

Tufts University – School of Engineering
Class of 2025 (requirements as established in the 2021-2022 Bulletin)
Bachelor of Science in Electrical Engineering (BSEE)
Major Requirement

* Courses that require a letter grade (i.e., no pass/fail)

The BSEE comprises credit requirements and course requirements as established by the School of Engineering and Department of Electrical & Computer Engineering. Students must satisfy the SOE and ABET-EAC requirements listed in the Credit Requirements box, as well as fulfill all course requirements. The School of Engineering requirements are shown in italics and fall outside second major double counting rules. SHU values listed for each course requirement reflect those associated with the corresponding Tufts course. Unless otherwise noted, course requirements may be satisfied with transfer courses having SHU values that are different than those shown here. In all cases, students should enter the SHUs received or earned in the correct SOE-Attribute column for a given course requirement to ensure they meet the credit requirements. For planning purposes, students completing the BSEE requirements with Tufts courses will earn at least 128 SHU.

Mathematics & Natural Sciences*	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
MATH 32 Calculus I	4							
MATH 34 Calculus II	4							
MATH 42 Calculus III	4							
MATH 51 Differential Equations	4							
PHY 11 Gen. Physics I w/ lab	5							
PHY 12 Gen. Physics II w/ lab	5							
CHEM 1 Chem. Fund. w/ lab or PHY 13 Intro. Modern Physics	4-5							
Natural Science Elective (a)	≥3							
subtotal	≥33	-	-	-	-	-	-	

Advanced Mathematics*	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
MATH 70 Linear Algebra or MATH 72 Abstract Linear Alg.	3							
EE 23 Linear Systems	4							
EE 24 Probabilistic Systems Anal.	3							
subtotal	10	-	-	-	-	-	-	

HASS	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
ENG 1* Expos. Writing or ENG 3	3							
Humanities Elective (b)	≥3							
Social Science Elective (c)	≥3							
≥24 SHU of SOE-HASS are required for the degree. List additional courses below (see note d)								
subtotal	≥24	-	-	-	-	-	-	

Credit Requirements	SOE Attribute						Total
	E	C	M	NS	HASS	None	
SOE Requirements	≥30		≥30		≥24	-	≥120
ABET-EAC Program Requirements	≥45		≥30		-	-	-
Student Totals							

Abbreviations:

- SHU = Semester Hour Unit
- SOE = School of Engineering
- C = Courses having attribute SOE-Computing
- E = Courses having attribute SOE-Engineering
- M = Courses having attribute SOE-Mathematics
- NS = Courses having attribute SOE-Natural Sciences
- HASS = Course having attribute SOE-HASS (Humanities, Arts, and Social Sciences)
- None = Course without SOE attribute

Student and Advisor Notes:

Engineering & Computing*	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
ES 2 Intro. Computing in Eng.	4							
CS 11 Intro. Comp. Science	4							
subtotal	8			-	-	-	-	

EE Core*	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
ES 4 Intro. Digital Log. Circuits	4							
EE 14 Embedded Systems	4							
EE 20 Intro. Circuits & Elec.	4							
EE 21 Electronics I	4							
subtotal	16	-	-	-	-	-	-	

EE & Technical Electives*	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
EE Breath Elective (e)	3-4							
EE Breath Elective (e)	3-4							
EE Elective (f)	3-4							
EE Elective (f)	3-4							
EE Elective (f)	3-4							
Technical Elective (g)	3-5							
Technical Elective (g)	3-5							
Technical Elective (h)	3-5							
Technical Elective (h)	3-5							
subtotal	27-40					-	-	

Design*	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
EN 1 Applications in Eng.	3							
EE 31 Junior Design Project	3							
EE 97 Senior Design Project	2							
EE 98 Senior Design Project	2							
subtotal	10	-	-	-	-	-	-	

BSEE Notes

(a) Natural Science Elective

Course selected may not be used to fulfill any other course or elective requirement.

Select From:

Any course having attribute SOE-Natural Sciences, except PHY 41

(b) Humanities Elective

At least 3 SHU of Humanities are required. Requirement may not be satisfied with pre-matriculation credits, ENG 1, ENG 3 or a course satisfying the Social Sciences Elective (c).

