

Electrical Engineering Program Degree Plan

Common First Year (Freshman)

| | Semester I | | | | | | Semester II | | | | | |
|------------|------------|--|----------|-----------|-----------|--------------|---|---------------------|----|-----------|-----------|--------------|
| | Course | Title | LT | LB | CR | Prerequisite | Course | Title | LT | LB | CR | Prerequisite |
| Semester I | ENGL 1601 | English Language I | 0 | 16 | 6 | | ENGL 1602 | English Language II | 0 | 16 | 6 | ENGL 1601 |
| | MATH 1301 | General Mathematics | 3 | 0 | 3 | | MATH 1302 | General Statistics | 3 | 0 | 3 | |
| | PHYS 1301 | General Physics | 2 | 2 | 3 | | MATH 1303 | Calculus I | 3 | 0 | 3 | MATH 1301 |
| | CSEN 0341 | Information Technology Skills and Its Applications | 2 | 2 | 3 | | ARAB 0221 | Arabic Editing | 2 | 0 | 2 | |
| | TUTR 0231 | Thinking and Learning Skills | 2 | 0 | 2 | | ISLM 0211 | Islamic Culture | 2 | 0 | 2 | |
| | | | | | | UNIV 0XXX | University Elective Course I (Health Awareness and Safety Domain) | 2 | 0 | 2 | | |
| | | | 9 | 20 | 17 | | | | | 12 | 16 | 18 |

Second Year (Sophomore)

| | Semester I | | | | | | Semester II | | | | | |
|------------|------------|---|----|-----------|----------|--------------|-------------|----------------------------------|----|----|-----------|-----------------------------------|
| | Course | Title | LT | LB | CR | Prerequisite | Course | Title | LT | LB | CR | Prerequisite |
| Semester I | ELEN 2101 | Introduction to Electrical Engineering | 1 | 0 | 1 | | ELEN 2302 | Electric Circuits I | 3 | 0 | 3 | MATH 2403, PHYS 1403 ELEN 2101 |
| | ENGL 2304 | Academic and Professional Communication | 3 | 0 | 3 | ENGL 1602 | ELEN 2403 | Digital Logic Circuit Design | 3 | 2 | 4 | |
| | MATH 2403 | Calculus II | 4 | 0 | 4 | MATH 1303 | CHEM 1401 | General Chemistry I | 3 | 2 | 4 | |
| | PHYS 1403 | General Physics II | 3 | 2 | 4 | PHYS 1301 | XXXX XXXX | Free Elective | 3 | 0 | 3 | |
| | CSEN 2315 | Introduction to Programming in Python and C | 2 | 2 | 3 | | MATH 2305 | Calculus III | 3 | 0 | 3 | MATH 2403 |
| | SSPA 1101 | Health and Physical Education I | 0 | 2 | 1 | | SSPA 1102 | Health and Physical Education II | 0 | 2 | 1 | SSPA 1101 |
| | ISLM 0212 | Intellectual Awareness | 2 | 0 | 2 | | | | | | | |
| | | | | 15 | 6 | 18 | | | | | 15 | 6 |

Third Year (Midler)

| | Semester I | | | | | | Semester II | | | | | |
|------------|------------|------------------------------------|-----------|----------|-----------|----------------------|-------------|--------------------------------|----|-----------|----------|--------------------------------------|
| | Course | Title | LT | LB | CR | Prerequisite | Course | Title | LT | LB | CR | Prerequisite |
| Semester I | ELEN 3304 | Signals and Systems | 3 | 0 | 3 | ELEN 2302 | ELEN 3308 | Embedded Systems | 2 | 2 | 3 | CSEN 2315- ELEN 2403 |
| | ELEN 3306 | Electric Circuits II | 2 | 2 | 3 | ELEN 2302 | ELEN 3409 | Electromagnetics I | 3 | 2 | 4 | ELEN 2302 - Corequisite MATH 3313 |
| | ELEN 3407 | Electronics I | 3 | 2 | 4 | ELEN 2302, ELEN 2403 | ELEN 3410 | Electronics II | 3 | 2 | 4 | ELEN 3407 |
| | MATH 3310 | Elements of Differential Equations | 3 | 0 | 3 | MATH 2305 | MATH 3313 | Methods of Applied Mathematics | 3 | 0 | 3 | MATH 3310 |
| | DSEC 3316 | Introduction to Data Science | 3 | 0 | 3 | CSEN 2315, MATH 2403 | UNIV 0XXX | University Elective Course III | 2 | 0 | 2 | |
| | UNIV 0XXX | University Elective Course II | 2 | 0 | 2 | | | | | | | |
| | | | 16 | 4 | 18 | | | | | 13 | 6 | 16 |

