B.S. in Mechanical Engineering Plan for Class of 2022/23 for Students in 5 year Military Program

Freshman: 1st semester (16 credits)
- CHEM 1035 (3) Chemistry
- CHEM 1045 (1) Chem Lab
  Co: CHEM 1035

Freshman: 2nd semester (16 credits)
- PHYS 2305 (4) Physics I
  Pre: CHEM 1035 or PHYS2306; Co: MATH2214 or ME2124(C-) & ME3124 (3)
- MATH 2114 (3) Linear Algebra
  Pre: MATH1225 (B) or MATH226

Sophomore: 1st semester (13 credits)
- **ME2004 (3) Numerical Methods (C-)
  Pre: MATH1225, ENGE1216, MATH 2114
- PHYS 2306 (4) Physics II (4)
  Pre: PHYS 2305, MATH 2226
- MSE 2034 (3) Elem Materials Engr
  Pre: CHEM 1035 or PHYS 2305

Sophomore: 2nd semester (12 credits)
- **ME2134 (4) Thermodynamics (C-)
  Pre: CHEM1035, MATH 2204 & PHYS2306; Co: MATH2214 or ME2124(C-) & ME3124 (3)
- ECE 2054 (3) Electrical Theory
  Pre: PHYS 2306, Co: MATH 2214

Junior: 1st semester (12 credits)
- ME3414 (4) Fluid Mechanics (w/lab)
  Pre: MATH 2114, 2124 & 2204, or ME2004(C-); Co: ME2134 or ME2124(C-) & ME3404 (3)
- ME3024 (3) Design & Econ
  Pre: ME2004(C-), ESM2204, ESM2104 or ME 2024 (3)

Junior: 2nd semester (12 credits)
- ME3304 (3) Heat & Mass Transfer
  Pre: ME2124(C-) or 2134(C-), ME3404 or 3414, ME3004(C-), MATH 2214
- ME3034 Tech Communication (1)
  Pre: ESM204 & 2304, ME3204, Co: MATH2114, 2204 & 2214 or ME4006 (3)

Senior: 1st semester (13 credits)
- ME3534 (4) Controls (w/lab)
  Pre: ESM204 & 2304, ME3204(C-), MATH2114, 2204 & 2214 or ME4504(3) & ME3514(3)
- ME4005 ME Lab (3)
  Pre: ECE 2054, STAT 3704, MATH 2114 & 2214

Senior: 2nd semester (11 credits)
- **ME 4015 (3) Senior Capstone Design
  Pre: (ME3024 or 2024), MSE2034, ME3034 or 4006, ME3304, ME3524, ME3534, ME3624 or 3614 & ME4005

5th year 1st semester (15 credits)
- **ME 4016 (3) Senior Capstone Design
  Pre: ME 4015 (continuation of same ME 4015 project from Fall)

5th year 2nd semester (12 credits)

Notes:
- Some required ROTC courses may also meet Pathways elective requirements.
- Arrows denote prerequisites. Prerequisites of prerequisites must be met. Prerequisites may change without warning. Please check for updates in the undergraduate catalog & meet with an ME advisor
- Pathways vs. CLE electives based on date of entrance, not graduation.
- **Must earn C- or higher in ME2004 & ME2134 to meet prerequisite & graduation requirements.
- **Approved design elective may count towards ME major elective credits.
- ***Required senior courses are offered only once per year; ME4015 & ME4016 must be taken in order during the same academic year, beginning in Fall.

Continued enrollment requirements: see ME website for more information, www.me.vt.edu.
- 2.000 minimum in-major GPA (all “ME” & “NSEG” courses)
- 2.000 minimum extended in-major GPA (“ME”,”NSEG” courses & ESM2104, 2204, & 2304)
- 2.000 minimum overall GPA (all courses)
- By 45 attempted required hours completion of: ESM2104, MATH2204 & MATH2114
- By 60 attempted required hours completion of: MATH2214, ESM2304, & ME2004 (C-)
- By 72 attempted required hours completion of: ME2134 (C-), ME3624 or ME 3024, and ME3524
- By 93 attempted credits completion ME4015 and ME4124

Revised Sept 10, 2020