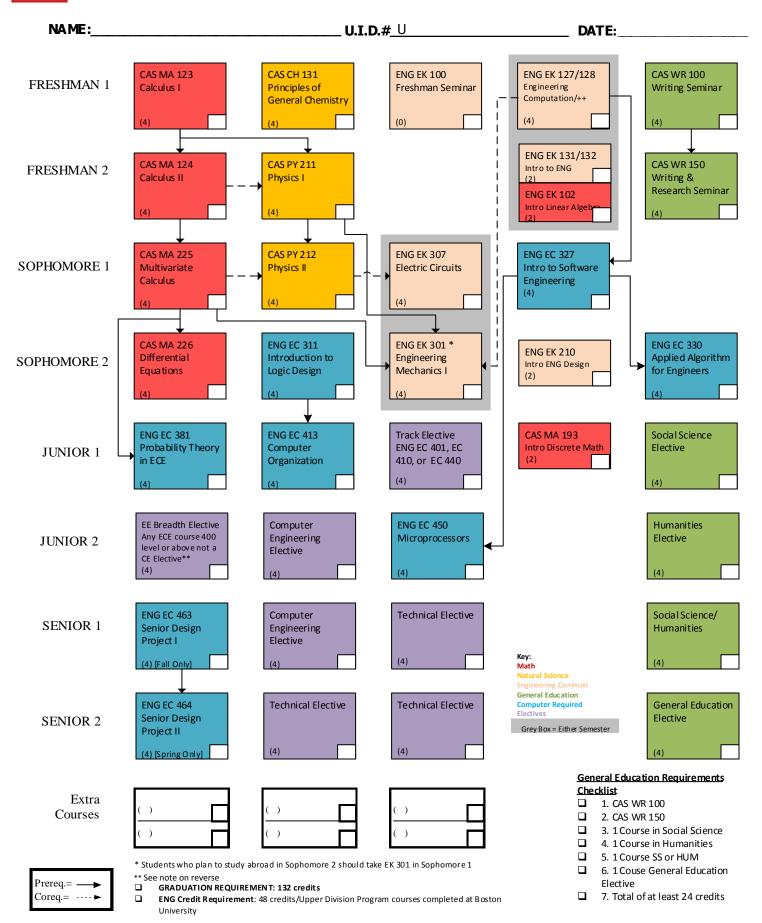
# College of Engineering

BI

### Computer Engineering – 2018

Undergraduate Program Planning Sheet



## BU College of Engineering

### COMPUTER ENGINEERING

#### REQUIREMENTS

Students majoring in Computer Engineering are required to complete a minimum of 132 credits as detailed on the Program Planning Sheet on the other side of this form.

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

TRACK ELECTIVE	Computer Engineering majors complete 1 Track Elective from the following list:
ENG EC 401	Signals and Systems
ENG EC 410	Introduction to Electronics
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ENG EC 440 Introduction to Operating Systems

#### COMPUTER ENGINEERING ELECTIVE Computer Engineering majors complete 2 CE Elective courses from the following list:

ENG EC 440 Introduction to Operating Systems	ENG EC 521 CyberSecurity	ENG EC 571 Digital VLSI Circuit Design
ENG EC 441 Introduction to Computer Networking	ENG EC 527 High Perf Programng with Multicore & GPU's	CAS CS 320 Concepts of Programming Languages
ENG EC 447 Software Design	ENG EC 528 Cloud Computing	CAS CS 350 Fundamentals of Computing Systems
ENG EC 504 Advanced Data Structures	ENG EC 535 Introduction to Embedded Systems	CAS CS 410 Advanced Software Systems
ENG EC 512 Enterprise Client-Server Softwr Sys Des	ENG EC 541 Computer Communications Networks	CAS CS 411 Software Engineering
ENG EC 513 Computer Architecture	ENG EC 544 Networking the Physical World	Any CAS CS 500-level course
	ENG EC 551 Advanced Digital Design with Verilog & FPGA	(except CAS CS 591-by Petition only)

**EE BREADTH ELECTIVE** Computer Engineering majors complete 1 EE Breadth Elective course :

Any ENG EC course 400-level or higher that is not on the above Computer Engineering Elective list, Directed Studies (ENG EC 451), 600-level courses, and Special Topics courses (ENG EC 500 and ENG EC 700).

