

Associate in Engineering in SOFTWARE ENGINEERING

The curriculum in the Associate Degree in Engineering (AEng) in Software Engineering is designed for those who intend to launch a career in the testing, installation, and maintenance of computer software modules and systems. Coursework in the program is hands-on oriented and prepares students to work in a variety of computer-intensive environments that involve engineering support: technical organizations, small or large businesses, manufacturing companies, and data-directed services.

The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such occupations as software technician, computer systems technician, data applications or computer technician, or as a test and integration assistant. Graduates of this program will be a software engineering technician versed in mathematics, physics, computer science, software development, and business fundamentals.

The program objectives are the following:

1. Graduates will have demonstrated knowledge and skills to pursue an engineering bachelor program.
2. Graduates will have demonstrated involvement in high-level technical roles.

Completion of this program should result in the following student outcomes:

1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
5. A knowledge of contemporary issues
6. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

GENERAL EDUCATION (33 CR)

Area I. Communications (9 cr)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)
SPCH	130	Public Speaking (3)

Area II. Mathematics (7 cr)

MATH	145	Introduction to Probability & Statistics (3)
ENGR	120L	Introductory Math for Engineering Applications (4)

Area III. Laboratory Sciences (8 cr)

PHYS	215/L	Engineering Physics I with lab (4)
		Elective Laboratory Science (4)

You must select a course from the following list:

ASTR	110/L	Intro to Astronomy with Lab (4)
PHYS	122/L	Applied Physics II with lab (4)
PHYS	215/L	Engineering Physics I with lab (4)
PHYS	216/L	Engineering Physics II with lab (4)
CHEM	121/L	General Chemistry I with Lab (4)

ES 112/L Introduction to Environmental Science with Lab (4)
BIOL 110/L Current Topics in Biology with Lab (4)
GEOL 101/L Physical Geology with Lab (4)

Area IV. Social/Behavioral Sciences (3 cr)

ECON 201 Microeconomics (3)

Area V. Humanities and Fine Arts (3 cr)

Elective (3) *Choose electives from Gen Ed Area IV on page X*

Area VI. First Year Experience (3 cr)

FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (29 CR)

Computer Science (6 cr)

CS 201 Mathematical Foundations of Computer Science (3)

IT 250 Introduction to Databases (3)

Electrical, Electronic, and Computer Engineering (21 cr)

EECE 105L Microcomputer Systems (3)

EECE 111 Introduction to Web Programming (3)

EECE 132 Computer Networks I (3)

EECE 152L Computer Programming I (3)

EECE 231L Intermediate Programming I (3)

CS/EECE/IT Elective (6)

Support Technologies (2 cr)

ENGR 110L Introduction to Engineering (2)

TOTAL CREDITS: 62

SUGGESTED SEQUENCE OF COURSES

First Semester (15 crs)

FYE 101 First Year Experience (3)

ENGR 110L Introduction to Engineering (2)

EECE 111 Introduction to Web Programming (3)

ENGR 120L Introductory Math for Engineering Applications (4)

EECE 132 Computer Networks I (3)

Second Semester (16 crs)

EECE 105L Microcomputer Systems (3)

ENG 111 English Composition I (3)

EECE 152L Computer Programming I (3)

PHYS 215/L Engineering Physics I with lab (4)

EECE/CS/IT Elective (3)

Third Semester (16 crs)

ENG 116 Technical Writing (3)

MATH 145 Introduction to Probability and Statistics (3)

CS 201 Mathematical Foundations of Computer Science (3)

IT 250 Introduction to Databases (3)

Elective Laboratory Science (4)

Fourth Semester (15 crs)

SPCH 130 Public Speaking (3)

ECON 201 Microeconomics (3)

EECE	231	Intermediate Programming (3)
EECE/CS/IT		Elective (3)
HFA		Elective (3)
