



## Associate in Engineering in SOFTWARE ENGINEERING

The curriculum in the Associate Degree in Engineering (AEng) in Software Engineering Technology 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 practice-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 environments as software technician, computer systems technician, data applications or computer technician, or as a test and integration assistant. The graduate of this curriculum will be a software engineering technician versed in mathematics, physics, computer science, software development, and business fundamentals. Failure to maintain an overall GPA of at least a 2.00 in all coursework is sufficient cause for being dropped from the program.

| GENERAL EDUCATION (34)   | COMPLETED | Planned Timeline<br>(By Semester) |
|--|-----------|-----------------------------------|
| <b><u>Area I: Communications (9)</u></b>   |           |                                   |
| ENG 111 English Composition I (3)<br><i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i>                      | _____     | _____                             |
| ENG 116 Technical Writing (3)<br><i>Pre-requisite: ENG 111</i>   | _____     | _____                             |
| SPCH 130 Public Speaking (3)<br><i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i>                           | _____     | _____                             |
| <b><u>Mathematics (11)</u></b>   |           |                                   |
| MATH 145 Introduction to Probability & Statistics (3)<br><i>Pre-requisite: MATH 130 or adequate score on the Course Placement Evaluation</i> | _____     | _____                             |
| MATH 162 Calculus I (4)<br><i>Pre-requisites: MATH 150 and MATH 155 or MATH 160</i>  | _____     | _____                             |
| MATH 163 Calculus II (4)<br><i>Pre-requisite: MATH 162</i>   | _____     | _____                             |
| <b><u>Laboratory Science (4)</u></b>   |           |                                   |
| PHYS 215/L Engineering Physics I with lab (4)<br><i>Pre-requisite: MATH 162; Co-requisite: PHYS 215L</i>                                     | _____     | _____                             |
| PHYS 216/L Engineering Physics II with lab (4)<br><i>Pre-requisite: PHYS 215; Co-requisite: PHYS 216L</i>                                    | _____     | _____                             |
| <b><u>Social/Behavioral Sciences (3)</u></b>   |           |                                   |
| ECON 201 Microeconomics (3)<br><i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i>                            | _____     | _____                             |
| <b><u>Humanities and Fine Arts (3)</u></b>   |           |                                   |
| PHIL 220 Ethics (3)<br><i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i>                                    | _____     | _____                             |
| <b>HEALTH, PHYSICAL EDUCATION &amp; RECREATION (1)</b>   |           |                                   |
| Electives (1) _____  | _____     | _____                             |
| <b>PROGRAM REQUIREMENTS (30)</b>   |           |                                   |
| <b><u>Business (3)</u></b>   |           |                                   |
| BA Lower division elective (3)<br>_____  | _____     | _____                             |
| <b><u>Computer Science (6)</u></b>   |           |                                   |
| CS 201 Mathematical Foundations of Computer Science (3) (Fall)<br><i>Pre-requisite: EECE 152L</i>  | _____     | _____                             |
| CS 241L Data Organization (3) (Fall)<br><i>Pre-requisite: EECE 152L</i>  | _____     | _____                             |

**Electrical, Electronic, and Computer Engineering (21)**

|  |   |       |       |
|--|---|-------|-------|
| EECE 105L  | Microcomputer Systems (4)                       | _____ | _____ |
| <i>Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation</i> |   |       |       |
| EECE 132   | Computer Networks I (3)                         | _____ | _____ |
| <i>Pre-requisite: EECE 152L</i>  |   |       |       |
| EECE 152L  | Computer Programming I (4)                      | _____ | _____ |
| <i>Pre-requisite: CS 102</i>   |   |       |       |
| EECE 238/L   | Computer Logic Design (4)                       | _____ | _____ |
| <i>Pre-requisites: MATH 163 and PHYS 216/L</i>                                     |   |       |       |
| EECE 231   | Intermediate Programming I (3)                  | _____ | _____ |
| <i>Pre-requisite: EECE 152L</i>  |   |       |       |
| Elective (3)   | Choose from : EECE or IT lower division courses | _____ | _____ |

TOTAL CREDITS 65

**SUGGESTED SEQUENCE OF COURSES**

**FIRST SEMESTER (14 crs)**

|          |  |
|----------|--|
| ENG 111  | English Composition I (3)                      |
| MATH 162 | Calculus I (4)                                 |
| MATH 145 | Introduction to Probability and Statistics (3) |
| ECON 201 | Microeconomics (3)                             |
| HPER     | Elective (1)                                   |

**SECOND SEMESTER (19 crs)**

|            |                                    |
|------------|------------------------------------|
| ENG 116    | Technical Writing (3)              |
| MATH 162   | Calculus II (4)                    |
| PHYS 215/L | Engineering Physics I with Lab (4) |
| EECE 105L  | Microcomputer Systems I (4)        |
| EECE 152L  | Computer Programming I (4)         |

**THIRD SEMESTER (16 crs)**

|            |                                     |
|------------|-------------------------------------|
| PHYS 216/L | Engineering Physics II with Lab (4) |
| EECE 132   | Computer Networks I (3)             |
| EECE 231   | Intermediate Programming (3)        |
| CS 241     | Data Organization (3)               |
| CS 201     | Math Foundations of CS (3)          |

**FOURTH SEMESTER (16 crs)**

|            |                           |
|------------|---------------------------|
| SPCH 130   | Public Speaking (3)       |
| EECE 238L  | Computer Logic Design (4) |
| PHIL 220   | Ethics (3)                |
| BA         | Elective (3)              |
| EECE/IT/CS | Elective in 2XX (3)       |

## Educational Planning Form (Semester)

|                      |                        |                    |
|----------------------|------------------------|--------------------|
| <b>Fall Semester</b> | <b>Spring Semester</b> | <b>Summer</b>      |
|                      |                        |                    |
| <b>Total Units</b>   | <b>Total Units</b>     | <b>Total Units</b> |
| <b>Fall Semester</b> | <b>Spring Semester</b> | <b>Summer</b>      |
|                      |                        |                    |
| <b>Total Units</b>   | <b>Total Units</b>     | <b>Total Units</b> |
| <b>Fall Semester</b> | <b>Spring Semester</b> | <b>Summer</b>      |
|                      |                        |                    |
| <b>Total Units</b>   | <b>Total Units</b>     | <b>Total Units</b> |