Electrical Engineering – Class of 2022 (131 credits)

Hub Electives: must include all Hub areas below to fulfill degree requirements:

1. One unit Philosophical Inquiry & Life’s Meanings (PLM)
2. One unit Aesthetic Exploration (AEX)
3. One unit Historical Consciousness (HCO)
4. One unit Social Inquiry (SO1 or SO2)
5. One unit Individual & Community (IIC)
6. First unit Global Citizenship & Intercultural Literacy (GCI)
7. Second unit Global Citizenship & Intercultural Literacy (GCI)
8. One unit Ethical Reasoning (ETR)

Total of at least 16 credits
REQUIREMENTS
Electrical Engineering majors are required to complete a minimum of 131 credits as detailed on the Program Planning Sheet on the other side of this page.

HUB ELECTIVES
All students are required to complete a total of 26 Hub units. Eighteen of these Hub units are included in courses required for the EE BS degree. The remaining eight Hub units must be satisfied through four (or more) Hub Electives that incorporate the following seven Hub areas: Philosophical Inquiry; Aesthetic Exploration; Historical Consciousness; Social Inquiry; Individual in Community; Ethical Reasoning; Global Citizenship & Intercultural Literacy (2X). Lists of courses that fulfill combinations of these Hub units are at: [www.bu.edu/eng/current-students/ugrad/requirements/hub-electives/](http://www.bu.edu/eng/current-students/ugrad/requirements/hub-electives/)

EE CORE ELECTIVES
Electrical Engineering majors complete three EE Core Electives chosen from the courses listed in the Systems, Electronics and Electrophysics areas. Courses must be selected from at least two of the three areas, and no more than two courses can be from any single area:

**SYSTEMS**
- ENG EC 402 Control Systems
- ENG EC 414 Machine Learning
- ENG EC 415 Software Radios
- ENG EC 501 Dynamic System Theory
- ENG EC 503 Introduction to Learning from Data
- ENG EC 505 Stochastic Processes

**ELECTRONICS**
- ENG EC 412 Analog Electronics
- ENG EC 417 Electric Energy Systems
- ENG EC 571 Digital VLSI Circuit Design

**ELECTROPHYSICS**
- ENG EC 417 Electric Energy Systems
- ENG EC 456 Electromagnetic Systems II
- ENG EC 471 Physics of Semiconductor Devices
- ENG EC 543 Sustainable Power Systems
- ENG EC 555 Intro to Bio Optics
- ENG EC 556 Optical Spectroscopic Imaging
- ENG EC 560 Intro to Photonics

**COMPUTER ELECTIVES**
Electrical Engineering majors complete one Computer Elective from the following list:
- ENG EC 327 Intro Software Engineering
- ENG EC 413 Computer Organization
- ENG EC 441 Introduction to Computer Networking

**TECHNICAL ELECTIVES**
Electrical Engineering majors complete three Technical Elective courses (12 credits) from the following list:

Approved Courses Outside Engineering that fulfill a Technical Elective:
- CAS AS 414 Solar and Space Physics
- CAS CS 440 Intro to Artificial Intelligence
- CAS CS 480 Introduction to Computer Graphics
- CAS CS 585 Image and Video Computing
- CAS MA 511 Introduction to Analysis
- CAS MA 528 Introduction to Modern Geometry
- CAS MA 531 Computability and Logic
- CAS MA 541 Modern Algebra 1
- CAS MA 583 Introduction to Stochastic Processes
- CAS MA 585 Introduction to Stochastic Processes
- CAS MA 583 Quantum Physics 1
- CAS PY 452 Quantum Physics 2
- QST SI 480 The Business of Technology Innovation
- QST SI 482 Technology and its Commercialization

Hub Unit Legend:
- QR1 = Quantitative Reasoning 1
- QR2 = Quantitative Reasoning 2
- SI1 = Scientific Reasoning 1
- SI2 = Scientific Reasoning 2
- FYW = First-Year Writing Seminar
- WRI = Writing, Research & Inquiry
- OSC = Oral and/or Signed Communication
- DME = Digital/Multimedia Expression
- CRT = Critical Thinking
- WRI = Writing, Research & Inquiry
- WIN = Writing-Intensive Course
- OSC = Oral and/or Signed Communication
- DME = Digital/Multimedia Expression
- CRT = Critical Thinking
- RIL = Research and Information Literacy
- TWC = Teamwork/Collaboration
- CRI = Creativity/Innovation

Notes:
For each of the following sets of courses, only one course can be taken for credit in each set due to the overlap of material:

1. ENG ME 403, ENG ME 404, ENG EC 402, ENG BE 404
2. ENG ME 303, ENG BE 436
3. ENG EK 103, CAS MA 142, CAS MA 242
4. ENG BE 403, ENG EC 401
5. ENG ME 366*, ENG EK 381, CAS MA 381, CAS MA 581
6. ENG ME 460, ENG ME 560

*indicates course no longer offered.