

# ELECTRICAL ENGINEERING: Electrical

Department of Electrical and Computer Engineering



## Sample Four-Year Plan

### First Year

| 1st Semester |  | sh        | 2nd Semester |  | sh        |
|--------------|--|-----------|--------------|--|-----------|
| ALL          | <b>RHET:1030 Rhetoric</b>  | 4         | ALL          | <b>General Education Course</b>                                    | 3         |
| F/S          | <b>MATH:1550 Math I: Single Variable Calculus</b><br>(P: ALEKS score $\geq 75$ or MPT Level 3 score $\geq 9$ ) | 4         | F/S          | <b>MATH 1560 Math II: Multivariable Calculus</b><br>(P: MATH:1550) | 4         |
| ALL          | <b>CHEM:1110 Principles of Chemistry I</b><br>(P: ALEKS score $\geq 55$ or MPT Level 3 score $\geq 9$ )        | 4         | ALL          | <b>MATH:2550 Math III: Matrix Algebra</b><br>(P: MATH:1550)        | 2         |
| F            | <b>ENGR:1000 Engineering Success for First-Year Students</b><br>(First semester standing)                      | 1         | ALL          | <b>PHYS:1611 Introductory Physics I / Lab</b><br>(C: MATH:1550)    | 4         |
| F            | <b>ENGR:1100 Intro to Engineering Problem Solving</b>  | 3         | F/S          | <b>ENGR:1300 Intro to Engineering Computing</b><br>(C: MATH:1550)  | 3         |
|              |  | <b>16</b> |              |  | <b>16</b> |

### Second Year

| 3rd Semester |  | sh        | 4th Semester |  | sh        |
|--------------|--|-----------|--------------|--|-----------|
| ALL          | <b>General Education Course</b>  | 3         | F/S          | <b>MATH:3550 Engineering Math V: Vector Calculus</b><br>(P: MATH:1560 & MATH:2550; C: MATH:2560)   | 3         |
| ALL          | <b>MATH:2560 Math IV: Differential Equations</b><br>(P: MATH:1560 & MATH:2550) | 3         | F/S          | <b>STAT:2020 Probability &amp; Statistics For Engr &amp; Phys Sci</b><br>(P: MATH:1560)            | 3         |
| F/S          | <b>PHYS:1612 Introductory Physics II</b><br>(P: PHYS:1611; C: MATH:1560)       | 4         | S            | <b>PHYS:2704 Physics IV</b><br>(P: PHYS:1612 & MATH:1550)  | 3         |
| F/S          | <b>ENGR:2120 Electrical Circuits</b><br>(C: MATH:2560)                         | 3         | F/S          | <b>ECE:2400 Linear Systems I</b><br>(P: ENGR:2120 & MATH:2560)                                     | 3         |
| F/S          | <b>ENGR:2730 Computers in Engineering</b><br>(P: ENGR:1300)                    | 3         | F/S          | <b>ECE:2410 Principles of Electronic Instrumentation</b><br>(P: PHYS:1612, ENGR:2120, & MATH:2560) | 4         |
|              |  | <b>16</b> |              |  | <b>16</b> |

### Third Year

| 5th Semester |   | sh        | 6th Semester |  | sh        |
|--------------|---|-----------|--------------|--|-----------|
| F            | <b>ECE:3000 Professional Seminar: Electrical Engineering</b><br>(Junior Status) | 1         | ALL          | <b>General Education Course</b>  | 3         |
| F            | <b>ECE:3320 Intro to Digital Design</b><br>(Sophomore Status)                   | 3         | F/S          | <b>ECE:3360 Embedded Systems</b><br>(P: ENGR:2730 & ECE:3320; C: ECE:2410) | 3         |
| F            | <b>ECE:3400 Linear Systems II</b><br>(P: ECE:2400)                              | 3         | S            | <b>ECE:3500 Communication Systems</b><br>(P: ECE:2400)                     | 3         |
| F            | <b>ECE:3410 Electronic Circuits</b><br>(P: ECE:2400 & ECE:2410)                 | 4         | S            | <b>ECE:3600 Control Systems</b><br>(P: ECE:2400)                           | 3         |
| F            | <b>ECE:3700 Electromagnetic Theory</b><br>(P: MATH:3550 & PHYS:1612)            | 3         | S            | <b>ECE:3720 Semiconductor Devices</b><br>(P: PHYS:2704 & ECE:3410)         | 3         |
| ALL          | <b>Elective:</b> Focus Area -Technical  | 3         | ALL          | <b>Elective:</b> Focus Area, Minor, Certificate, etc. (minimum 2sh)        | 2         |
|              |   | <b>17</b> |              |  | <b>17</b> |

### Fourth Year

| 7th Semester |   | sh        | 8th Semester |   | sh        |
|--------------|---|-----------|--------------|---|-----------|
| ALL          | <b>General Education Course</b>   | 3         | ALL          | <b>General Education Course</b>   | 3         |
| F/S          | <b>ECE:4880 Principles of ECE Design</b><br>(P: Senior Status; ECE:2410, & ENGR:2730) | 3         | F/S          | <b>ECE:4890 ECE Design</b><br>(P: ECE:4880 and 3 of: ECE:3330, ECE:3350, ECE:3360, ECE:3400, ECE:3410, ECE:3500, ECE:3600, CS:3330) | 3         |
| ALL          | <b>Elective:</b> Focus Area - 5000 level ECE  | 3         | ALL          | <b>Elective:</b> Focus Area - 5000 level ECE  | 3         |
| ALL          | <b>Elective:</b> Focus Area -Technical  | 3         | ALL          | <b>Elective:</b> Focus Area, Minor, Certificate, etc.   | 3         |
| ALL          | <b>Elective:</b> Focus Area - Breadth   | 3         | ALL          | <b>Elective:</b> Focus Area - Depth   | 3         |
|              |   | <b>15</b> |              |   | <b>15</b> |