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

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

CORE ELECTIVE

CE majors complete two Core Electives (8 credits) 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
- ENG EC 447 Software Design
- ENG EC 450 Advanced Data Structures
- ENG EC 520 CyberSecurity
- ENG EC 521 Computer Architecture
- ENG EC 524 Digital Image Processing
- ENG EC 525 Computer Communications Systems
- ENG EC 526 Network Physical World
- ENG EC 527 Software Engineering
- ENG EC 528 Cloud Computing
- ENG EC 530 Software Engineering Principles

COMPUTER ENGINEERING ELECTIVE

CE 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 and Connected Systems
- ENG EC 447 Software Design
- ENG EC 450 Advanced Data Structures
- ENG EC 520 CyberSecurity
- ENG EC 521 Computer Architecture
- ENG EC 524 Digital Image Processing
- ENG EC 525 Computer Communications Systems
- ENG EC 526 Network Physical World
- ENG EC 527 Software Engineering
- ENG EC 528 Cloud Computing
- ENG EC 530 Software Engineering Principles

EE BREADTH ELECTIVE

CE majors complete one EE Breadth Elective course (4 credits) 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
- ENG EC 516 Digital Signals Processing
- ENG EC 517 Intro to Information Theory
- ENG EC 519 Speech Processing
- ENG EC 520 Digital Image Processing
- ENG EC 522 Computational Optical Imaging
- ENG EC 523 Deep Learning
- ENG EC 524 Optimization Theory and Methods
- ENG EC 525 Sustainable Power Systems
- ENG EC 526 Intro to Biomedical Optics
- ENG EC 556 Optical Spectroscopic Imaging
- ENG EC 560 Intro to Photonics
- ENG EC 562 Introduction to Learning from Data
- ENG EC 563 Electromagnetic Fundamentals
- ENG EC 568 Optical Fibers and Wave Guides
- ENG EC 569 Intro to Subsurface Imaging

TECHNICAL ELECTIVES

(see Notes below) CE majors complete three Technical Elective courses (12 credits) from the following:

- 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 480 Introduction to Computer Graphics
- CAS CS 505 Natural language processing
- ENG EK 103, CAS MA 142, CAS MA 242
- ENG EC 440 Introduction to Operating Systems
- ENG EC 441 Intro to Computer Networking
- ENG EC 444 Smart and Connected Systems
- ENG EC 447 Software Design
- ENG EC 450 Advanced Data Structures
- ENG EC 520 CyberSecurity
- ENG EC 521 Computer Architecture
- ENG EC 524 Digital Image Processing
- ENG EC 525 Computer Communications Systems
- ENG EC 526 Network Physical World
- ENG EC 527 Software Engineering
- ENG EC 528 Cloud Computing
- ENG EC 530 Software Engineering Principles
- ENG EC 516 Digital Signals Processing
- ENG EC 517 Intro to Information Theory
- ENG EC 519 Speech Processing
- ENG EC 520 Digital Image Processing
- ENG EC 522 Computational Optical Imaging
- ENG EC 523 Deep Learning
- ENG EC 524 Optimization Theory and Methods
- ENG EC 525 Sustainable Power Systems
- ENG EC 526 Intro to Biomedical Optics
- ENG EC 556 Optical Spectroscopic Imaging
- ENG EC 560 Intro to Photonics
- ENG EC 562 Introduction to Learning from Data
- ENG EC 563 Electromagnetic Fundamentals
- ENG EC 568 Optical Fibers and Wave Guides
- ENG EC 569 Intro to Subsurface Imaging

Hub Unit Legend:

- QR1 = Quantitative Reasoning 1
- QRS2 = Quantitative Reasoning 2
- SI1 = Scientific Reasoning 1
- SI2 = Scientific Reasoning 2
- FYW = First-Year Writing Seminar
- WRI = Writing, Research & Inquiry
- RIL = Research and Information Literacy
- TWC = Teamwork/Collaboration
- QST = Quantitative Literacy
- CRI = Creativity/Innovation
- DME = Digital/Multimedia Expression
- CR = 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 EC 103, CAS MA 142, CAS MA 242
5. ENG BE 403, ENG EC 401
6. ENG EC 381, CAS MA 381, CAS MA 581