Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

### Electrical Engineering, BSE

- **Computer Track** [p. 1]
- **Electrical Track** [p. 2]

#### Computer Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET:1030</td>
<td>Rhetoric</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1550</td>
<td>Engineering Mathematics I: Single Variable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>CHEM:1110</td>
<td>Principles of Chemistry I</td>
<td>4</td>
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<tr>
<td>ENGR:1100</td>
<td>Introduction to Engineering Problem Solving</td>
<td>3</td>
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<tr>
<td>ENGR:1000</td>
<td>Engineering Success for First-Year Students</td>
<td>1</td>
</tr>
<tr>
<td>CSI:1600</td>
<td>Success at Iowa</td>
<td>0</td>
</tr>
</tbody>
</table>

#### First Year

- **Fall**
  - GE: Approved Course Subjects | 3 |
  - MATH:1560 | Engineering Mathematics II: Multivariable Calculus | 4 |
  - MATH:2550 | Engineering Mathematics III: Matrix Algebra | 2 |
  - PHYS:1611 | Introductory Physics I | 4 |
  - ENGR:1300 | Introduction to Engineering Computing | 3 |

#### Spring

- GE: Approved Course Subjects | 3 |
- MATH:2550 | Engineering Mathematics III: Multivariable Calculus | 4 |
- MATH:2550 | Engineering Mathematics III: Matrix Algebra | 2 |
- PHYS:1611 | Introductory Physics II | 4 |
- ENGR:2120 | Electrical Circuits | 3 |

#### Second Year

- **Fall**
  - GE: Diversity, Equity, and Inclusion | 3 |
  - MATH:2560 | Engineering Mathematics IV: Differential Equations | 3 |
  - PHYS:1612 | Introductory Physics II | 4 |
  - ENGR:2730 | Computers in Engineering | 3 |

#### Third Year

- **Fall**
  - STAT:2020 | Probability and Statistics for the Engineering and Physical Sciences | 3 |
  - CS:3330 | Algorithms | 3 |
  - ECE:3320 | Introduction to Digital Design | 3 |
  - ECE:3330 | Introduction to Software Design | 3 |
  - ECE:3700 | Electromagnetic Theory | 3 |
  - ECE:3000 | Electrical and Computer Engineering Professional Seminar | 1 |

#### Fourth Year

- **Fall**
  - GE: Approved Course Subjects | 3 |
  - ECE:4880 | Principles of Electrical and Computer Engineering Design | 3 |
  - Focus Area: breadth elective | 3 - 4 |
  - Focus Area: elective ECE course numbered above 5000 | 3 |
  - Focus Area: technical elective | 3 |
  - Focus Area: additional elective | 2 - 3 |

#### Hours

- **First Year** | 16 |
- **Second Year** | 16 |
- **Third Year** | 17-19 |
- **Fourth Year** | 15-17 |
- **Total Hours** | 128-132 |
elective (3 s.h.); two courses with prefix ECE numbered above 5000 (6 s.h.); and five additional elective courses (at least 14 s.h.). See General Catalog and Department of Electrical and Computer Engineering website or consult an advisor for more information.

b Typically this course is offered in fall, spring, and summer sessions. Check MyUI for course availability since offerings are subject to change.

c Typically this course is offered in fall and spring semesters. Check MyUI for course availability since offerings are subject to change.

d Enrollment in math courses requires completion of a placement exam.

e Enrollment in chemistry courses requires completion of a placement exam.

f Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.

g See General Catalog for list of approved course subjects.

h Students select a course from one of two GE CLAS Core areas: Diversity and Inclusion or Values and Culture.

i See General Catalog for list of approved courses.

j Students who intend to enroll in a Be Creative course with prerequisites must request a waiver by completing the Request Prerequisite Special Permission form on MyUI.

k Students in the computer track complete two technical electives that align with the focus area (6-7 s.h.), one elective with prefix ECE (3-4 s.h.), and two additional electives (5 s.h.). Additional electives may be selected from the breadth, depth, or ECE elective list and from a list of suggested electives for the specific focus area. Consult the Department of Electrical and Computer Engineering website or an academic advisor for more information.

