# Mechanical Engineering Graduation Requirements

**Requirement Sheet Key**

- ♦ = Upper-Division Admission Requirements

## Mathematics (24 Credits)

- ♦ Math 124 (5cr) – Calculus I
- ♦ Math 125 (5cr) – Calculus II
- ♦ Math 126 (5cr) – Calculus III
- Math 307 (3cr) – Differential Equations [pr: Math 125]
- Math 308 (3cr) – Matrix Algebra [pr: Math 126]

One course from the following:

- Math 309 or Math 324

(AMATH 351/352/353 may substitute for Math 307/308/309)

## Sciences (25 Credits)

- ♦ Chem 142 (5cr) – General Chemistry with lab
- ♦ Chem 152 (5cr) – General Chemistry with lab
- ♦ Phys 121 (5cr) – Mechanics with lab [pr: Math 124]
- ♦ Phys 122 (5cr) – Electro/Oscillatory with lab [pr: Math 125]
- Phys 123 (5cr) – Waves with lab [pr: Math 126]

## Written & Oral Communications (7* Credits)

- ♦ English Comp (5cr) – English Composition
- HCDE 231 (3cr) – Intro to Technical Writing [pr: Engl. Comp]

*Additional writing credits built into ME core curriculum.

## Visual, Literary & Performing Arts/Individuals & Society (VLPA/I&S) (24 Credits)

Minimum 10 credits in VLPA required.

Minimum 10 credits in I&S required.

Remaining 4 credits can be either VLPA or I&S.

Minimum 3 credits in Diversity (DIV) required (can overlap with VLPA/I&S requirements).

## Engineering Fundamentals (31 Credits)

- ♦ AA 210 (4cr) – Engineering Statics [pr: Math 126, Phys 121]
- ♦ ME 230 (4cr) – Kinematics & Dynamics [pr: AA 210]
- AMATH 301(4cr) – Beg. Scientific Computing
- ME 123 (4cr) - Intro to Visualization and CAD
- MSE 170 (4cr) – Fund. of Material Science [pr: CHEM 152]
- EE 215 (4cr) – Fund. of EE [pr: PHYS 122 & MATH 126]
- IND E 315 (3cr) – Prob & Stats for Engrs [pr: MATH 307]

-or-
- Math/Stat 390 (4cr) - Statistics

## ME Core Courses (45 Credits)

- ME 323 (5cr) – Engineering Thermodynamics
- ME 331 (4cr) – Intro to Heat Transfer [pr: ME 333]
- ME 333 (5cr) Intro to Fluid Mechanics [pr: ME 323, Math 307 or AMATH 351, AMATH 301]
- ME 354 (5cr) – Behavior of Engr Material Lab [pr: MSE 170, CEE 220]
- ME 355 (4cr) – Manufacturing Processes [pr: ME 354]
- ME 356 (4cr) – Machine Design Analysis [pr: ME 354]
- ME 373 (5cr) – Intro to System Dynamics [pr: EE 215, ME 230, MATH 307 or AMATH 351, Math308 or AMATH 352]
- ME 374 (5cr) – Sys Dynamic Analysis/Design [pr: ME 373, AMATH 301]
- ME 395 (4cr) – Intro to Mechanical Design [pr: ME 123, ME 323, IND E 315/MATH 390]
- ME 495 (4cr) – Mech Engr Design [pr: ME 395]

See ME Advising Guide for a list of courses.

## Total Credits Required for Graduation (180 Credits)

### Early Admission Requirements

1. Early Admission is an option for Autumn Quarter Only.
2. Students must be enrolled at UW-Seattle.
3. Math 124, 125 & 126 or equivalent.
4. 10 credits of physical sciences courses plus the accompanying lab at the level of Chem 142, 152; Phys 121, 122, 123.
5. 5 credits of English Composition.
6. 15 credits must have been completed at UW.

### Application Deadlines

Both early and upper division applications are due July 1st.

Last revised May 2015
# Mechanical Engineering Sample Curriculum

University of Washington  
www.me.washington.edu

**Freshman – Autumn Quarter**  
- Math 124 – Calculus I  
- Chem 142 – Chem & Lab I  
- Engl 131 – English Composition  
  
Quarter Total 15

**Freshman – Winter Quarter**  
- Math 125 – Calculus II  
- Chem 152 – Chem & Lab II  
- VLPA/I&S  
  
Quarter Total 15

**Freshman – Spring Quarter**  
- Math 126 – Calculus III  
- Phys 121 – Mechanics & Lab I  
- VLPA/I&S  
  
Quarter Total 15

**Sophomore – Autumn Quarter**  
- AA 210 – Statics  
- Phys 122 – Electro & Lab I  
- ME 123 – Intro to Visualizn. & CAD  
- Math 307 – Differential Equations  
  
Quarter Total 16

**Sophomore – Winter Quarter**  
- ME 230 – Kinematics/Dynamics  
- Math 308 – Matrix Algebra  
- Phys 123 – Waves & Lab I  
- VLPA/I&S  
  
Quarter Total 16

**Sophomore – Spring Quarter**  
- CEE 220 – Mech. of Materials  
- Math 324 or Math 309  
- AMATH 301 – Scientific Computing  
- HCDE 231 – Technical Writing  
  
Quarter Total 14

**Junior – Autumn Quarter**  
- ME 323 – Thermodynamics  
- MSE 170 – Materials Science  
- EE 215 – Fund of EE  
- VLPA/I&S  
  
Quarter Total 16

**Junior – Winter Quarter**  
- ME 333 – Intro to Fluid Mechanics  
- ME 354 – Behavior of Engr Materials  
- ME 373 – Intro to System Dynamics  
- VLPA/I&S  
  
Quarter Total 15

**Junior – Spring Quarter**  
- ME 355 – Intro to Manufct. Processes  
- ME 374 – System Dynamics  
- IND E 315 – Prob & Stats for Engrs  
- ME Senior Elective  
  
Quarter Total 14

**Senior – Autumn Quarter**  
- ME 331 – Intro to Heat Transfer  
- ME 395 – Intro to Mech Design  
- ME Senior Elective  
- VLPA/I&S  
  
Quarter Total 15

**Senior – Winter Quarter**  
- Free Elective  
- ME 356 – Machine Design Analysis  
- ME Senior Elective  
- ME Senior Elective  
  
Quarter Total 15

**Senior – Spring Quarter**  
- ME 495 – Mechanical Engr Design  
- ME Senior Elective  
- VLPA/I&S  
- ME Senior Elective  
  
Quarter Total 12

**Bold face** courses are required for upper-division admission  
See ME Advising Guide for list of senior electives

For more information contact:  
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