Electrical engineers find innovative ways to use electricity, electronic materials and electrical phenomena to improve people’s lives. The field of electrical engineering encompasses a very broad spectrum of technical areas, including computers and digital systems, electronics and integrated circuits, communications, systems and control, electromagnetics and electro-optics, energy conversion and power distribution, robotics, signal processing, solid state electronics and photonics. Electrical engineers work at the frontier of high technology and are involved in research, the creation of new ideas and the design and development of new products, manufacturing and marketing activities. Electrical engineers work in a variety of industries: film and television, aerospace, automotive, business machines, professional and scientific equipment, computers and electronics, communications, medical technology. They work in public utilities, at NASA, the National Institutes of Health, and the Department of Defense. As researchers, they study everything from fuel cells to nanotechnology. If it’s got an on/off switch, these engineers have studied it, designed it or produced it.

Freshman Year

**FALL SEMESTER**

- EGR 101 - ENGINEERING EXPLORATION I - 1
- EGR 102 - FUNDAMENTALS OF ENGINEERING COMPUTING - 2
- Choose CHE 105 or PHY 231 - 4
- PHY 241 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- UK Core - Comp. & Comm. I - 3
- MA 113 - CALCULUS I - 4

**SPRING SEMESTER**

- EGR 103 - ENGINEERING EXPLORATION II - 2
- UK Core - Comp. & Comm. II - 3
- MA 114 - CALCULUS II - 4
- Choose CHE 105 or PHY 231 - 4
- UK Core - Social Sciences --OR-- CS 215 - 3

**TOTAL HOURS: 15**

Total Freshman Hours: 32

Sophomore Year

**FALL SEMESTER**

- MA 213 - CALCULUS III - 4
- PHY 232 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 242 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- EE 211 - CIRCUITS I - 4
- EE 282 --OR-- CPE 282 - 3

**SPRING SEMESTER**

- MA 214 - CALCULUS IV - 3
- EE 223 - AC CIRCUITS - 4
- EE 287 --OR-- CPE 287 - 3
- UK Core - Social Sciences --OR-- CS 215 - 3
- UK Core - Humanities - 3

**TOTAL HOURS: 18**

Total Sophomore Hours: 35

Junior Year
### FALL SEMESTER
- EE 415G - ELECTROMECHANICS - **3**
- EE 421G - SIGNALS AND SYSTEMS - **3**
- EE Laboratory Elective - **3**
- EE 461G - INTRODUCTION TO ELECTRONICS - **3**
- MA/STA 320 --OR-- STA 381 - **3**
- Technical Elective - **3**

**TOTAL HOURS: 17**

Total Junior Hours: **32**

### SPRING SEMESTER
- EE 468G - INTRODUCTION TO ENGINEERING ELECTROMAGNETICS - **4**
- EE Laboratory Elective - **3**
- Engineering/Science Elective - **3**
- Technical Elective - **3**
- UK Core - Community, Culture and Citizen - **3**

**TOTAL HOURS: 15**

### Senior Year

#### FALL SEMESTER
- EE 490 --OR-- CPE 490 - **3**
- EE Technical Elective - **3**
- EE Technical Elective - **3**
- Math/Statistics Elective - **3**
- UK Core - Global Dynamics - **3**

**TOTAL HOURS: 15**

Total Senior Hours: **33**

#### SPRING SEMESTER
- EE 491 --OR-- CPE 491 - **3**
- EE Technical Elective - **3**
- EE Technical Elective - **3**
- Supportive Elective - **3**
- Engineering/Science Elective - **3**
- UK Core - Statistical Inferential Reason - **3**

**TOTAL HOURS: 18**

**Total Minimum hours Required for Degree: 131 hours**