

**Current****DEGREE: HONORS BACHELOR OF ELECTRICAL ENGINEERING****MAJOR: ELECTRICAL ENGINEERING****CURRICULUM**

Superior figures indicate year (1 = freshman, 2 = sophomore, 3 = junior, 4 = senior) and semester (F = fall, S = spring) in which the course should be taken.

**UNIVERSITY REQUIREMENTS**

|  |       |
|--|-------|
| ENGL 110 Critical Reading and Writing (minimum grade C-) | 3(1F) |
| First Year Experience (FYE)                              | 0-4   |
| Breadth Requirements                                     | 3     |
| Discovery Learning Experience (DLE)                      | 12    |
| Multi-cultural Courses                                   | 3     |

**Major Requirements**

**Breadth Requirements** 21

College of Engineering Breadth Requirements

The College of Engineering requires 21 total Breadth Requirement credits (essentially 9 credits in addition to the University Breadth Requirement.)

- If chosen carefully, up to 3 credits from each of the University Breadth Requirement categories may be used to simultaneously satisfy the College of Engineering Breadth Requirements for this major.
- Of the 21 credits, 6 credits must be at the Upper Level (usually 300-level or higher) as designated on the College of Engineering Breadth Requirement list.
- Of the 21 credits, 3 credits may be used to satisfy the University Multicultural Requirement (recommended for timely progress toward degree completion.)
- All Breadth Requirement coursework must be passed with a minimum grade of C-.

One of the following four courses must be taken: 3(3F)

ENGL 301 Expository Writing  
 ENGL 312 Written Communications in Business  
 ENGL 410 Technical Writing  
 ENGL 413 Topics in Professional Writing

|  |       |
|--|-------|
| EGGG 101 Introduction to Engineering (FYE)             | 2(1F) |
| MATH 241 Analytic Geometry and Calculus A              | 4(1F) |
| MATH 242 Analytic Geometry and Calculus B              | 4(1S) |
| MATH 243 Analytic Geometry and Calculus C              | 4(2F) |
| MATH 341 Differential Equations with Linear Algebra I  | 3(2S) |
| MATH 342 Differential Equations with Linear Algebra II | 3(3F) |
| CHEM 103 General Chemistry                             | 4(1F) |
| PHYS 207 Fundamentals of Physics I                     | 4(1S) |
| PHYS 208 Fundamentals of Physics II                    | 4(2F) |
| CISC 106 General Computer Science for Engineers        | 3(1F) |
| CISC 181 Introduction to Computer Science II           | 3(1S) |
| CISC 220 Data Structures                               | 3(2F) |

**Revised****DEGREE: HONORS BACHELOR OF ELECTRICAL ENGINEERING****MAJOR: ELECTRICAL ENGINEERING****CURRICULUM**

Parenthesized figures indicate year and semester in which the course should be taken. (1 = freshman, 2 = sophomore, 3 = junior, 4 = senior) and semester (F= fall, S = spring)

**UNIVERSITY REQUIREMENTS**

|  |       |
|--|-------|
| ENGL 110 Critical Reading and Writing (minimum grade C-) | 3(1F) |
| First Year Experience (FYE)                              | 0-4   |
| Discovery Learning Experience (DLE)                      | 3     |
| Breadth Requirements                                     | 12    |
| Multi-cultural Course(s)                                 | 3     |

**Major Requirements**

**Breadth Requirements** 21

College of Engineering Breadth Requirements

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 ENGL 312 Written Communications in Business  
 ENGL 410 Technical Writing  
 ENGL 413 Topics in Professional Writing

|  |       |
|--|-------|
| EGGG 101 Introduction to Engineering                   | 2(1F) |
| MATH 241 Analytic Geometry and Calculus A              | 4(1F) |
| MATH 242 Analytic Geometry and Calculus B              | 4(1S) |
| MATH 243 Analytic Geometry and Calculus C              | 4(2F) |
| MATH 341 Differential Equations with Linear Algebra I  | 3(2S) |
| MATH 342 Differential Equations with Linear Algebra II | 3(3F) |
| CHEM 103 General Chemistry                             | 4(1F) |
| PHYS 207 Fundamentals of Physics I                     | 4(1S) |
| PHYS 208 Fundamentals of Physics II                    | 4(2F) |
| CISC 106 General Computer Science for Engineers        | 3(1F) |
| CISC 181 Introduction to Computer Science II           | 3(1S) |
| CISC 220 Data Structures                               | 3(2F) |

