

**Electrical Engineering – Electrical Track**

|                   | UI Course #                          | University of Iowa Course Title   | SH        |                              | ILCC Course                  | Iowa Lakes Course Title                        | SH |
|-------------------|--------------------------------------|---|-----------|------------------------------|------------------------------|--|----|
| <b>Semester 1</b> |                                      |   |           |                              |                              |  |    |
| Fall              | MATH:1550                            | Engineering Math I – Single Variable Calculus   | 4         | <b>BOTH</b>                  | MAT 211                      | Calculus I                                     | 5  |
|                   |                                      |   |           |                              | MAT 217                      | Calculus II                                    | 5  |
|                   | ENGR:1100                            | Engineering Problem Solving I   | 3         |                              | No equivalent course offered |  |    |
|                   | CHEM:1110                            | Principles of Chemistry I & Lab   | 4         |                              | CHM 166                      | General Chemistry I                            | 5  |
|                   | RHET:1030                            | Rhetoric (Writing Component 1, Writing Component 2, and a single Speech Component all required) | 4         | <b>CHOOSE 1</b>              | ENG 105                      | Composition I                                  | 3  |
|                   |                                      |   |           |                              | ENG 106                      | Composition II                                 | 3  |
|                   |                                      |   |           |                              | SPC 112                      | Public Speaking                                | 3  |
| ENGR:1000         | Engr Success for First-Year Students | 1*  |           | No equivalent course offered |                              |  |    |
|                   | Total                                |   | <b>16</b> |                              |                              |  |    |
| <b>Semester 2</b> |                                      |   |           |                              |                              |  |    |
| Spring            | MATH:1560                            | Engineering Math II – Multivariable Calculus  | 4         |                              | Mat 218**                    | Calculus III                                   | 3  |
|                   | MATH:2550                            | Engineering Math III – Matrix Algebra   | 2         |                              | No equivalent course offered |  |    |
|                   | ENGR:1300                            | Engineering Problem Solving II  | 3         | <b>CHOOSE 1</b>              | CIS 171                      | Java   | 3  |
|                   |                                      |   |           |                              | CIS 162                      | C++  | 4  |
|                   |                                      |   |           |                              | CIS 161                      | C++  | 3  |
|                   | PHYS:1611                            | Introductory Physics I with Lab   | 4         |                              | PHY 212                      | Classical Physics I                            | 5  |
|                   | General Education Component #1       | 3   |           |                              |                              |  |    |
|                   | Total                                |   | <b>16</b> |                              |                              |  |    |
| <b>Semester 3</b> |                                      |   |           |                              |                              |  |    |
| Fall              | MATH:2560                            | Engineering Math IV – Differential Equations  | 3         |                              | MAT 227                      | Differential Equations with Laplace Transforms | 4  |
|                   | PHYS:1612                            | Introductory Physics II   | 4         |                              | PHY 222                      | Classical Physics II                           | 5  |
|                   | ENGR:2110                            | Engineering Fundamentals I: Statics   | 2         |                              | EGT 139                      | Statics Engineering                            | 3  |
|                   | ENGR:2120                            | Engineering Fundamentals II: Electrical Circuits  | 3         | No equivalent course offered |                              |  |    |
|                   | ENGR:2130                            | Engineering Fundamentals III: Thermodynamics  | 3         | No equivalent course offered |                              |  |    |
|                   | Total                                |   | <b>15</b> |                              |                              |  |    |
| <b>Semester 4</b> |                                      |   |           |                              |                              |  |    |
| Spring            | MATH:3550                            | Engineering Math V: Vector Calculus   | 3         | No equivalent course offered |                              |  |    |
|                   | ECE:2400                             | Linear Systems I  | 3         | No equivalent course offered |                              |  |    |
|                   | ECE:2410                             | Principles of Electronic Instrumentation  | 4         | No equivalent course offered |                              |  |    |
|                   | ENGR:2730                            | Computers in Engineering  | 3         | No equivalent course offered |                              |  |    |
|                   |                                      | General Education Component #2  | 3         |                              |                              |  |    |
|                   | Total                                |   | <b>16</b> |                              |                              |  |    |

## Electrical Engineering – Electrical Track

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|-------------------|-------------|---|----|-------------|------------------------------|----|
| <b>Semester 5</b> |             |   |    |             |                              |    |
| Fall              | STAT:2020   | Probability and Stat for Engineering & Phys Sci | 3  |             | No equivalent course offered |    |
|                   | ECE:3320    | Intro to Digital Design                         | 3  |             | No equivalent course offered |    |
|                   | ECE:3400    | Linear Systems II                               | 3  |             | No equivalent course offered |    |
|                   | ECE:3410    | Electronic Circuits                             | 3  |             | No equivalent course offered |    |
|                   | ECE:3700    | Electromagnetic Theory                          | 3  |             | No equivalent course offered |    |
|                   | ECE:3000    | Professional Seminar: Electrical Engineering    | 1  |             | No equivalent course offered |    |
|                   |             | Total   |    | 16          |                              |    |
| <b>Semester 6</b> |             |   |    |             |                              |    |
| Spring            | ECE:3500    | Communication Systems                           | 3  |             | No equivalent course offered |    |
|                   | ECE:3600    | Control Systems                                 | 3  |             | No equivalent course offered |    |
|                   | ECE:3720    | EE Materials and Devices                        | 3  |             | No equivalent course offered |    |
|                   |             | Elective Focus Area #1                          | 3  |             |                              |    |
|                   |             | Elective Focus Area #2                          | 3  |             |                              |    |
|                   |             | General Education Component #3                  | 3  |             |                              |    |
|                   |             | Total   |    | 18          |                              |    |
| <b>Semester 7</b> |             |   |    |             |                              |    |
| Fall              | ECE:4880    | Principles of Electrical Engineering Design     | 3  |             | No equivalent course offered |    |
|                   |             | Elective Focus Area #3                          | 3  |             |                              |    |
|                   |             | Elective Focus Area #4                          | 3  |             |                              |    |
|                   |             | Track Breadth Elective                          | 3  |             | No equivalent course offered |    |
|                   |             | General Education Component #4                  | 3  |             |                              |    |
|                   |             | Total   |    | 15          |                              |    |
| <b>Semester 8</b> |             |   |    |             |                              |    |
| Spring            | ECE:4890    | Senior Electrical Engineering Design            | 3  |             | No equivalent course offered |    |
|                   |             | Track Depth Elective                            | 3  |             | No equivalent course offered |    |
|                   |             | Elective Focus Area #5                          | 3  |             |                              |    |
|                   |             | Elective Focus Area #6                          | 3  |             |                              |    |
|                   |             | General Education Component #5                  | 3  |             |                              |    |
|                   |             | Total   |    | 15          |                              |    |

2017-18 Curriculum

updated June 2018

\* 1sh; does not count toward 128 sh total required for graduation

\*\*Students must have completed Calculus I, II, and III to receive credit for Engineering Math II