B.S. in Mechanical Engineering

DEGREE PATH SHEET - Class of 2022

Freshman:
1st semester (16 credits)
- CHEM 1035 (3) Chemistry
- CHEM 1045 (1) Chem Lab
  Co: CHEM 1035
- PHYS 2305 (4) Physics I
  Pre: MATH1125
  Co: MATH 1226
- MATH 2114 (3) Linear Algebra
  Pre: MATH1125
  or MATH1226
- MATH 1225 (4) Calculus (C-)
  “Math ready”
- PHYS 2306 Physics II (4)
  Pre: PHYS 2305, MATH 1226
- **ME2004 (3) Numerical Methods (C-)
  Pre: MATH1126, ENGE1216, MATH 2114

Sophomore:
1st semester (16 credits)
- ME 2024 (3) Design & Econ
  Pre: ESM2104 & 2304, ME2004 (C-), MSE2034, (ME3024 or 2024), ME3304, MATH2114 & 2214
- ECE 2054 (3) Electrical Theory
  Pre: PHYS 2306, Co: MATH 2114
- **ME2134 (4) Thermodynamics (C-)
  Pre: CHEM1035, MATH 2204 & PHYS2306; Co: MATH2214
  or ME2124(C-) & ME3124 (3)
- **ME2004 (3) Numerical Methods (C-)
  Pre: MATH1126, ENGE1216, MATH 2114
- ME3024 (3) Design & Econ
  Pre: ME2004(C-), ESM2204, ESM 2304
  ENGL1105&1106
  or ME 2024 (3)
- **ME4124 (3) CAD Thermal/Fluid Design
  Pre: (ME2134 or 2024), SE2034, ME3034 (or 4006), ME3304, ME3524, ME3534, (ME3624 or 3614) & ME4005

Junior:
1st semester (17 credits)
- ME3043 (4) Fluid Mechanics (w/lab)
  Pre: MATH 2114, 2214 & 2204, ME2004(C-); Co: ME2134
  or ME2124(C-) & ME3124 (3)
- ME3043 (4) Fluid Mechanics (w/lab)
  Pre: MATH 2114, 2214 & 2204, ME2004(C-); Co: ME2134
  or ME2124(C-) & ME3124 (3)
- ME3304 (3) Heat & Mass Transfer
  Pre: ME2124 (C-) or 2134(C-), ME3044 or 3414, ME2004(C-), MATH 2214
- ME3043 (4) Tech Communication (1)
  Pre: ME2004(C-), ME3024, Co: ME4005
  or ME4006 (3)
- ME3534 (4) Controls (w/lab)
  Pre: ESM2104 & 2304, ME2004(C-), MATH2114, 2204 & 2214
  or ME4504(C-) & ME3154(3)
- **ME4124 (3) CAD Thermal/Fluid Design
  Pre: (ME2134 or 2024), SE2034, ME3034 (or 4006), ME3304, ME3524, ME3534, (ME3624 or 3614) & ME4005
- **ME 4015 (3) Senior Capstone Design
  Pre: (ME3024 or 2024), SE2034, ME3034 (or 4006), ME3304, ME3524, ME3534, (ME3624 or 3614) & ME4005

Notes:
- Arrows indicate prerequisites. Prerequisites of prerequisites must be met.
- Prerequisites may change without warning. Please check for updates in the undergraduate catalog.
- *Pathways vs. CLE electives are 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.
- Notes on the Registrar's website for more information.

Continued enrollment requirements: see ME website for more information, www.me.vt.edu.
- 2.00 minimum in-major GPA (all “ME” & “NSEG” courses)
- 2.00 minimum extended in-major GPA (“ME”, “NSEG” courses & ESM2104, 2204, & 2304)
- 2.00 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 ME3024, and ME3524
- By 93 attempted required credits completion ME4015 and ME4124
B.S. in Mechanical Engineering

DEGREE PATH SHEET - Class of 2022

Freshman: 1st semester (16 credits)
- CHEM 1035 (3) Chemistry

Freshman: 2nd semester (16 credits)
- CHEM 1045 (1) Chem Lab Co: CHEM 1035

Sophomore: 1st semester (17 credits)
- PHYS 2305 (4) Physics I Pre: MATH1225 Co: MATH 1226
- MATH 2125 (4) Calculus C- “Math ready”
- MATH 2214 (3) Linear Algebra Pre: MATH1225 (B) or MATH1226
- MATH 2226 (4) Calculus Pre: MATH 1225 (C-)

Sophomore: 2nd semester (16 credits)
- MATH 2114 (3) Numerical Methods C- Pre: MATH1225
- ECE 2054 (3) Electrical Theory Pre: PHYS 2306, Co: MATH 2214

Junior: 1st semester (17 credits)
- ESE 2124 (4) Thermodynamics C- Pre: CHEM1035, MATH 2204, PHYS2306, Co: MATH2214 or ME2124(C-), ME3124 (C-)
- ME3024 (3) Design & Econ Pre: ME2004(C-), ESM2204, ESM2304, ME2004 or ME2124(C-), ME3024

Junior: 2nd semester (17 credits)
- ME3304 (3) Heat & Mass Transfer Pre: ME2124(C-), ME2124 or ME2124(C-), ME2124(C-), ME2124(C-), ME2124(C-)
- ME3034 (3) Tech Communication Pre: ME2004(C-), ME3204, ESE 2104, ESM 2204, Co: MATH2214, ME2124(C-), ME2124(C-), ME2124(C-)

Senior: 1st semester (15 credits)
- ME4124 (3) CAD Thermal/Fluid Design Pre: ME2134(C-) or ME3124, Co: MATH 2214

Senior: 2nd semester (15 credits)
- ME 4015 (3) Senior Capstone Design Pre: ME 4015 (continuation of same ME 4015 project from Fall)

Notes:
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- Must earn C- or higher in ME2004 & ME2134 to meet prerequisite & graduation requirements.
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- 2.000 minimum in-major GPA (all “ME” & “NSEG” courses)
- 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-), MATH2114 & ME3024, and ME3524
- By 93 attempted required credits completion ME4015 and ME4124

For more information please see www.me.vt.edu

Revised Sept. 11, 2020 - 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.

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