|  |       |   |              |
|--|-------|---|--------------|
| CPEG 202 Introduction to Digital Systems   | 3(1S) | CPEG 202 Introduction to Digital Systems          | 3(1S)        |
| CPEG 222 Microprocessor Based Systems      | 4(2S) | CPEG 222 Microprocessor Based Systems             | 4(2S)        |
| ELEG 205 Analog Circuits I                 | 4(2F) | ELEG 205 Analog Circuits I                        | 4(2F)        |
| ELEG 305 Signals and Systems               | 3(2S) | ELEG 305 Signals and Systems                      | 3(2S)        |
| ELEG 309 Electronic Circuit Analysis I     | 4(2S) | ELEG 309 Electronic Circuit Analysis I            | 4(2S)        |
| ELEG 310 Random Signals and Noise          | 3(3S) | ELEG 310 Random Signals and Noise                 | 3(3S)        |
| ELEG 320 Field Theory I                    | 4(3F) | ELEG 320 Field Theory I                           | 4(3F)        |
| ELEG 340 Solid State Electronics           | 3(3F) | ELEG 340 Solid State Electronics                  | 3(3F)        |
| ELEG 491 Ethics and Impacts of Engineering | 2(4S) | <b>ELEG 491 Ethics and Impacts of Engineering</b> | <b>3(4S)</b> |

Three of the following five foundation elective courses must be taken: 3S, 4F

9

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ELEG 306 Digital Signal Processing  
ELEG 312 Electronic Circuit Analysis II  
ELEG 403 Communication Systems Engineering  
ELEG 413 Field Theory II  
ELEG 418 Digital Control Systems

ELEG 306 Digital Signal Processing  
ELEG 312 Electronic Circuit Analysis II  
ELEG 403 Communication Systems Engineering  
ELEG 413 Field Theory II  
ELEG 418 Digital Control Systems

Design Requirement (DLE) 6(4F&S)

In addition to the content of the normal program, every student must take at least six credits in ELEG course designated as "design." Regularly offered ELEG design courses include ELEG 498 offered in the fall and ELEG 499 offered in the spring.

Design Requirement (DLE) 6(4F&S)

In addition to the content of the normal program, every student must take at least six credits in ELEG course designated as "design." Regularly offered ELEG design courses include ELEG 498 offered in the fall and ELEG 499 offered in the spring.

Technical Electives 15

In addition to the design requirement, each student, in consultation with their advisor, must select a program of technical electives satisfying the following: (1) With some exceptions, technical electives consist of 300-level or above engineering, mathematics, natural sciences, and computer science courses. With the permission of the student's advisor, certain 200-level courses, such as PHYS 211, are permitted. (2) At least 15 technical elective credits must be taken. (3) Of the 15 technical elective credits, at least 9 must be in CPEG or ELEG courses. (4) Of the 9 credits in ELEG or CPEG, at least 6 must be in 400-level or above ELEG or CPEG courses.

**CREDITS TO TOTAL A MINIMUM OF 125**

Technical Electives 15

In addition to the design requirement, each student, in consultation with their advisor, must select a program of technical electives satisfying the following: (1) With some exceptions, technical electives consist of 300-level or above engineering, mathematics, natural sciences, and computer science courses. With the permission of the student's advisor, certain 200-level courses, such as PHYS 211, are permitted. (2) At least 15 technical elective credits must be taken. (3) Of the 15 technical elective credits, at least 9 must be in CPEG or ELEG courses. (4) Of the 9 credits in ELEG or CPEG, at least 6 must be in 400-level or above ELEG or CPEG courses.

**CREDITS TO TOTAL A MINIMUM OF 126**

### HONORS BACHELOR OF ELECTRICAL ENGINEERING

A recipient of the Honors Bachelor of Electrical Engineering must satisfy the following:

1. All requirements for the Bachelor of Electrical Engineering degree.
2. All generic University requirements for the Honors Degree. Graduate courses approved for this purpose by the department may be counted as Honors courses