Fourth Year (Junior)

| | Semester I | | | | | | Semester II | | | | | |
|------------|------------|---|-----------|----------|-----------|----------------------|-------------|---|----|-----------|----------|------------------------------------|
| | Course | Title | LT | LB | CR | Prerequisite | Course | Title | LT | LB | CR | Prerequisite |
| Semester I | ELEN 4311 | Fundamentals of Power systems | 3 | 0 | 3 | ELEN 3306 | ELEN 4416 | Control Engineering I | 3 | 2 | 4 | ELEN 3304 |
| | ELEN 4412 | Electric Energy Engineering | 3 | 2 | 4 | ELEN 3306, ELEN 3409 | ELEN 4417 | Digital System Engineering | 3 | 2 | 4 | CSEN 2315, ELEN 2403 |
| | ELEN 4213 | Fundamentals of EE Design | 2 | 0 | 2 | ELEN 3304, ELEN 3407 | ELEN 4418 | Communications Engineering I | 3 | 2 | 4 | ELEN 3304, ELEN 3407 |
| | ELEN 4314 | Probabilistic and Statistical Methods in Electrical Engineering | 3 | 0 | 3 | ELEN 3304 | ELEN 4191 | Senior Design Project I | 1 | 0 | 1 | ELEN 3410, ELEN 4412, ELEN 4213 |
| | ELEN 4315 | Power Electronics | 3 | 0 | 3 | ELEN 3410 | CSEN 4317 | Introduction to Artificial Intelligence | 3 | 0 | 3 | DSEC 3316 |
| | UNIV 0XXX | University Elective Course IV | 2 | 0 | 2 | | | | | | | |
| | | | 16 | 2 | 17 | | | | | 13 | 6 | 16 |

Summer

| | | | | | | |
|--|-----------|-----------|---|---|---|--|
| | ELEN 4082 | Coop Work | 0 | 0 | 0 | |
|--|-----------|-----------|---|---|---|--|

Fifth Year (Senior)

| | Semester I | | | | | | Semester II | | | | | |
|------------|------------|-----------------------|----------|----------|----------|--|------------------------------|--------------------------|----|-----------|----------|----------------------|
| | Course | Title | LT | LB | CR | Prerequisite | Course | Title | LT | LB | CR | Prerequisite |
| Semester I | ELEN 5683 | Coop Work (Continued) | 0 | 0 | 6 | ENGL 2304, ELEN 4412, ELEN 4191, Completion of 120 CR | ELEN XXXX | ELEN Elective I | 3 | 2 | 4 | |
| | | | | | | | ELEN XXXX | ELEN Elective II | 3 | 0 | 3 | |
| | | | | | | | ELEN XXXX | ELEN Elective III | 3 | 0 | 3 | |
| | | | | | | | ELEN 5392 | Senior Design Project II | 1 | 4 | 3 | ELEN 4191, ELEN 5683 |
| | | | | | | | XXXX XXXX | Technical Elective | 3 | 0 | 3 | |
| | | | | | | UNIV 0XXX | University Elective Course V | 2 | 0 | 2 | | |
| | | | 0 | 0 | 6 | | | | | 15 | 6 | 18 |

Total Credits

162