




### What Is Computer Science?

Computers touch almost all aspects of our daily lives. They are the basis of many of the endeavors in our society today and continue to advance various areas as well as opening new fields. These endeavors include the entertainment industry, engineering, government, medicine, business, manufacturing, science, space exploration and communication. All of these fields would not be able to develop and advance their respective areas without the use of computers and the methods of computer science.



*Computer game development and demo*

Computer science spans a wide range, from its theoretical and algorithmic foundations to cutting-edge developments in robotics, computer vision, intelligent systems, bioinformatics, and other exciting areas. Its comprehensive foundation allows graduates to adapt to new technologies and new ideas.

The work of a computer scientist falls into the following categories.

- Design and implement software. Computer scientists take on challenging programming jobs.
- Devise new ways to use computers. Progress in the areas of networking, database, and human-computer interface enabled the development of the World Wide Web. Computer scientists also work with scientists from other fields to make robots become practical and intelligent aides, to use databases to create new knowledge, and to use computers to help decipher the secrets of our DNA.

- Develop effective ways to solve computing problems. For example, computer scientists develop the best possible ways to store information in databases, send data over networks, and display complex images. Their theoretical background allows them to determine the best performance possible, and their study of algorithms helps them to develop new approaches that provide better performance.

In addition, computer scientists contribute to advances in a variety of industry and business applications.

### Career Opportunities

Career possibilities abound for computer science graduates. The fast pace of technology has spawned a plethora of new and exciting jobs in computing including computer systems analyst, data communications analyst/administrator, programmer analyst, software engineer, systems programmer, computer graphics specialist, systems engineer, database administrator, information assurance specialist, knowledge engineer, teleprocessing manager/coordinator, etc. Major employers of recent graduates are among the most prominent U.S. corporations and research laboratories, including Apple, AT&T, Bank of America, Bechtel, IBM, Intel, Lawrence Livermore Laboratory, NASA, NEC, PG&E, Price Waterhouse, SBC-Yahoo, SMUD, and the State of California, to name a few.

### Computer Science Department

The Sacramento State Computer Science Department is one of the oldest and largest computer science programs in the CSU. Founded in 1969, our baccalaureate and masters programs have educated computer professionals ever since. Currently our programs serve well over 600 majors. In addition the Department offers a variety of service courses to over 500 non-majors who seek practical experience in the application of information technology.

### Facilities

A large heterogeneous network of Linux ia32/ia64, Sun RISC, and Hewlett-Packard servers combined with Linux, Windows, and Macintosh workstations supports the instructional programs. Windows workstation laboratories support lower and some upper division instruction. High-end laboratories provide access to Linux and RISC servers and workstations. Specialized laboratories support systems, communications and networking, and computer architecture instruction. A graduate laboratory is designed to provide graduate students with access to a variety of advanced workstations. All students have access to the Internet and the World Wide Web.

## Faculty

The Department has 22 full-time faculty members and five additional full-time equivalent positions supporting part-time faculty and lecturers. Research interests of the faculty span a broad spectrum of Computer Science including: active databases, artificial intelligence, autonomic computing, competitive programming, computer architecture, computer game design, computer graphics, computer networks, cryptography, data mining, data warehousing, database systems, distributed systems, enterprise application integration, formal methods, human-computer interface, information



*Developing and testing software*

security and assurance, Internet and Web programming, knowledge-based systems, machine learning, network security, operating systems, optimized implementations, performance modeling and evaluation, programming languages, software engineering, theoretical computer science, and Web database applications.

## Computer Science Undergraduate Program

The Bachelor of Science degree in Computer Science is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), a specialized accrediting body recognized by the Council for Higher Education Accreditation. The solid educational foundation of the baccalaureate program derives from the general education requirements common among all University programs and substantial courses in mathematics, statistics and physics.

The undergraduate lower division core curriculum is a comprehensive exposure to programming languages, algorithms and problem solving. The upper division core courses comprise an intensive program of study that embraces the theories and core technologies of computer science. Beyond the core curriculum students may select a related set of courses such as:

- Computer Architecture and Operating Systems
- Database Systems and Applications
- Data Communication and Networking
- Computer Graphics and Game Design
- Software Engineering
- Compiler Constuction
- Intelligent Systems and Data Mining
- Information Assurance and Security
- Algorithm Design and Analysis

Look to Sacramento State Computer Science and the Sacramento Region—a sound educational program, affordable living, and enormous potential for professional growth and development.

## For more information:

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### College of Engineering and Computer Science

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(916) 278-6366

Visit our website at: [www.ecs.csus.edu](http://www.ecs.csus.edu)

Information is available on current job listings and salary ranges for graduates, on the College Career Services website at: [www.ecs.csus.edu/career](http://www.ecs.csus.edu/career)

### Admissions and Records

California State University, Sacramento

6000 J Street

Sacramento, CA 95819-6048

(916) 278-7766

My Sac State: <http://my.csus.edu/>

Applications are accessible at: [www.csumentor.edu](http://www.csumentor.edu)

### Financial Aid

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