

Bachelor of Science in Electrical Engineering with Computer Science Focus

Required 127 credits (36 of which must be numbered 300 or above) including:

I. Essential Studies Requirements (see University listing)

II. Electrical Engineering required courses

| Code | Title | Credits |
|----------------------|--|-----------|
| EE 101 | Introduction to Electrical Engineering | 3 |
| EE 111 | Digital Circuits | 3 |
| EE 111L | Digital Circuits Laboratory | 1 |
| EE 221 | Electric Circuits I | 3 |
| EE 221L | Electric Circuits I Laboratory | 1 |
| EE 211 | Embedded Systems | 3 |
| EE 222 | Electric Circuits II | 3 |
| EE 222L | Electric Circuits II Laboratory | 1 |
| EE 292 | Sophomore Design | 3 |
| EE 321 | Electronics I | 3 |
| EE 321L | Electronics Laboratory I | 1 |
| EE 330 | Electric and Magnetic Fields | 3 |
| EE 360 | Signals and Systems | 3 |
| EE 312 | Computer Hardware Organization | 3 |
| EE 322 | Electronics II | 3 |
| EE 350 | Fundamentals of Controls | 3 |
| EE 392 | Junior Design | 3 |
| EE 492 | Senior Design I | 3 |
| EE 493 | Senior Design II | 3 |
| Total Credits | | 49 |

III. Program Required Electives

| Code | Title | Credits |
|---|-------|----------|
| Technical Electives ² | | 9 |
| Total Credits | | 9 |

IV. College of Engineering and Mines requirements

| Code | Title | Credits |
|----------------------|---------------------|----------|
| ENGR 460 | Engineering Economy | 3 |
| Total Credits | | 3 |

V. Requirements outside of the College of Engineering and Mines

| Code | Title | Credits |
|----------------------|---|---------|
| MATH 165 | Calculus I | 4 |
| MATH 166 | Calculus II | 4 |
| MATH 207 | Introduction to Linear Algebra | 2 |
| MATH 265 | Calculus III | 4 |
| MATH 266 | Elementary Differential Equations | 3 |
| MATH 321 | Applied Statistical Methods | 3 |
| PHYS 251 | University Physics I | 4 |
| or PHYS 251C & 251CL | University Physics I and University Physics I Lab | |
| PHYS 252 | University Physics II | 4 |

| | | |
|-----------------------|---|-----------|
| or PHYS 252C & 252CL | University Physics II and University Physics II Lab | |
| Math/Science Elective | | 3 |
| Total Credits | | 31 |

VI. Computer Science Focus requirements

| Code | Title | Credits |
|----------------------|--|-----------|
| CSCI 160 | Computer Science I | 4 |
| CSCI 161 | Computer Science II | 4 |
| CSCI 265 | Introduction to Programming Languages | 3 |
| CSCI 289 | Social Implications of Computer Technology | 3 |
| Total Credits | | 14 |

¹ Grade "C" or better in all EE and CSCI courses required for graduation.

² A minimum of 6 credit hours of Technical Electives must be selected from among courses administered by SEECS at the 300 level or above. Remaining Technical Electives may be selected only from courses administered by CEM, Mathematics, or Physics at the 300 level or above and as approved by the student's advisor. MATH 308 History of Math does not meet the requirements of Technical Electives. A maximum of three credits of EE 490 Electrical Engineering Problems is allowed as an independent study and can count towards the Technical Elective requirement, but cannot be double counted. 2 credits of EE 397 Cooperative Education Cooperative (40 hours/week) is equivalent to 3 credits of the EE Electives with S/U grading, maximum 4 credits of EE 397 is equivalent to maximum of 6 credits of EE Elective.

³ Students must ensure all appropriate pre-requisites are met prior to registering for all courses in the curriculum.