Electrical Engineering – 2020 (130 credits)

**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**

- Students planning to study abroad sophomore 2 should take EK 301 in sophomore 1.
- Grey box = either semester
- 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 415 Communication Systems  ENG EC 516 Digital Signals Processing
ENG EC 414 Machine Learning  ENG EC 416 Intro to 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 417 Electric Energy Systems  ENG EC 471 Physics of Semiconductor Devices  ENG EC 562 Engineering Optics
ENG EC 450 Microprocessors  ENG EC 456 Electromagnetic Systems II  ENG EC 571 Digital VLSI Circuit Design

ELECTROPHYSICS ELECTIVES  Electrical Engineering majors complete one Electrophysics Elective course from the following list:

ENG EC 456 Electromagnetic Systems II  ENG EC 471 Physics of Semiconductor Devices  ENG EC 562 Engineering Optics
ENG EC 471 Physics of Semiconductor Devices  ENG EC 456 Electromagnetic Systems II  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 MA 528 Introduction to Modern Geometry  CAS PY 452 Quantum Physics 2
CAS CS 440 Intro to Artificial Intelligence  CAS MA 531 Computability and Logic  QST SI 480 The Business of Technology Innovation
CAS CS 480 Introduction to Computer Graphics  CAS MA 541 Modern Algebra 1  QST SI 482 Technology and its Commercialization
CAS CS 585 Image and Video Computing  CAS MA 583 Introduction to Stochastic Processes
CAS MA 511 Introduction to Analysis  CAS PY 451 Quantum Physics 1

Notes:
For each of the following seven 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
(2)  ENG ME 303, ENG BE 436
(3)  ENG ME 501, ENG EC 501
(4)  ENG EK 102, ENG EK 103, CAS MA 142, CAS MA 242
(5)  ENG BE 401, ENG BE 403, ENG EC 401
(6)  ENG ME 366, ENG EC 381, ENG EK 481, ENG BE 200
(7)  ENG ME 460, ENG ME 560