College of Engineering

Electrical Engineering – 2020 (130 credits)

Freshman 1
- CAS MA 123 Calculus I
- ENG EK 100 Freshman Seminar
- CAS CH 131 Principles of Gen Chemistry
- ENG EK 127 Intro ENG Computation
- CAS WR 100 Writing Seminar

Freshman 2
- CAS MA 124 Calculus II
- CAS PY 211 Physics I
- ENG EK 131/2 Intro to ENG
- ENG EK 102 Intro Lin Alg
- CAS WR 150 Writing & Res Seminar

Sophomore 1
- CAS MA 225 Multivariate Calculus
- CAS PY 212 Physics II
- ENG EK 307 Electric Circuits
- ENG EK 210 Intro ENG Des
- Social Science

Sophomore 2
- CAS MA 226 Differential Equations
- CAS PY 313 Waves & Modern Physics
- ENG EK 301 Eng Mechanics
- ENG EK 311 Intro Logic Design
- Humanities

Junior 1
- ENG EC 455 Electromagnetic Systems I
- ENG EC 401 Signals & Systems
- ENG EC 410 Intro Electronics
- ENG EC 463 Senior Design I
- Electrophysics Elective

Junior 2
- ENG EK 381 Prob, Stats & Data Sci
- ENG EK 102 Intro Lin Alg
- ENG EK 131/2 Intro to ENG
- ENG EK 381 Prob, Stats & Data Sci
- Electrophysics Elective

Senior 1
- Computer Elective
- Technical Elective
- ENG EC 463 Senior Design I
- Social Science/Humanities

Senior 2
- Technical Elective
- Technical Elective
- ENG EC 464 Senior Design II
- Gen Ed Elective

General Education Electives Checklist
- 1. CAS WR 100
- 2. CAS WR 150
- 3. One Social Science course
- 4. One Humanities course
- 5. One Social Science or Humanities course
- 6. One General Education elective course
- 7. Total of at least 24 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 social science/humanities or writing).
REQUIREMENTS
Electrical Engineering majors are required to complete a minimum of 130 credits as detailed on the Program Planning Sheet on the other side of this page.

GENERAL EDUCATION
For a list of specific courses that satisfy the Social Science, Humanities and General Education Elective, please go to the College of Engineering Undergraduate Requirements website at: http://www.bu.edu/eng/current-students/ugrad/requirements/.

SYSTEMS ELECTIVES
Electrical Engineering majors complete one Systems Elective from the following list:
- ENG EC 402 Control Systems
- ENG EC 414 Machine Learning
- ENG EC 415 Communication Systems
- ENG EC 416 Intro Digital Signal Processing*

COMPUTER ELECTIVES
Electrical Engineering majors complete one Computer Elective from the following list:
- ENG EC 327 Intro Software Engineering
- ENG EC 413 Computer Organization
- ENG EC 441 Introduction to Computer Networking

ELECTRONICS ELECTIVES
Electrical Engineering majors complete one Electronics Elective course from the following list:
- ENG EC 412 Analog Electronics
- ENG EC 417 Electric Energy Systems
- ENG EC 450 Microprocessors*
- ENG EC 451 Digital VLSI Circuit Design

ELECTROPHYSICS ELECTIVES
Electrical Engineering majors complete one Electrophysics Elective course from the following list:
- ENG EC 417 Electric Energy Systems
- ENG EC 456 Electromagnetic Systems II
- ENG EC 471 Physics of Semiconductor Devices
- ENG EC 562 Engineering Optics

TECHNICAL ELECTIVES
Electrical Engineering majors complete three Technical Elective courses (12 credits) from the following list:
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.

Pre-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 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 534 Modern Algebra 1
- CAS MA 583 Introduction to Stochastic Processes
- CAS PY 451 Quantum Physics 1

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 BE 402*, ENG EC 402, ENG BE 404
2. ENG ME 303, ENG BE 436
3. ENG EK 102*, ENG EK 103, CAS MA 142, CAS MA 242
4. ENG BE 401*, ENG BE 403, ENG EC 401
5. ENG ME 366, ENG EC 381*, ENG EK 381, ENG BE 200*
6. ENG ME 460, ENG ME 560
7. ENG EK 156*, ENG ME 358
8. ENG ME 357, ENG ME 359*

*indicates course no longer offered.