

Plan of Study for the Mechanical and Materials Science and Engineering Track of AB Engineering Sciences Concentration

Effective for students declaring after August 1, 2026 · AY 2026–2027

Editable example: Math 21a entry. Adapt the course selections and fill in your schedule. Approved alternatives: page 2.

Name:

Class:

Email:

Date:

This Plan of Study is a:

Declaration

Revision

8-SEMESTER COURSE SCHEDULE (type directly in any cell to change a course)

Fall 1	Spring 1	Fall 2	Spring 2	Fall 3	Spring 3	Fall 4	Spring 4

type any course dropdown of approved courses (page 2) — or pick “Other” and type a petitioned course

REQUIRED COURSES

EXAMPLE COURSES — edit to match your plan

Mathematics (sequence by placement)	
Applied Mathematics (AM 105)	
Physics (2 courses)	
Computer Science (1 course)	
Electronics (1 course)	
Mechanical Engineering Core (5 required)	
Engineering Electives (2 — list on page 2)	

Concentration structure to verify: 14–16 courses total · 8 engineering · 5 core · 2 electives

Advisor notes:

Required Signatures

No concentration course may be taken Pass/Fail or SAT/UNS.

Student

Date:

Concentration Advisor

Date:

Click a signature box to sign — in Adobe Acrobat Reader, or via Harvard DocuSign / Adobe Sign for a binding, audit-trailed signature.

Approved Courses & Planning Reference

Reference only — fill in the form on page 1. AY 2026–2027 requirements; the SEAS handbook governs.

Mathematics (2–4 courses, by placement)

- Sequence: Math MA/MB or Math 1a, then Math 1b, Math 21a, Math 21b.
- Math MA/MB is the equivalent of Math 1a — the two are alternative starting points, not consecutive steps. Starting at MA, complete MB and go straight on to Math 1b; you do not take Math 1a.
- Math MA and MB together satisfy the single Math 1a requirement.
- Start where your placement puts you; everything from that point through Math 21b is required.
- Math 22a/22b are accepted in place of Math 21a/21b.

Applied Mathematics

- AM 105 — Ordinary & Partial Differential Equations (Spring): always required for the A.B., at every math placement.
- No statistics course is required for the A.B.

Physics (2 courses)

- Physics A: PS 12a, Physics 15a, Physics 16, or AP 50a.
- Physics B: PS 12b, Physics 15b, or AP 50b.

Computer Science (1 course)

- AM 10 (Fall), CS 32 (Spring), CS 50 (Fall/Spring), or SCI 5 (Spring).

Electronics (1 course)

- ECE 50 (Spring) — the usual choice.
- Or ECE 152 (Fall) together with CS 1140; CS 1140 then counts as one of the two engineering electives.

Mechanical Engineering Core — 5 required

- ES 120, ES 123, ES 125, ES 181, ES 190.

Engineering Electives — 2 courses

- AP 195, BE 110, CHEM 160, ESE 109, ES 51, ES 55, ES 105hfr, ES 128, ESE 131, ESE 132, ECE 151, ECE 156, ECE 159, ESE 160, ESE 162, ESE 166, ES 170, ECE 173, ES 175, ECE 177, ES 183, ES 192, PHYS 143a, ES 190, ECE 155, ES 231, ES 220, ES 240.
- ESE 6, ES 53 count only if taken in the freshman or sophomore year.

Rules that trip students up

- Structure: 14–16 courses total, at least 8 of them engineering (core + electives + electronics).
- For a course co-listed in another department, enroll in the Engineering Sciences offering.
- Petitioned substitutions: an approved course may stand in for an elective or a science/other requirement. In Adobe Acrobat Reader pick “Other” in the dropdown and type the course; in Preview, record it in Advisor notes. Either way, note the approval in Advisor notes.
- No concentration course may be taken Pass/Fail or SAT/UNS.
- No more than three of ESE 6, ECE 50, ES 51, ES 53 may count toward the concentration.
- The Engineering Sciences A.B. may be part of a joint or a double concentration (not both) — talk to your concentration advisor before planning either.
- File a revision any time your plan changes — keep it current.
- The A.B. in Engineering Sciences is not ABET-accredited — no ABET distribution count applies.

Prerequisite planning

Physics A = PS 12a / Physics 15a / AP 50a · Physics B = PS 12b / Physics 15b / AP 50b · Co: = may be a co-requisite

Course	Offered	Math	Physics / other
ES 120	Spring	Math 21a, Co: Math 21b	Physics A
ES 123	Spring	Math 21a, Math 21b	Physics A
ES 125	Fall	Math 21a, Math 21b	Physics A
ES 181	Fall	—	Physics A
ES 190	Spring	Math 21a, Math 21b	Physics A, Physics B
ES 51	Fall, Spring	—	—
ES 128	Fall	Math 21a, Math 21b	Physics A, ES 120
ECE 50	Spring	—	—
ECE 152	Fall	Math 1a, Math 1b	Co: Physics B
ECE 155	Fall	Math 21a, Math 21b	—
ECE 159	Spring	—	Physics A, rec. CS 50
ES 183	Spring	Math 21a, Math 21b	Physics A, ES 181