### Bachelor of Science in Electrical Engineering or Bachelor of Science in Computer Engineering

**Combined Major - Electrical and Computer Engineering**

**Curriculum Outline - Class of 2025**

*Sample Only – Actual Curriculum Sequence May Deviate from Sample*

**Fall** | **Spring** | **Summer 1** | **Summer 2**
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**Year 1**
MATH1341 | Calculus 1 for Engrs. | 4 | MATH1342 | Calculus 2 for Engrs. | 4
CHEM1151 | General Chem. for Engrs. | 4 | PHYS1151 | Physics 1 for Engrs. | 3
CHEM1153 | Recitation for CHEM1151 | 0 | PHYS1152 | Physics 1 Lab | 1
GE1500 | Intro to Engrg. | 1 | PHYS2153 | ILS for PHYS1151 | 1
GE1501 | Cornerstone of Engineering 1 | 4 | GE1502 | Cornerstone of Engineering 2 | 4
ENGW1111 | College Writing | 4 | Elective | General Elective | 4

**Year 2 AA**
MATH2341 | Diff. Eq./Lin. Alg. | 4 | CS1800 | Discrete Structures | 4
PHYS1155 | Physics 2 for Engrs. | 3 | CS1801 | Recitation for CS1800 | 1
PHYS1156 | Physics 2 Lab | 1 | MATH2321 | Calculus 3 for Engrs. | 4
PHYS1157 | ILS for PHYS1155 | 1 | INC2000 | Intro to Eng’g. Coop | 1
ECE21x0 | ECE2150 OR ECE2160 | 4/5 | ECE12x0 | ECE2150 OR ECE2160 | 4/5
Elective | Elective | 4 | ECExxxx | EE or CE Fundamentals | 4/5

**Year 2 BB**
MATH2341 | Diff. Eq./Lin. Alg. | 4 | ECExxxx | EE or CE Fundamentals | 4/5
PHYS1155 | Physics 2 for Engrs. | 3 | ECExxxx | EE or CE Fundamentals | 4/5
PHYS1156 | Physics 2 Lab | 1 | ECExxxx | EE or CE Fundamentals | 4/5
PHYS1157 | ILS for PHYS1155 | 1 | ECExxxx | EE or CE Fundamentals | 4/5
ECE21x0 | ECE2150 OR ECE2160 | 4/5 | ECE3468 | EE or CE Fundamentals | 4/5
Elective | General Elective | 4 | *ENGW3302* | Adv. Writing for Prof. | 4

**Year 3 AA**
CS1800 | Discrete Structures | 4 | Elective | General Elective | 4
CS1802 | Recitation for CS1800 | 1 | *ENGW3302* | Adv. Writing for Prof. | 4
MATH2321 | Calculus 3 for Engrs. | 4 | Co-op | Co-op | Vacation
ECE21x0 | ECE2150 OR ECE2160 | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5
ECExxxx | EE or CE Fundamentals | 4/5 | *ENGW3302* | Adv. Writing for Prof. | 4

**Year 3 BB**
CS1800 | Discrete Structures | 4 | Elective | General Elective | 4
CS1802 | Recitation for CS1800 | 1 | *ENGW3302* | Adv. Writing for Prof. | 4
MATH2321 | Calculus 3 for Engrs. | 4 | Co-op | Co-op | Vacation
ECE21x0 | ECE2150 OR ECE2160 | 4/5 | ECE4790 | ECE Tech Elective 1 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | ECE4792 | ECE Tech Elective 2 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | *ENGW3302* | Adv. Writing for Prof. | 4

**Year 4 AA**
ECExxxx | EE or CE Fundamentals | 4/5 | ECE4792 | ECE Tech Elective 2 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5
ECExxxx | EE or CE Fundamentals | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5
ECExxxx | EE or CE Fundamentals | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5
INC2000 | Prof. Issues in Eng’g | 1 | ECE4790 | ECE Tech Elective 3 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | ECE4792 | ECE Tech Elective 4 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5
ECExxxx | EE or CE Fundamentals | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5
ECExxxx | EE or CE Fundamentals | 4/5 | ECExxxx | EE or CE Fundamentals | 4/5

**Year 4 BB**
ECExxxx | Prof. issues in Eng’g. | 1 | Elective | ECE4790 | Capstone 1 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | ECE Tech Elect. 1 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone 2 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone 3 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone 4 | 4

**Year 5 AA**
ECE4792 | Capstone Design 2 | 4 | Elective | ECE4792 | Capstone Design 2 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 3 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 4 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 5 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 6 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 7 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 8 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 9 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 10 | 4

**Year 5 BB**
ECE4792 | Capstone Design 2 | 4 | Elective | ECE4792 | Capstone Design 2 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 3 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 4 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 5 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 6 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 7 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 8 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 9 | 4
ECExxxx | EE or CE Fundamentals | 4/5 | Elective | ECE4792 | Capstone Design 10 | 4

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The Capstone Design Courses are taken as follows: (ECE4790 - Summer 1 and ECE4792 - Spring) OR (ECE4790 - Summer 2 and ECE4792 - Fall)

* ENGW3302 is an acceptable substitution for engineering majors.

NUpath requirements, Interpreting Culture (IC), Societies and Institutions (SI) and Differences and Diversity (DD) are not explicitly satisfied by required engineering courses. Students are responsible for satisfying these requirements, and if these are not fulfilled in engineering courses, should use General Electives to do so. General Electives are academic, non-remedial, non-repetitive courses.

4 Required General Electives
3 Required CE Fundamental: ECE2222/2323 - Fundamentals Digital Design & Lab AND ECE2250 - Fundamentals Networks AND ECE2560 - Fundamentals Algorithms

Technical Elective Requirements: 4 ECE technical electives: ECE2275, ECE2315, ECE2324-ECE2340, [ECE4512-ECE4698], [ECE4991-ECE4993], [ECE5515-ECE5698], GE4608, ENGR5670

2 CS/CY/IS courses from the following approved list may be taken toward the ECE technical elective requirement: Approved List: CY2550, (CS3200-CS3500), (CS3540-CS3800), (CS4100-CY4770), CS4950, (IS4200-IS4700)

Please speak with your academic advisor regarding possibilities of Dialogues of Civilization courses and study abroad. Please check with your advisor when taking a general elective in overlapping disciplines.

https://coe.northeastern.edu/academics-experiential-learning/undergraduate-studies/undergraduate-academic-advising/

The registrar’s website provides a listing of degree requirements and the DARS system provides a degree audit utility for students.

Revised March/2018