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
Computer Engineering majors are required to complete a minimum of 133 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 CE 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). Boston University’s Course Search tool can be used to search for courses by School/College, number of credits and/or specific Hub units [https://www.bu.edu/phpbin/course-search/](https://www.bu.edu/phpbin/course-search/).

**CORE ELECTIVE**

Computer Engineering majors complete two Core Electives from the following list:

- ENG EC 401 Signals and Systems
- ENG EC 410 Introduction to Electronics
- ENG EC 440 Introduction to Operating Systems
- ENG EC 444 Smart and Connected Systems

**COMPUTER ENGINEERING ELECTIVE**

Computer Engineering majors complete two Computer Eng Elective courses (8 credits) from the following list:

- ENG EC 440 Introduction to Operating Systems
- ENG EC 441 Intro to Computer Networking
- ENG EC 444 Smart & Connected Systems
- ENG EC 447 Software Design
- ENG EC 504 Advanced Data Structures
- ENG EC 512 Enterp Client-Server Softwr Sys Des
- ENG EC 513 Computer Architecture
- ENG EC 521 CyberSecurity
- ENG EC 526 Parallel Prog for High Perf & Big Data
- ENG EC 527 High Perf Prog w/ Multicore & GPUs
- ENG EC 528 Cloud Computing
- ENG EC 530, Software Engineering Principles

Computer Engineering majors complete three Technical Elective courses (12 credits):

- ENG EC 401 Signals and Systems
- ENG EC 402 Control Systems
- ENG EC 410 Intro to Electronics
- ENG EC 412 Analog Electronics
- ENG EC 414 Machine Learning
- ENG EC 415 Software Radios
- ENG EC 417 Electric Energy Systems
- ENG EC 455 Electromagnetic Systems I
- ENG EC 456 Electromagnetic Systems II
- ENG EC 471 Physics of Semiconductor Devices
- ENG EC 501 Dynamic System Theory
- ENG EC 503 Introduction to Learning from Data
- ENG EC 505 Stochastic Processes
- ENG EC 508 Wireless Communication
- ENG EC 515 Digital Communication

**EE BREADTH ELECTIVE**

Computer Engineering majors complete one EE Breadth Elective course from the following list:

- ENG EC 401 Signals and Systems
- ENG EC 402 Control Systems
- ENG EC 410 Intro to Electronics
- ENG EC 412 Analog Electronics
- ENG EC 414 Machine Learning
- ENG EC 415 Software Radios
- ENG EC 417 Electric Energy Systems
- ENG EC 455 Electromagnetic Systems I
- ENG EC 456 Electromagnetic Systems II
- ENG EC 471 Physics of Semiconductor Devices
- ENG EC 501 Dynamic System Theory
- ENG EC 503 Introduction to Learning from Data
- ENG EC 505 Stochastic Processes
- ENG EC 508 Wireless Communication
- ENG EC 515 Digital Communication

**TECHNICAL ELECTIVES**

Any course listed as **Computer Engineering Elective**

- ENG BE 209 and any ENG EC, BE, EK or ME course at the 300-level or 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
- CAS MA 528 Introduction to Modern Geometry
- CAS MA 531 Computability and Logic
- CAS MA 541 Modern Algebra I
- CAS MA 583 Introduction to Stochastic Processes
- CAS MA 583 Introduction to Modern Geometry
- CAS MA 584 Modern Algebra I
- CAS MA 585 Image and Video Computing
- CAS MA 585 Introduction to Stochastic Processes
- CAS MA 511 Introduction to Analysis
- CAS PY 313/314 Waves and Modern Physics
- CAS PY 451 Quantum Physics 1
- CAS PY 452 Quantum Physics 2
- CAS PY 451 Quantum Physics 1
- CAS PY 452 Quantum Physics 2
- QST SI 480 The Business of Technology Innovation
- QST SI 482 Technology and its Commercialization
- RIL = Research and Information Literacy
- TWC = Teamwork/Collaboration
- RIL = Research and Information Literacy
- TWC = Teamwork/Collaboration

**Hub Unit Legend:**

- Q1 = Quantitative Reasoning 1
- WRI = Writing, Research & Inquiry
- RIL = Research and Information Literacy
- Q2 = Quantitative Reasoning 2
- WIN = Writing-Intensive Course
- TWC = Teamwork/Collaboration
- SI1 = Scientific Reasoning 1
- OSC = Oral and/or Signed Communication
- CRT = Critical Thinking
- SI2 = Scientific Reasoning 2
- DME = Digital/Multimedia Expression
- CRI = Creativity/Innovation
- FYW = First-Year Writing Seminar
- PD = Program Development

**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.