### Directed Studies (ENG EC451), Special Topics Courses (ENG EC 500), and all ENG EC 700-level courses may satisfy the EE Breadth requirement by petition only.

TECHNICAL ELECTIVES (see Notes below) Computer Engineering majors complete 3 Technical Elective courses: 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.

#### Pre-Approved Courses Outside Engineering that fulfill a Technical Elective:

CAS CS 440Intro to Artificial IntelligenceCAS MA 531Computability and LogicCAS PY 452Quantum Physics 2CAS CS 480Introduction to Computer GraphicsCAS MA 541Modern Algebra 1QST SI 480The Business of Technology InnovationCAS CS 585Image and Video ComputingCAS MA 583Introduction to Stochastic ProcessesQST SI 482Technology and its Commercialization	CAS AS 414 Solar and Space Physics	CAS MA 528 Introduction to Modern Geometry	CAS PY 451 Quantum Physics 1
CAS CS 480 Introduction to Computer Graphics CAS MA 541 Modern Algebra 1 QST SI 480 The Business of Technology Innovation	, ,	CAS MA 531 Computability and Logic	CAS PY 452 Quantum Physics 2
	5	CAS MA 541 Modern Algebra 1	QST SI 480 The Business of Technology Innovation
		CAS MA 583 Introduction to Stochastic Processes	QST SI 482 Technology and its Commercialization
CAS MA 511 Introduction to Analysis I CAS PY 313 Waves and Modern Physics	5 1 5	CAS PY 313 Waves and Modern Physics	

#### **DEGREE ENHANCEMENTS**

#### CONCENTRATIONS

Students may choose to add a Concentration in Energy Technologies, Nanotechnology or Technology Innovation. Students completing a Minor in Mechanical Engineering may choose to add a concentration in Aerospace Engineering. A concentration requires 4 courses which can usually be used to satisfy courses within the major. Hence, a concentration can usually be completed without additional coursework. More information on concentrations and the specific requirements for each can be found at http://www.bu.edu/eng/academics/programs/concentrations/.

#### MINORS

Students may choose to add a minor in any one of the other degree programs or divisions (Materials Science & Engineering or Systems Engineering) within the College of Engineering. A minor consists of 5 courses, 2 of which may also be used to satisfy requirements for the major. Completing a Minor will add a minimum of 12 credits to the total for the degree. More information on minors and the specific requirements for each can at http://www.bu.edu/eng/academics/programs/minors/. Students may also pursue minors in other Colleges at Boston University. For more information, please contact the College of the minor.

#### **DOUBLE MAJORS**

Students may earn two engineering BS degrees. Double majors require a minimum of 168 credits and students must fulfill the requirements for each of the degree programs.

See http://www.bu.edu/eng/academics/special-programs/ for more details.

#### **OTHER WAYS TO ENHANCE YOUR DEGREE**

Students have several additional options available to them including study abroad, research, and co-op/internship opportunities. For more information on these programs, please visit the College of Engineering Undergraduate website: http://www.bu.edu/eng/academics/.

#### Notes:

For the following 8 sets of courses, only 1 course can be taken for credit in each set due to the overlap of material:

- ENG ME 305, ENG BE 420 (1)
  - ENG ME 403, ENG ME 404, ENG BE 402, ENG EC 402 (2)
  - ENG ME 303, ENG BE 436 (3)
  - ENG ME 441. ENG ME 515 (4)
  - (5) ENG ME 501, ENG EC 501 (6)
  - ENG EK 102, CAS MA 142, CAS MA 242 (7) ENG BE 401, ENG EC 401
  - (8)