DEGREES & CERTIFICATES

SOFTWARE ENGINEERING ASSOCIATE OF SCIENCE (AS)

About the Program
The Associates of Science in Software Engineering is offered to prepare students to transfer to a four-year institution as a Software engineering major. The core courses required for this degree will fulfill many of the lower division requirements for most campuses in the UC and CSU systems. This program will enable students to develop a strong foundational understanding in computing, engineering, physics and mathematics that will be essential as they continue on the engineering pathway. In addition, students will benefit from hands-on computing and laboratory experiences in their courses allowing them to learn by doing.The LPC Software Engineering degree is intended for transfer. Students are encouraged to meet with a counselor early on and refer to the catalog of the prospective transfer institution to determine specific major requirements required for transfer since they can vary from university to university. Finally, because this program is a high-unit major, counselors can also assist in determining appropriate general education courses to complete the degree requirements.

Program Goals and Objectives
The goal of this program is to earn a local Associates of Science in Software Engineering, with the secondary goal of transferring to a four-year institution as Software Engineering major. This program provides a guided path of courses to take for students who have identified their specific career aspirations within the broader engineering field. Students will be able to develop a strong foundation in computing, engineering, physics and mathematics, as well as gain critical hands-on skills that will help them to succeed in their future educational and career endeavors.

Career Opportunities
Preparation for entry level jobs in Software Engineering generally requires a bachelor's degree. Software Engineering is a blend of the computer science and engineering disciplines. Software engineers design, build, and maintain software systems and application software that are reliable, affordable and meet customer requirements. Software engineers can develop antivirus programs, mobile applications, computer gaming, and inventory management platforms.

Program Outcomes

- Upon completion of the AS in Software Engineering, students are able to apply fundamental principles from mathematics, science and engineering to solve a software engineering-related problem.
- Upon completion of the AS in Software Engineering, students are able to set up appropriate laboratory equipment, collect and analyze software data, draw conclusions, and clearly communicate results.
- Upon completion of the AS in Software Engineering, students are able to use a variety of technological tools to solve software engineering problems.

Required Core: (48.5 Units)

CS 2 Computing Fundamentals II....4
CS 17 Discrete Mathematical Structures or 4
MATH 10 Discrete Mathematical Structures....4
ENGR 1 Introduction to Engineering....2
ENGR 26 Computational Methods for Engineers and Scientists....3
ENGR 35 Statics....3
ENGR 44 Introduction to Circuit Analysis....4
MATH 1 Calculus I....5
MATH 2 Calculus II....5
MATH 3 Multivariable Calculus....5
MATH 5 Ordinary Differential Equations....3.5
PHYS 1A General Physics I....5
PHYS 1C General Physics III....5

Total Units for the Major....48.5

Program-Based GE: Select One (3 Units)

CMST 1 Fundamentals of Public Speaking....3
CMST 10 Interpersonal Communication....3

Additional General Education....10