

**ME**

**Mechanical Engineering**  
 Graduation Requirements  
 University of Washington  
<https://me.washington.edu>

**ENGRUD Requirement Sheet – Key**

◆ = Placement Requirements  
 ★ = *Pick two to satisfy placement requirements*

**Placement Periods**

Placement 1 = July 1 of first year  
 Placement 2 = January 15 of second year  
 Placement 3 = July 1 of second year

<b>Mathematics (24cr)</b>	
◆ <b>MATH 124, 125, 126 - Calculus with Analytical Geometry I, II, III (15cr)</b>	<input type="checkbox"/>
MATH 307 - Introduction to Differential Equations (3cr) [pr: MATH 125]	<input type="checkbox"/>
MATH 308 - Matrix Algebra with Applications (3cr) [pr: MATH 126]	<input type="checkbox"/>
MATH 309 - Linear Analysis (3cr) [pr: MATH 307 and MATH 308 or MATH 136] OR MATH 324 - Advanced Multivariable Calculus (3cr) [pr: MATH 126 or MATH 136]	<input type="checkbox"/>
<b>Sciences (25cr)</b>	
★ <b>CHEM 142 - General Chemistry (5cr)</b>	<input type="checkbox"/>
★ <b>CHEM 152 - General Chemistry (5cr)</b>	<input type="checkbox"/>
◆ <b>PHYS 121 - Mechanics (5cr) [pr: MATH 124]</b>	<input type="checkbox"/>
★ <b>PHYS 122 - Electromagnetism (5cr) [pr: MATH 125]</b>	<input type="checkbox"/>
★ <b>PHYS 123 - Waves (5cr) [pr: MATH 126]</b>	<input type="checkbox"/>
<b>Engineering General Education Requirements (36cr)</b>	
<i>Written and Oral Communication (12cr):</i>	
◆ <b>English Composition (5cr)</b>	<input type="checkbox"/>
ENGR 231 - Into to Technical Communication (3cr)	<input type="checkbox"/>
Add'l Composition or Writing (4cr)	<input type="checkbox"/>
<i>Areas of Knowledge:</i>	
Visual, Literary & Performing Arts - VLPA (10cr)	<input type="checkbox"/>
Individuals & Society - I&S (10cr)	<input type="checkbox"/>
VLPA or I&S (4cr)	<input type="checkbox"/>
Diversity-DIV (3cr) - (may overlap with VLPA/I&S)	<input type="checkbox"/>
<b>Engineering Fundamentals (31-32cr)</b>	
AA 210 - Engineering Statics (4cr) [pr: MATH 126; PHYS 121]	<input type="checkbox"/>
CEE 220 - Introduction to Mechanics of Materials (4cr) [pr: AA 210]	<input type="checkbox"/>
ME 230 - Kinematics and Dynamics (4cr) [pr: AA 210]	<input type="checkbox"/>
AMATH 301 - Beginning Scientific Computing (4cr) [pr. Either MATH 125 or MATH 135]	<input type="checkbox"/>
ME 123 - Introduction to Visualization and Computer-Aided Design (4cr) [pr. MATH 125 or MATH 135]	<input type="checkbox"/>
MSE 170 - Fundamentals of Materials Science (4cr) [pr. CHEM 142, CHEM 143, or CHEM 145]	<input type="checkbox"/>
EE 215 - Fundamentals of Electrical Engineering (4cr) [pr. MATH 136, or MATH 126 and MATH 307 or AMATH 351, either of which may be taken concurrently; PHYS 122]	<input type="checkbox"/>
IND E 315 (3cr) OR STAT 390 (4cr)	<input type="checkbox"/>

<b>Departmental Core (45cr)</b>	
ME 323 - Engineering Thermodynamics (5cr)	<input type="checkbox"/>
ME 331 - Introduction to Heat Transfer (4cr)	<input type="checkbox"/>
ME 333 - Introduction to Fluid Mechanics (5cr)	<input type="checkbox"/>
ME 354 - Mechanics of Materials Laboratory (5cr)	<input type="checkbox"/>
ME 355 - Introduction to Manufacturing Processes (4cr)	<input type="checkbox"/>
ME 356 - Machine Design Analysis (4cr)	<input type="checkbox"/>
ME 373 - Introduction to System Dynamics (5cr)	<input type="checkbox"/>
ME 374 - Systems Dynamic Analysis and Design (5cr)	<input type="checkbox"/>
ME 395 - Introduction to Mechanical Design (4cr)	<input type="checkbox"/>
ME 495 - Mechanical Engineering Design (4cr)	<input type="checkbox"/>
<b>Mechanical Option Courses (19cr)</b>	
See ME Advising Guide online for list of courses.	<input type="checkbox"/>
<b>Total credits required for graduation: 180cr</b>	

