

2011-13 Cal Poly Catalog**Computer Science Department****MS COMPUTER SCIENCE**

The MS program in Computer Science offers students the opportunity to prepare for careers in several areas of emphasis including software engineering, computer architecture, programming languages, theory of computing, operating systems, database systems, distributed computing, computer networks, artificial intelligence, computer graphics, and human-computer interaction. The program is designed for maximum flexibility to allow students to concentrate in one or more areas of study.

Admission to the program requires a baccalaureate degree from an accredited institution and good standing at the last college attended. Applicants with a bachelor's degree in computer science, software engineering, or computer engineering are required to have a minimum 3.0 grade point average in the last 90 quarter hours (60 semester hours) of study, including a minimum 3.0 grade point average in major courses. A minimum grade point average of 3.25 is required for all other applicants. A satisfactory score on the General Graduate Record Exam (GRE) is required; applicants are expected to achieve the following minimum scores: 425 verbal, 650 quantitative, 4.0 analytical writing. A satisfactory score on the TOEFL is required for foreign applicants; expected minimum scores are: 80 for internet-based test with a minimum 20 on each portion; 213 for computer-based test; 550 for paper-based test, plus 4.5 on TWE. All applicants must provide three letters of recommendation. Women and underrepresented minorities are strongly encouraged to apply for admission.

Qualified students who do not have an undergraduate degree in computer science, computer engineering, or software engineering may be admitted as unclassified students. Unclassified students must complete the necessary undergraduate coursework to be admitted to candidacy. While fulfilling the undergraduate requirements, unclassified students retain official status as graduate students in the University.

Unclassified students may advance to candidacy by completing each of the following undergraduate courses with a "B" or better grade. These courses do not count toward the graduate degree:

- CSC/CPE 103 Fundamentals of Computer Science III (4)
- CSC/CPE 307 Introduction to Software Engineering *or*
CSC/CPE 308 Software Engineering I (4)
- CSC/CPE 315 Computer Architecture (4)
- CSC/CPE 349 Design and Analysis of Algorithms (4)
- CSC/CPE 357 Systems Programming (4)
- CSC/CPE 430 Programming Languages I (4)
- CSC/CPE 445 Theory of Computation (4)

CSC/CPE 453 Introduction to Operating Systems (4)

The department may offer several graduate teaching assistantships. Preference is given to continuing graduate students and experienced teachers. Other grant, fellowship, scholarship and loan information can be obtained from the Financial Aid office.

Degree Requirements

Students must file a Formal Study Plan with the Computer Science Department office no later than the end of the quarter in which they complete the twelfth unit of coursework to be counted toward the degree. The formal study plan identifies specific courses to be taken to fulfill requirements of the MS degree. The formal study plan may be amended with approval of the graduate coordinator.

The MS degree requires at least 45 units beyond the undergraduate degree. Courses must be chosen according to the following requirements:

Curriculum for MS Computer Science

	<i>Units</i>
Select five courses from the following:	20
CSC 508 Software Engineering I (4)	
CSC 509 Software Engineering II (4)	
CSC 520 Computer Architecture (4)	
CSC 530 Language and Translators (4)	
CSC 540 Theory of Computation II (4)	
CSC 541 Numerical Methods (4)	
CSC 550 Operating Systems (4)	
CSC 556 Computer Security (4)	
CSC 560 Database Systems (4)	
CSC 564 Computer Networks: Research Topics (4)	
CSC 568 Distributed Systems (4)	
CSC 569 Distributed Computing (4)	
CSC 570 Current Topics in Computer Science (2-4)	
CSC 572 Computer Graphics (4)	
CSC 580 Artificial Intelligence (4)	
CSC 581 Computer Support for Knowledge Management (4)	
Thesis/Project and Seminar	9
CSC 590 Thesis Seminar (1)	
CSC 596 Thesis I (2)	
CSC 597 Thesis II (3)	
CSC 599 Thesis III (3)	

Electives to be selected with Graduate Coordinator approval	16
	45

For further information or advisement students should communicate with the Graduate Coordinator of the Computer Science Department.