

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

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

The BSEP comprises credit requirements and course requirements as established by the School of Engineering and Department of Electrical & Computer Engineering in collaboration with the Department of Physics and Astronomy. Students must satisfy the SOE 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 BSEP requirements with Tufts courses will earn at least 120 SHU.

	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
Mathematics & Natural Sciences*								
MATH 32 Calculus I	4							
MATH 34 Calculus II	4							
MATH 42 Calculus III	4							
MATH 51 Differential Equations	4							
Probability & Statistics (a)	3-4							
CHEM 1 Chem. Fund. w/ lab	5							
subtotal	≥24	-	-			-	-	

	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
Physics*								
PHY 11 Gen. Physics I w/ lab	5							
PHY 12 Gen. Physics II w/ lab	5							
PHY 13 Intro. Modern Physics	4							
PHY 32 Intermediate Mechanics	4							
PHY 52 Thermal Physics	3							
PHY 64 Adv. Experimental Physics	4							
Physics & Astronomy Elective (b)	≥3							
Physics & Astronomy Elective (b)	≥3							
Physics & Astronomy Elective (b)	≥3							
subtotal	≥34	-	-	-		-	-	

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

	SOE Attribute						Total
	E	C	M	NS	HASS	None	
Credit Requirements							
<i>SOE Requirements</i>	≥30		≥30		≥24	-	≥120
Student Totals							

	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
Engineering & Computing*								
EN 1 Applications in Eng.	3							
ES 2 Intro. Comp. in Eng. or CS 11 Intro. Comp. Sci.	4							
ES Elective (f)	≥3							
ES Elective (f)	≥3							
Discipline Elective (g)	≥3							
Discipline Elective (g)	≥3							
Discipline Elective (g)	≥3							
Discipline Elective (g)	≥3							
<i>≥30 SHU of SOE-Engineering + SOE-Computing are required for the degree. List below additional EC courses (h) used to satisfy the requirement.</i>								
subtotal	≥30			-		-	-	

	SHU	SOE Attribute						Term
		C	E	M	NS	HASS	None	
Technical Electives*								
Technical Elective (i)	≥2							
Technical Elective (i)	≥2							
Technical Elective (j)	≥2							
Technical Elective (j)	≥2							
Technical Elective (j)	≥2							
subtotal	≥10					-	-	

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:

BSEP Notes

(a) Probability and Statistics

Select From:

PHY 153, ES 56, MATH 165, MATH 166, BIO 132, EE24

(b) Physics and Astronomy Electives

Select From:

Any PHY or ASTRO course having attribute SOE-Natural Sciences

(c) 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 (d).

Select From:

Any course having attribute SOE-HASS-Humanities

(d) 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 (c).

Select From:

Any course having attribute SOE-HASS-Social Sciences

(e) 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

(f) Engineering Sciences Electives

Select From:

ES 4, ES 5, ES 7, ES 8, ES 9, ES 10, ES 11, & ES 15

(g) Engineering and Computing Discipline Electives

Concentrated study in one area Engineering or Computing. Courses must be at least 3 SHU each and cannot be used to satisfy any other course or elective requirement.

Select from:

Any course having attribute SOE-Engineering or SOE-Computing within a selected discipline.

(h) Engineering and Computing Electives

Select From:

Any course having attribute SOE-Computing

Any course having attribute SOE-Engineering

(i) Technical Electives

Select From:

Any course having attribute SOE-Computing

Any course having attribute SOE-Engineering

Any course having attribute SOE-Mathematics

(j) Technical Electives

Select From:

Any course having attribute SOE-Computing

Any course having attribute SOE-Engineering

Any course having attribute SOE-Mathematics

Any PHY or ASTRO course having attribute SOE-Natural Sciences