



**Notes**

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

**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 units

**REQUIREMENTS**

Computer Engineering (CE) majors are required to complete a minimum of 133 units 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** CE majors complete one Natural Science Elective (4 units) from the following list:

CAS AS 202 Principles of Astronomy 1	CAS CH 131 Gen Chem for the Eng Sci	CAS PY 321 & 322 Thermal Physics (2 units) & Quantum Physics (2 units) (Madrid)
CAS BI 107 Biology 1	CAS PY 313 Waves and Modern Physics	CAS PY 451 Quantum Physics 1
CAS BI 108 Biology 2	CAS PY 314 Waves and Modern Physics (Grenoble)	
CAS CH 101 General Chemistry 1		

**CORE ELECTIVE** CE majors complete two Core Electives (8 units) from the following list:

ENG EC 401 Signals and Systems	ENG EC 427 Software Engineering in Practice	ENG EC 441 Introduction to Computer Networking
ENG EC 410 Introduction to Electronics	ENG EC 440 Introduction to Operating Systems	ENG EC 444 Smart and Connected Systems

**COMPUTER ENGINEERING ELECTIVE** CE majors complete two Computer Engineering Elective courses (8 units) from the following list:

ENG EC 427 Software Engineering in Practice	ENG EC 530 Software Engineering Principles	CAS CS 411 Software Engineering
ENG EC 440 Intro to Operating Systems	ENG EC 531 Full-Stack Software at Scale	CAS CS 505 Natural Language Processing
ENG EC 441 Intro to Computer Networking	ENG EC 535 Introduction to Embedded Systems	CAS CS 511 Formal Methods
ENG EC 444 Smart & Connected Systems	ENG EC 541 Computer Communications Networks	CAS CS 525 Compiler Design
ENG EC 504 Advanced Data Structures	ENG EC 544 Network Physical World	CAS CS 530 Advanced Algorithms
ENG EC 513 Computer Architecture	ENG EC 545 Cyber Physical Systems	CAS CS 535 Complexity Theory
ENG EC 518 Robot Learning	ENG EC 551 Adv Digital Design w/ Verilog & FPGA	CAS CS 538 Fundamentals of Cryptography
ENG EC 521 Cybersecurity	ENG EC 552 Computational Synthetic Biology	CAS CS 548 Cryptography
ENG EC 523 Deep Learning	ENG EC 571 Digital VLSI Circuit Design	CAS CS 552 Operating Systems
ENG EC 526 Parallel Prog for High Perf & Big Data	CAS CS 320 Concepts of Programming Languages	CAS CS 558 Computer Network Security
ENG EC 527 High Perf Prog w/ Multicore & GPUs	CAS CS 350 Fundamentals of Computing Systems	CAS CS 562 Database Applications
ENG EC 528 Cloud Computing	CAS CS 410 Advanced Software Systems	CAS CS 565 Data Mining

**EE BREADTH ELECTIVE** CE majors complete one EE Breadth Elective course (4 units) from the following:

EC 401, EC 410, EC 455 as well as any course that appears on the EE planning sheet as an EE Core Elective except for EC 541 and EC 571.

**TECHNICAL ELECTIVES** (see **Notes** below) CE majors complete three Technical Elective courses (12 units) 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 units of ENG EC 451 can be used).

**Approved Courses Outside Engineering that fulfill a Technical Elective:**

CAS AS 414 Solar and Space Physics	CAS PY 313 Waves and Modern Physics	CDS DS 453: Crypto for Data Science
CAS CS 440 Intro to Artificial Intelligence	CAS PY 314 Waves and Modern Physics (Grenoble)	CDS DS 563: Algo Techniques for Taming Big Data
CAS CS 480 Intro to Computer Graphics	CAS PY 321 & 322 Thermal Physics (2 units) & Quantum Physics (2 units) (Madrid)	
CAS CS 585 Image and Video Computing	CAS PY 451 Quantum Physics 1	
CAS MA 511 Intro to Analysis	CAS PY 452 Quantum Physics 2	
CAS MA 528 Intro to Modern Geometry	CDS DS 310: Data Mechanics	
CAS MA 531 Computability and Logic	CDS DS 340: Intro to Machine Learning and AI	
CAS MA 541 Modern Algebra 1		
CAS MA 583 Intro to Stochastic Processes		

**No more than two of the following:**

QST SI 480 The Business of Technology Innovation  
 QST SI 482 Technology and its Commercialization  
 HUB XC 433 D1 Art&Sci Tech Cnsltng (F24 & Sp25)  
 HUB XC 438 The Art and Sci of Tech Consulting

**Notes:**

- Any requirement satisfied via AP/IB fulfills a **maximum of one Hub requirement** and students may need to replace missing Hub requirements.
- Any requirement satisfied via transfer fulfills **zero Hub requirements** and students may need to replace missing Hub requirements.
- The following sets of courses have significant overlapping content; credit will **not** be granted for more than one course in a set. Students should **only** take one of the corresponding courses and should take the ENG option unless otherwise advised:
  - ENG ME 403, ENG ME 404, ENG EC 402, ENG BE 404
  - ENG ME 303, ENG BE 436
  - ENG ME 306, ENG BE 425
  - ENG EK 103, CAS MA 242, CAS MA 442
  - ENG BE 403, ENG EC 401
  - ENG EK 381, CAS MA 581
  - ENG BE 428, ENG BE 478
  - CAS PY 313, CAS PY 314, CAS PY321 & 322