Electrical Engineering – Class of 2025 (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

**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 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). Search for courses that fulfill specific combinations of Hub units at: https://www.bu.edu/phpbin/course-search/

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 Systems
ENG EC 414 Machine Learning
ENG EC 415 Software Radios
ENG EC 501 Dynamic System 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, 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

Hub Unit Legend:

QR = Quantitative Reasoning
QW = Writing, Research & Inquiry
SI = Scientific Reasoning
S1 = Scientific Reasoning 1
S2 = Scientific Reasoning 2
FYW = First-Year Writing Seminar

WRI = Writing, Research & Inquiry
OSC = Oral and/or Signed Communication
DM = Digital/Multimedia Expression
CRT = Critical Thinking

Notes:

a) Any requirement satisfied via AP/IB can earn a maximum of one Hub unit and may require students to replace the Hub units missed.

b) Any requirement satisfied via transfer earns zero Hub units and may require students to replace the Hub units missed.

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

5/19/2022