Electrical Engineering – Class of 2028 (131 credits)

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

- 1. Philosophical Inquiry & Life’s Meanings (PLM)
- 2. Aesthetic Exploration (AEX)
- 3. Historical Consciousness (HCO)
- 4. Social Inquiry (SO1 or SO2)
- 5. Individual & Community (IIC)
- 6. First Global Citizenship & Intercultural Literacy (GCI)
- 7. Second Global Citizenship & Intercultural Literacy (GCI)
- 8. Ethical Reasoning (ETR)
- Total of at least 16 credits

**Notes:**
- Grey box = either semester
- = prerequisite; = corequisite
- Students planning to study abroad sophomore 2 should take EK 301 in sophomore 1.
- Students must complete 48 credits of upper-division program coursework (not including Hub or writing).
- See back for Hub Unit Legend
**REQUIREMENTS**

Electrical Engineering (EE) 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 requirements. Eighteen of these Hub requirements are incorporated into courses required for the EE BS degree. The remaining eight Hub requirements 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). Search for courses that fulfill specific combinations of Hub requirements at: https://www.bu.edu/phpbin/course-search/

**NATURAL SCIENCE ELECTIVE**

EE majors complete one Natural Science Elective (4 credits) from the following list:

- CAS AS 202: Principles of Astronomy
- CAS BI 108: Biology 2
- CAS CH 131: Gen Chem for the Eng Sci
- CAS CH 101: General Chemistry 1
- CAS PY 451: Quantum Physics 1

**EE CORE ELECTIVES**

EE majors complete three EE Core Electives (12 credits) 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 System
- ENG EC 414 Machine Learning
- ENG EC 415 Software Radios
- ENG EC 418 Intro to Reinforcement Learning
- ENG EC 501 Dynamical Systems Theory
- ENG EC 503 Intro 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**

EE majors complete one Computer Elective (4 credits) from the following list:

- ENG EC 327 Intro Software Engineering
- ENG EC 413 Computer Organization
- ENG EC 441 Introduction to Computer Networking

**TECHNICAL ELECTIVES**

EE majors complete three Technical Elective courses (12 credits) from the following:

Acceptable courses include all EC courses and ENG BE 209.

Additionally, all ENG BE, EK and ME courses at the 300-level and above, except for 600-level courses and ENG 409, are acceptable as Technical Electives (no more than 4 credits of ENG EC 451 can be used).

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 PY 451 Quantum Physics 1
- CAS PY 452 Quantum Physics 2
- WRI = Writing, Research & Inquiry
- WIN = Writing-Intensive Course
- OSC = Oral and/or Signed Communication
- DME = Digital/Multimedia Expression
- CRT = Critical Thinking

**Hub Unit Legend:**

- Q1 = Quantitative Reasoning 1
- Q2 = Quantitative Reasoning 2
- S1 = Scientific Reasoning 1
- S2 = Scientific Reasoning 2
- FYW = First-Year Writing Seminar

**Notes:**

a) Any requirement satisfied via AP/IB earns a maximum of one Hub requirement and students may need to replace missing Hub requirements.

b) Any requirement satisfied via transfer earns zero Hub requirements and students may need to replace missing Hub requirements.

c) 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 ME 306, ENG BE 425
4. ENG EK 103, CAS MA 142, CAS MA 242
5. ENG BE 403, ENG EC 401
6. ENG EK 381, CAS MA 381, CAS MA 581

5/30/2024