Course Map for Mechanical Engineering – Class of 2025

Freshman 1
- CAS MA 123: Calculus I
- CAS CH 131: Gen Chem Eng
- ENG EK 100: Freshman Seminar
- ENG EK 125: Prog for Engs
- CAS WR 120: Writing Seminar

Freshman 2
- CAS MA 124: Calculus II
- CAS PY 211: Physics I
- ENG EK 131: Intro to ENG
- ENG EK 103: Comp Lin Alg
- CAS WR 15X: Writing & Res

Sophomore 1
- CAS MA 225: Multivar Calculus
- CAS PY 212: Physics II
- ENG EK 307: Electric Circuits
- ENG ME 357: Intro to CAD
- Hub Elective

Sophomore 2
- CAS MA 226: Diff Equ
- ENG EK 381: Prob, Stats & DS
- ENG EK 301: Eng Mechanics
- ENG ME 310: Intro Eng Des
- Hub Elective

Junior 1
- ENG ME 304: Energy & Thermo
- ENG ME 303: Fluid Mechanics
- ENG ME 305: Mech of Matrls
- ENG ME 306: Materials Sci
- Hub Elective

Junior 2
- Advanced Elective
- ENG ME 310: Meas & Instrum
- ENG ME 302: Eng Mechanics II
- ENG ME 360: Electromech Des
- Hub Elective

Senior 1
- Advanced Elective
- ENG ME 419: Heat Transfer
- ENG ME 460: Senior Design I
- ENG ME 461: Senior Design II
- Hub Elective

Senior 2
- Advanced Elective
- Advanced Elective
- Hub Elective

Notes
- Grey box = either semester
- = prerequisite; = corequisite
- Students planning to study abroad sophomore 2 should take EK 301 in sophomore 1.
- Many courses are offered every semester – order can be rearranged as long as prereqs fulfilled.
- Students must complete 48 credits of upper-division program coursework (not including Hub or writing).
- See back for Hub Unit Legend

Hub Electives: must include all Hub areas below to fulfill degree requirements
- 1. One unit Philosophical Inquiry & Life’s Meanings (PLM)
- 2. One unit Aesthetic Exploration (AEX)
- 3. One unit Historical Consciousness (HCO)
- 4. One unit Social Inquiry (SO1 or SO2)
- 5. One unit Individual & Community (IIC)
- 6. First unit Global Citizenship & Intercultural Literacy (GCI)
- 7. Second unit Global Citizenship & Intercultural Literacy (GCI)
- 8. One unit Ethical Reasoning

- Total of at least 16 credits
REQUIREMENTS
Mechanical Engineering (ME) majors are required to complete a minimum of 135 credits as detailed on the Program Planning Sheet on the other side of this page.

HUB ELECTIVES
All students are required to complete a total of 26 Hub units. Eighteen of these Hub units are included in courses required for the ME BS degree. The remaining eight Hub units must be satisfied through four (or more) Hub Electives that incorporate the following seven Hub areas: Philosophical Inquiry; Aesthetic Exploration; Historical Consciousness; Social Inquiry; Individual in Community; Ethical Reasoning; Global Citizenship & Intercultural Literacy (2X). Search for courses that fulfill specific combinations of Hub units at: https://www.bu.edu/phpbin/course-search/

ADVANCED ELECTIVES  ME majors complete four Advanced Elective courses (16 credits). Acceptable courses include all engineering (ENG) courses 300 level or above including ENG ME 452 and ENG ME 457, as long as there is not significant overlap with other courses being used for the degree (See Notes below). A minimum of 2 engineering (ENG) courses at or above the 300 level are required.

The following courses are also acceptable:
- CAS AS 414 – Solar and Space Physics
- CAS PY 313/314 – Waves and Modern Physics
- CAS PY 321 & 322 – Thermal Physics (2 cr) & Quantum Physics (2 cr)
- ENG BE 209 — Principles of Molecular Cell Biology and Biotechnology
- QST SI 480 – The Business of Technology Innovation
- QST SI 482 – Technology and its Commercialization

Additionally other 300-level or above Mathematics and Natural Science courses may be acceptable by petition.

Hub Unit Legend:
- QR1 = Quantitative Reasoning 1
- QR2 = Quantitative Reasoning 2
- SI1 = Scientific Reasoning 1
- SI2 = Scientific Reasoning 2
- FYW = First-Year Writing Seminar
- WRI = Writing, Research & Inquiry
- WIN = Writing-Intensive Course
- OSC = Oral and/or Signed Communication
- DME = Digital/Multimedia Expression
- CRT = Critical Thinking
- RIL = Research and Information Literacy
- TWC = Teamwork/Collaboration
- CRI = Creativity/Innovation

Notes:
a) Any requirement satisfied via AP/IB can earn a maximum of one Hub unit and may require students to replace the Hub units missed.
b) Any requirement satisfied via transfer earns zero Hub units and may require students to replace the Hub units missed.
c) For each of the following sets of courses, only one course can be taken for credit in each set due to the overlap of material:
   (1) ENG ME 403, ENG ME 404, ENG EC 402, ENG BE 404
   (2) ENG ME 303, ENG BE 436
   (3) ENG ME 306, ENG BE 425
   (4) ENG EK 103, CAS MA 142, CAS MA 242
   (5) ENG BE 403, ENG EC 401
   (6) ENG EK 381, CAS MA 381, CAS MA 581