B.S. in Mechanical Engineering - Robotics & Mechatronics Major

5 year Military Plan

Freshman: 1st semester (16 credits)
- CHEM 1035 (3) Chemistry
- PHYS 2305 (4) Physics I
  Pre: MATH1225 (B) or MATH1226
- ME 3024 (3) Design & Econ
  Pre: MATH1225, ENGE1215, MATH 2214

Freshman: 2nd semester (16 credits)
- CHEM 1045 (1) Chem Lab
  Co: CHEM 1035
- PHYS 2306 Physics II (4)
  Pre: PHYS 2305, MATH 2114
- ME 2004 (3) Numerical Methods
  Pre: MATH1225 (B) or MATH1226

Sophomore: 1st semester (13 credits)
- ME 2134 (4) Thermodynamics
  Pre: CHEM1035, MATH2204 & PHYS2305
- ECE 2054 (3) Electrical Theory
  Pre: PHYS 2306, Co: MATH 2214
- ME 3220 (4) Mech Design (w/lab)
  Pre: ESM2204, MATH 2311

Sophomore: 2nd semester (13 credits)
- ME 3034 (3) Heat & Mass Transfer
  Pre: ME2134, MATH 2204 & MATH 2214
- ECE 3254 (3) Ind. Electronics
  Pre: ECE2054 & Co: MATH 2214

Junior: 1st semester (13 credits)
- ME 3414 (4) Fluid Mech (w/lab)
  Pre: MATH 2114, 2214 & 2204, ME2004; Co: ME2134
- ME 3024 (3) Design & Econ
  Pre: ESM2104 & ENGL 1106
- ME 3524 (4) Vibrations (w/lab)
  Pre: ESM2204, MATH 2214 & 2211

Junior: 2nd semester (13 credits)
- ME 3534 (4) Controls (w/lab)
  Pre: ESM2104, MATH 2204, MATH 2114 & ENGL 1106
- ME 3805 ME Lab (3)
  Pre: ECE 2054, STAT3704, & ME3524
- CS 1044 (3) Programming in C
  Pre: ECE 2054 & Co: MATH 2214

Senior: 1st semester (12 credits)
- ME 4055 ME Lab (3)
  Pre: ME 3524, MATH 2204, & ME 3534
- ME 3034 ME Discourse (1)
  Pre: ENGL 1106

Senior: 2nd semester (13 credits)
- ME 4015 (3) Senior Capstone Design
  Pre: ME 3504, ME 3534, ME 3034, & ME 4005
- ME 4016 (3) Senior Capstone Design (Spring only)
  Pre: ME 4015
  (continuation of ME 4015 project from previous Fall)
- ME 4017 (3) Mechatronics
  Pre: ESM2304, CS 1044 & ECE3254

5th year 1st semester (12 credits)
- Pathways** Concept 2 (3)
- Pathways** Concept 3 (3)

5th year 2nd semester (12 credits)
- Pathways** Concept 2 (3)
- Pathways** Concept 3 (3)

Pathways** Concept 3 (3)

Notes:
- Arrows denote prerequisites. Prerequisites of prerequisites must be met. Prerequisites may change without warning - see undergrad catalog for updates.
- **Combine Pathways Concept 7 with Concept 2 to eliminate 3 credits.
- ***Senior courses are offered only once per year; ME4015 & ME4016 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, NSCE courses), if no in-major GPA, average 2.000 or higher in ESM2104, 2204 & 2304.

Overall GPA
- 2.000 minimum (All VT courses)