B.S. in Mechanical Engineering – Mechanical Engineering Major
Co-op Plan† (8 semesters of classes)

Still not sure about a major? See: www.careercornerstone.org for help choosing an engineering or science major

Freshman:
First semester (16 credits)

CHEM 1035 (3) Chemistry

CHEM 1045 (1) Chem Lab
Co: CHEM 1035

PHYS 2305 (4) Physics I
Pre: MATH1225 (B) or MATH1226

Sophomore:
First semester (17 credits)

MSE 2034 (3) Elements Materials Engr

PHYS 2306 Physics II (4)
Pre: PHYS 2305, MATH 1226

Sophomore:
Second semester (16 credits)

ME 2134 (4) Thermodynamics
Pre: CHEM1035, MATH 2204 & PHYS2305

ME 2004 (3) Numerical Methods
Pre: MATH1226, ENGE1215, MATH 2114

Junior:
First semester (17 credits)

ME 3414 (4) Fluid Mech (w/lab)
Pre: MATH2114, 2214 & 2204, ME2004; Co ME2134

ME 3024 (3) Design & Econ
Pre: ESM2104, ENGL1106

Junior:
Second semester (17 credits)

ME 1304 (2) Heat & Mass Transfer
Pre: ME2134, MATH 2214

ME 3034 (4) Controls (w/lab)
Pre: ESM2104 & 2304, ME2004, MATH2114, 2204 & 2214

Senior:
First semester (15 credits)

*ME4124 or Approved Alternate Elective (3)

**ME 4016 (3) Senior Capstone Design
Pre: ME 4015 (continuation of same ME 4015 project from Fall)

Senior:
Second semester (15 credits)

**ME 4015 (3) Senior Capstone Design
Pre: ME 4015 & ME 4061

Pathways Concept 2 (3)
Pathways Concept 3 (3)

Pathways Concept 3 (3)
Pathways Concept 2 (3)

Notes:
- Arrows denote prerequisites. Prerequisites of prerequisites must be met. Prerequisites may change without warning. Please check for updates in the timetable of classes.
- For students graduating in 2023-24, any List #1 technical elective may be used to replace ME4124.
- Required senior courses are offered only once per year; ME4015 & ME4061 must be taken in order during the same academic year, beginning in Fall.
- Assumes that classes with white fill have been completed before entering ME Department; adjust as necessary.

Continued enrollment requirements: see ME website for more information, www.me.vt.edu.

In-Major GPA
2.000 minimum (All ME, NSEG courses); if no in-major GPA, average 2.000 or higher in ESM2104, 2204, & 2304.

Overall GPA
2.000 minimum (All VT courses)

MATH2114, MATH2204, & ESM2104
Complete within 50 attempted required credits

ME2004
Complete within 2 semesters of entry into ME Department and complete within 69 attempted required credits

MATH2214 & ESM2304
Complete within 69 attempted required credits

ME2134
Complete within 3 semesters of entry into ME Department and complete within 57 attempted required credits

ME2524 & (ME3624 or ME3924)
Complete within 87 attempted required credits

ME4015
Complete within 104 attempted required credits

Revised Sept., 2023. For more information please see www.me.vt.edu
This is an unofficial planning tool only; please see the approved checksheets on the Registrar’s website for official graduation requirements.
Co-op Schedules with 8 Academic (School) Terms:
See the color-coded degree path sheet on the previous page for which courses should be taken in each term.

Note: Be sure to add any required Pathways (humanities) electives you have not completed. Note that “Junior 2” courses must be taken during a Spring semester or over the summer (not recommended).

Students gain 1+ years of engineering-related work experience while spreading out their courses into an additional semester. Median hourly rates for our co-op students were over $19/hour in 2018. Some students also received housing allowances or free housing and overtime pay.

In general, co-op students who work multiple terms with the same employer tend to:
- earn a higher hourly rate compared to summer interns who work for a single term only,
- participate in longer-term, more complex projects than interns
- get a broader experience with a company than an intern, possibly rotating between departments or job functions, and
- have a job offer from their employer before they start their senior year

Employers expect all engineering students to have related work experience before they start a full time job after graduation. Co-op students tend to get higher starting salaries and more job offers than students who do internships only or who have no work experience at all. It is typically easier to find a co-op job than a summer internship, especially for rising sophomores and rising juniors.

Students care more about how long it takes them to graduate and how high their grades are, but above a minimum GPA (sometimes as low as a 3.0), employers care more about prior work experience.

The ME advisors strongly encourage students to get work experience over the summer instead of taking classes. If the required course load is too heavy, then one of the co-op schedules to the left may be perfect for you!