Degree Benefits

The computer science program at California University of Pennsylvania is accredited by the Computing Accreditation Commission of ABET (www.abet.org). Computer science is one of the fastest growing academic disciplines today. There is a national demand for computer science experts in the government sector, in the public sector, in corporations of all sizes, and in colleges and universities across the U.S. and the world. The U.S. Department of Labor projects over 776,600 new hires in computer occupations from 2008 to 2018. The nationwide average starting salary for computer science graduates is $61,407. This is one of the highest salaries for a four-year degree.

This CAC of ABET (www.abet.org) accredited program helps students develop expertise in computer science, which enables graduates to be successful. In addition to being successful in industry, many of our graduates have gone on to achieve graduate degrees in computer science and other fields from universities throughout the country.

Program Educational Objectives

It is the goal of the computer science program to produce graduates who:
- Are successful professionals in industry and graduate school;
- Are life-long learners and keep current in their professional field;
- Perform ethically and professionally in industry and society.

Student Outcomes

To achieve the goals of the Computer Science program, we will provide students with the opportunity to develop;
- An ability to apply knowledge of computing and mathematics appropriate to the discipline;
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
- An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs;
- An ability to function effectively on teams to accomplish a common goal;
- An ability to use current techniques, skills, and tools necessary for computing practice;
- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.

Internships and Career Options

After a student completes the sophomore year, he/she is eligible to apply for a computer science Internship. As an intern the student is able to put into practice his/her knowledge of computer science in a real job situation. The University has a number of computer science opportunities with educational, business and industrial organizations. The monetary compensation for most internships will be between minimum wage and $20 an hour. Internships are a way for students to learn and earn, and they prepare students for immediate employment upon graduation.

Our graduates are currently working in a wide variety of employment situations including: directors of IT, programmers, Web developers, clinical systems analysts, higher education, software engineers and applications analysts. Some of the employers include: FBI, State Farm Insurance, US Steel, Voltec Inc., Eaton, Northrop Grumman Corp., and Indus International.

University Resources

The Department of Mathematics, Computer Science and Information Systems features the close personal involvement of dedicated faculty typical of a smaller institution specializing in teaching. Based on a tradition of teaching excellence, Cal U offers a warm association among students and faculty. At the same time, the department offers the state-of-the-art technology found at larger universities. Our modern facilities allow many of the courses to be taught in computer laboratories. Emphasis is placed on learning technologies that are in demand in the marketplace. Wireless broadband is available in the building and at other campus locations. Residence halls offer broadband connections. Many faculty members use course management packages that give the student a common, cross-campus learning environment. This environment allows students to access current grades, to upload homework and to communicate with fellow classmates. While the faculty embraces this technology, professors also are available to talk one-on-one with students outside the classroom. Students are our primary concern.

BACHELOR OF SCIENCE

COMPUTER SCIENCE—120 CREDITS

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty adviser, ensure that they complete necessary prerequisites and required courses in sequence, and complete a minimum of 15 credits each semester.
COMPUTER SCIENCE

Freshman Year

First Semester .......................................................... 16 credits

**ENG 101 English Composition I .................................................. 3 crs.
OR **HON 150 Honors Composition I ........................................... 3 crs.
UNI 100 First Year Seminar .......................................................... 1 cr.
**CSC 120 Problem Solving & Programming Constructs .................. 3 crs.
**MAT 281 Calculus I ................................................................. 3 crs.
General Education Courses .......................................................... 6 crs.

Second Semester.................................................................... 15 credits

**ENG 217 Science & Technical Writing ........................................ 3 crs.
**CSC 124 C Programming .......................................................... 3 crs.
**MAT 282 Calculus II .................................................................. 3 crs.
General Education Courses .......................................................... 3 crs.

Sophomore Year

Third Semester ....................................................................... 15 credits

*CSC 216 Logic & Switching Theory .............................................. 3 crs.
*CSC 269 Object-Oriented Programming ...................................... 3 crs.
Public Speaking ............................................................................ 3 crs.
General Education Electives .......................................................... 3 crs.
Free Elective course ..................................................................... 3 crs.

Fourth Semester ..................................................................... 16 credits

*CSC 323 Assembly Language Programming .................................. 3 crs.
*CSC 328 Data Structures ............................................................ 3 crs.
*MAT 341 Linear Algebra I ............................................................ 3 crs.
*CET 350 Technical Computing using Java ..................................... 3 crs.
Laboratory Science I ................................................................. 4 crs.

Program Contact Information

Contact the Department of Mathematics, Computer Science and Information Systems by phone at 724-938-4078.

Junior Year

Fifth Semester ..................................................................... 16 credits

*CSC 360 Analysis of Algorithms .................................................. 3 crs.
*CSC 378 Computer Architecture .................................................. 3 crs.
*MAT 381 Calculus III OR *MAT 441 Linear Algebra II .................. 3 crs.
*Computer Science Elective .......................................................... 3 crs.
Laboratory Science II ................................................................. 4 crs.

Sixth Semester ................................................................... 15 credits

*CSC 400 Operating Systems ......................................................... 3 crs.
*CSC 455 Structure of Programming Languages ............................. 3 crs.
*MAT 215 Statistics ...................................................................... 3 crs.
*CIS 352 Global, Econ. and Soc. Ethical Issues in Computing .......... 3 crs.
*Computer Science Elective .......................................................... 3 crs.

Senior Year

Seventh Semester ................................................................... 13 credits

*CSC 475 Theory of Languages ...................................................... 3 crs.
*CSC 490 Senior Project I .............................................................. 3 crs.
*Computer Science Elective .......................................................... 3 crs.
*Scientific Method ....................................................................... 4 crs.

Eighth Semester ................................................................ 14 credits

*CSC 460 Language Translation ..................................................... 3 crs.
*CSC 492 Senior Project II ............................................................ 3 crs.
*Computer Science Elective .......................................................... 3 crs.
Free Elective course ................................................................... 5 crs.

* Required major courses
** Required and recommended General Education courses

Department Website

www.calu.edu/academics/colleges/eberly/math-computer-science

Questions About Admissions?

Office of Admissions
California University of Pennsylvania
250 University Ave.
California, PA 15419-1394

Phone: 724-938-4404
Toll-free: 888-412-0479
Fax: 724-938-4564
E-mail: inquiry@calu.edu

Financial Aid

For information on student loans and undergraduate scholarships, visit www.calu.edu or call 1-888-412-0479.

About Us

California University of Pennsylvania is a proud member of the Pennsylvania State System of Higher Education. Located in the borough of California, just 35 miles from Pittsburgh, Cal U serves about 8,200 undergraduate and graduate students.

- Cal U’s main campus houses academic buildings, dining and recreation facilities, and six suite-style residence halls.
- Cal U’s upper campus includes the Vulcan Village apartments, athletic facilities at Roadman Park, and space for student meetings and outdoor recreation at SAI Farm.
- Cal U Global Online is the University’s virtual campus, offering degree and certificate programs 100% online.

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