Software Engineering

Laboratory Tour & Information

Frank E. Pilling (Bldg. 14)

232A—Apple Mobile Computing Lab iMacs, MacPros, and a plethora of mobile devices. Students study the design/development of apps on iOS based devices. Open 24/7.

235—Computer Lab A general purpose lab, open 24/7. iMacs as well as dual boot PCs with NVIDIA cards to support GPU development and high-end graphics. Students work on assignment/projects independently or in groups.

238—Machine Room The “nerve center” of the Computer Science Department. Collection of high-end servers, networking equipment, multi-core (5000 core) machine, parallel clusters, and hundreds of TB of disk storage. Students can work and assist in systems administration.

255—Game Design Lab Collection of high-end PCs, stereo enabled monitors, 3D glasses, tablets for artistic creation, 3D sound system. Students learn and conduct research in Computer Graphics, Animation, Game Design-Development.

256—Software Engineering Lab Collaborative space with network workstations. Android-based mobile devices. Lab for the teaching of the Software Engineering, as well as mobile computing courses.

257—Human Computer Interaction (HCI) Lab A cutting-edge HCI lab (observer and participant rooms). Equipped with PCs, iMacs, Game Engines, Mobile devices, eye-tracking glasses, Google glasses, wearable computing devices and much more. A lab to teach and conduct research in the areas of HCI, User Interface Design, and also to run Usability studies.

301, 302, 303—Computer Labs Labs to support the “Learn by Doing” paradigm in the Computer Science and Software Engineering Department. Collection of networked and dual-boot workstations.

305—Graduate Lab Workspace for graduate students. Please don’t interrupt them, they are trying to graduate!

Cisco Advanced Networks Lab Supports the teaching and research in the field of computer networks. A plethora of specialized network CISCO equipment, and Intel based workstations. Experimentation in router configuration and testing at all levels of the protocol stack.

333—Northrop Grumman Cyber Lab A truly unique, one of its kind in the nation. A side-by-side, undergraduate lab and a graduate research area. Networked workstations, specialized firewalls, servers, storage devices, multi-screen projection complex for “red-blue” exercises. The lab supports teaching and research of Cybersecurity.

204—Raytheon Security Lab Includes a collection of workstations, firewalls, servers. Specialized equipment for projects in security of embedded device. The lab supports the University’s strategic initiative in Cybersecurity.

Bonderson Projects Center (Bldg. 197)

SEE MAP ABOVE FOR LAB LOCATIONS

Cal Poly, San Luis Obispo
College of Engineering

Cal Poly, San Luis Obispo
Program Description

Computer science is playing a pivotal role in tackling every national and global challenge. Mobile computing, artificial intelligence, natural language processing, cybersecurity, big data, cloud computing, social networks, bioinformatics, sustainable computing, human computer interaction, robotics, wearable computing, game design/development, interactive entertainment, the internet of things are just a few examples of the impact of computer science in shaping our society and directly helping the human race.

The focus of the Cal Poly Computer Science program is on education, based on our “learn by doing” educational philosophy. The curriculum includes a large number of hands-on laboratories. From the first quarter, students take computer science laboratory-based courses. Software Engineering program accredited by the Engineering Accreditation Commission of ABET http://www.abet.org.

From the Faculty

Our mission is to educate the best engineers for California, the country, and the world. Our students obtain unique education that combines theory and a lot of practice. They become “day one ready” computer scientists from the moment they graduate. In fact, our industrial partners tell us that they intensively seek out our graduates because, in their words, “they hit the ground running.” So, how do we do it?

We offer one of the most practical, hands-on programs available. Our curriculum is laboratory-intensive, and many of our courses require labs! We encourage our students to take internships and/or cooperative education opportunities to get real industry experience. Our program offers a plethora of technical electives in various sub-areas of computing. Working in teams is an essential component for our upper division courses. The program provides opportunities for students to pursue senior projects, independent studies, or elect to take our year-long, team-based, “Software Engineering capstone sequence” to design, build, test software systems for industry sponsors. And let’s not forget that our labs and facilities are all available to our undergraduate students. Above all, we have extremely dedicated and student-focused faculty. Most of our faculty have significant industrial experience which enhances the way the curriculum is developed and delivered. Labs and lectures are taught by our faculty, whose first love is to be passionate educators. Faculty are involved in our clubs and team projects. Finally, students have a great rapport with professors that is hard to find elsewhere, with plentiful office hours and open doors. Indeed, students have a great rapport with professors that is hard to find elsewhere.

Some associations include: Association of Computing Machinery, ACM, Women in Software and Hardware (WISH), White Hat Club, Robotics Club, Mobile Computing Club, PolyGame Development -CPDG club. All of these clubs offer students active programs in professional and leadership activities. Students are also involved in numerous clubs in different majors.

Specializations

Data Science/Big Data: Data is everywhere! Students can take courses in databases, data mining, machine intelligence, distributed computing, and an array of statistics courses.

CyberSecurity: A unique specialization at Cal Poly, students can take courses in computer-cyber security, software security, cryptography engineering, security for embedded devices, network security, security for the “critical infrastructure,” and many more.

Computational Interactive Arts/Game Design: A specialization with focus on the artistic and technical aspects of interactive media. A blend of courses in computing, Game Design, and Art/Design. A unique culminating capstone experience in which art majors and computer science majors develop a creative project combining design, artistic and algorithmic thinking.

Career Paths

What about the job prospects? The US – Bureau of Labor and Statistics (BLS) is predicting that during the 2015–2025 time interval there will be far more “job openings” in software development than any other STEM field.

Companies like Google, Apple, Microsoft, Intel, Salesforce, Workday, CISCO, Disney, DreamWorks, game companies, defense industries, security companies, startups, and many others, do aggressively recruit our graduates. Our software engineering students experience great internship opportunities and amazing job offers.

Associated Clubs

There are many organized student clubs associated with the Computer Science-Software Engineering Department. Some include: Association of Computing Machinery-ACM, Women in Software and Hardware-WISH, White Hat Club, Robotics Club, Mobile Computing Club, PolyGame Development -CPDG club. All of these clubs offer students active programs in professional and leadership activities. Students are also involved in numerous clubs in different majors.

Program Description

Software Engineering Department

Building 14 Room 254
Office 805.756.2824
www.csc.calpoly.edu

Mission Statement

The Computer Science and Software Engineering Department educates students using our signature “learn by doing” paradigm, to apply their education to solve practical problems in a socially responsible way. Our graduates are fully prepared for entry into industry, government, graduate school, and private enterprise.

Software Engineering

From the Faculty

Our mission is to educate the best engineers for California, the country, and the world. Our students obtain unique education that combines theory and a lot of practice. They become “day one ready” computer scientists from the moment they graduate. In fact, our industrial partners tell us that they intensively seek out our graduates because, in their words, “they hit the ground running.” So, how do we do it?

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