Select From:

Any course having attribute SOE-HASS-Humanities

(c) Social Sciences Elective

At least 3 SHU of Social Sciences are required. Requirement may not be satisfied with pre-matriculation credits or a course satisfying the Humanities elective (b).

Select From:

Any course having attribute SOE-HASS-Social Sciences

(d) Humanities, Arts or Social Sciences Electives

Select From:

Any course having attribute SOE-HASS

Any course having attribute SOE-HASS-Humanities

Any course having attribute SOE-HASS-Arts

Any course having attribute SOE-HASS-Social Sciences

(e) Electrical Engineering Breadth Electives

Courses selected may not be used to fulfill any other course or elective requirement.

Select From:

EE 18, EE 22, EE 105, EE 107

(f) Electrical Engineering Electives

Courses selected may not be used to fulfill any other course or elective requirement.

Select From:

Any EE course having attribute SOE-Engineering

Any EE course having attribute SOE-Computing

(g) Technical Electives

Courses selected may not be used to fulfill any other course or elective requirement.

Select From:

Any course having attribute SOE-Engineering, except ES 3

Any course having attribute SOE-Computing

Any course having attribute SOE-Mathematics

Any course having attribute SOE-Natural Sciences

(h) Technical Electives

Courses selected may not be used to fulfill any other course or elective requirement.

Select From:

Any ES course having attribute SOE-Engineering, except ES 3

Any ES course having attribute SOE-Computing

Any course having attribute SOE-Mathematics

Any course having attribute SOE-Natural Sciences

Any of the following additionally approved courses:

Computer Science: CS 15, CS 40, CS 160

BSEE Course Selection Guidance

Fall Semester, First Year

Course	SHU	SOE Attribute
<i>EN 1 Introduction to Engineering</i>	3	Engineering
MATH 32 Calculus I	4	Mathematics
PHY 11 General Physics I with laboratory	5	Natural Sciences
<i>ENG 1 Expository Writing</i>	3	HASS

Semester Total SHU 15

Spring Semester, First Year

Course	SHU	SOE Attribute
ES 2 Introduction to Computing in Engineering	4	Computing
MATH 34 Calculus II	4	Mathematics
PHY 12 General Physics II with laboratory	5	Natural Sciences
<i>HASS Elective</i>	3-5	HASS

Semester Total SHU 16-18

Fall Semester, Second Year

Course	SHU	SOE Attribute
ES 4 Introduction to Digital Logic Circuits with laboratory	4	Engineering
MATH 42 Calculus III	4	Mathematics
EE 20 Introduction to Circuits & Electronics	4	Engineering
CS 11 Introduction to Computer Science	4	Computing
<i>HASS Elective</i>	3-5	HASS

Semester Total SHU 19-21

Spring Semester, Second Year

Course	SHU	SOE Attribute
EE 14 Microprocessor Architecture & Applications with lab.	4	Engineering
EE 21 Electronics I with laboratory	4	Engineering
EE 23 Linear Systems	4	Mathematics
MATH 51 Differential Equations	4	Mathematics
<i>HASS Elective</i>	3-5	HASS

Semester Total SHU 19-21

Fall Semester, Third Year

Course	SHU	SOE Attribute
EE Breadth Elective	3-4	Engineering
MATH 70 Linear Algebra	3	Mathematics
Technical Elective	3-5	varies with selection
CHEM 1 Chemical Fundamentals w/ laboratory or PHY 13 Intro. Modern Physics	4-5	Natural Sciences
<i>HASS Elective</i>	3-4	HASS

Semester Total SHU 16-21

Spring Semester, Third Year

Course	SHU	SOE Attribute
EE 24 Probabilistic Systems Analysis	3	Mathematics
EE 31 Junior Design Project	3	Engineering
EE Breadth Elective	3-4	Engineering
Technical Elective	3-5	varies with selection
Natural Science Elective	3-5	Natural Sciences

Semester Total SHU 15-20

Fall Semester, Fourth Year

Course	SHU	SOE Attribute
EE 97 Senior Design Project	2	Engineering
EE Electives	9-15	varies with selection
<i>HASS Elective</i>	3-5	HASS

Semester Total SHU 14-21

Spring Semester, Fourth Year

Course	SHU	SOE Attribute
EE 98 Senior Design Project	2	Engineering
Technical Electives	6-10	varies with selection
<i>HASS Electives</i>	6-12	HASS

Semester Total SHU 14-21