l Students in the computer track take ECE:3540 or choose their track breadth elective from the list of required electrical track courses. Specific recommendations vary based on focus area. See General Catalog for full list of approved courses; see Department of Electrical and Computer Engineering website or consult an advisor for more information about your specific focus area.

m Students complete at least two courses with prefix ECE numbered above 5000. Specific recommendations vary based on focus area. Consult the Department of Electrical and Computer Engineering website or an academic advisor for more information.

n The depth elective must be an advanced course, normally numbered 4000 or above, in a computer-related subject area; it is typically an ECE course. Specific recommendations vary based on focus area. See Department of Electrical and Computer Engineering website or consult an advisor for more information.

o Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.

### Electrical Track

#### Course Title Hours

<table>
<thead>
<tr>
<th>Academic Career</th>
<th>Hours</th>
<th>Any Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Third Year</strong></td>
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<tr>
<td><strong>Fall</strong></td>
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<tr>
<td>ECE:3000</td>
<td>Electrical and Computer Engineering Professional Seminar</td>
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<tr>
<td>ECE:3320</td>
<td>Introduction to Digital Design</td>
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</table>
ECE:3400  Linear Systems II  
ECE:3410  Electronic Circuits  
ECE:3700  Electromagnetic Theory  
Focus Area: technical elective  

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<tr>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>3</td>
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</tbody>
</table>

### Spring

GE: Engineering Be Creative  
ECE:3360  Embedded Systems  
ECE:3500  Communication Systems  
ECE:3600  Control Systems  
ECE:3720  Semiconductor Devices  
Focus Area: additional elective  

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<thead>
<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>2 - 3</td>
</tr>
</tbody>
</table>

### Fourth Year

#### Fall

GE: Approved Course Subjects  
ECE:4880  Principles of Electrical and Computer Engineering Design  
Focus Area: elective ECE course numbered above 5000  
Focus Area: technical elective  
Focus Area: breadth elective  

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>17-18</td>
</tr>
</tbody>
</table>

#### Spring

GE: Approved Course Subjects  
ECE:4890  Senior Electrical and Computer Engineering Design  
Focus Area: elective ECE course numbered above 5000  
Focus Area: additional elective  
Focus Area: depth elective  
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)  

<table>
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**Total Hours** 128-131

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a. Students in the electrical track complete eight focus area courses including: one breadth elective (3-4 s.h.); one depth elective (3 s.h.); two courses with prefix ECE numbered above 5000 (6 s.h.); two technical electives (6 s.h.); and two additional elective courses (at least 5 s.h.). See General Catalog and Department of Electrical and Computer Engineering website or consult an advisor for more information.

b. Typically this course is offered in fall, spring, and summer sessions. Check MyUI for course availability since offerings are subject to change.

c. Typically this course is offered in fall and spring semesters. Check MyUI for course availability since offerings are subject to change.

d. Enrollment in math courses requires completion of a placement exam.

e. Enrollment in chemistry courses requires completion of a placement exam.

f. Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.

g. See General Catalog for list of approved course subjects.
h. Students select a course from one of two GE CLAS Core areas: Diversity and Inclusion or Values and Culture.

i. Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.

j. Students in the electrical track complete two technical electives that align with the focus area (6-7 s.h.) and two additional electives (5 s.h.). Additional electives may be selected from the breadth, depth, or ECE elective lists or from a list of suggested electives for the specific focus area. Consult the Department of Electrical and Computer Engineering website or an academic advisor for more information.

k. See General Catalog for list of approved courses.

l. Students who intend to enroll in a Be Creative course with prerequisites must request a waiver by completing the Request Prerequisite Special Permission form on MyUI.

m. Students in the electrical track take ECE:3540 or choose their track breadth elective from the list of required computer track courses. Specific recommendations vary based on focus area. See General Catalog for full list of approved courses; see Department of Electrical and Computer Engineering website or consult an advisor for more information.

n. The depth elective must be an advanced course, normally numbered 4000 or above, in an electrical-related subject area; it is typically an ECE course. Specific recommendations vary based on focus area. See General Catalog or consult a computer engineering advisor for more information.

o. Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Degree Services.