*Honors or accelerated sequences of math and chemistry can satisfy some of the above requirements, see department website for specifics. AMATH 351/352/353 are alternatives to Math 307/308/309.*



**Mechanical Engineering Sample Curriculum**  
 University of Washington  
<https://me.washington.edu>

**Mechanical Engineering Advising**  
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 Seattle, WA 98195-2600  
 Phone: (206) 543-5090  
 Email: meadvise@uw.edu

This is a sample four-year plan for ENGRUD students. It is intended to provide a framework for ENGRUD students to reference as they create their own individual academic plan.

Courses required to request placement for ENGRUD students: **MATH 124, MATH 125, MATH 126; PHYS 121; and two additional courses from CHEM 142, CHEM 152, PHYS 122, or PHYS 123; 5 credits of English Composition.**

	Autumn Quarter	Cr	Winter Quarter	Cr	Spring Quarter	Cr
Freshman	◆ <b>MATH 124 - Calculus with Analytical Geometry I</b>	5	◆ <b>MATH 125 - Calculus with Analytical Geometry II</b>	5	◆ <b>MATH 126 - Calculus with Analytical Geometry III</b>	5
	★ <b>CHEM 142 - General Chemistry</b>	5	★ <b>CHEM 152 - General Chemistry</b>	5	◆ <b>PHYS 121 - Mechanics</b>	5
	VLPA/I&S	5	VLPA/I&S	5	◆ <b>English Composition</b>	5
	E-FIG: ENGR 101 & GEN ST 199	2				
	<b>Qtr. Total:</b>	<b>17</b>	<b>Qtr. Total:</b>	<b>15</b>	<b>Qtr. Total:</b>	<b>15</b>
Sophomore	Autumn Quarter	Cr	Winter Quarter	Cr	Spring Quarter	Cr
	MATH 307 - Introduction to Differential Equations	3	MATH 308 - Matrix Algebra with Applications	3	MATH 324 - Advanced Multivariable Calculus OR MATH 309 - Linear Analysis	3
	★ <b>PHYS 122 - Electromagnetism</b>	5	★ <b>PHYS 123 - Waves</b>	5	CEE 220 - Mechanics of Materials	4
	AA 210 - Engineering Statics	4	ME 230 - Kinematics & Dynamics	4	AMATH 301 - Beginning Scientific Computing	4
	ME 123 - Intro to Visualization. & CAD	4	VLPA/I&S	4	ENGR 231 - Intro to Technical Communication	3
	<b>Qtr. Total:</b>	<b>16</b>	<b>Qtr. Total:</b>	<b>16</b>	<b>Qtr. Total:</b>	<b>14</b>
Junior	Autumn Quarter	Cr	Winter Quarter	Cr	Spring Quarter	Cr
	ME 323 - Engineering Thermodynamics	5	ME 333 - Intro to Fluid Mechanics	5	ME 355 - Intro to Manufacturing Processes	4
	MSE 170 - Fundamentals of Materials Science	4	ME 354 - Mechanics of Materials Lab	5	ME 374 - System Dynamics Analysis and Design	5
	EE 215 - Fundamentals of Electrical Engineering	4	ME 373 - Intro to System Dynamics	5	IND E 315 - Probability & Statistics for Engineers	3
	VLPA/I&S/DIV	3			ME Senior Elective	4
<b>Qtr. Total:</b>	<b>16</b>	<b>Qtr. Total:</b>	<b>15</b>	<b>Qtr. Total:</b>	<b>16</b>	
Senior	Autumn Quarter	Cr	Winter Quarter	Cr	Spring Quarter	Cr
	ME 331 - Intro to Heat Transfer	4	ME 356 - Machine Design Analysis	4	ME 495 - Mechanical Engineering Design	4
	ME 395 - Intro to Mechanical Design	4	ME Senior Elective	3	ME Senior Elective	4
	ME Senior Elective	4	ME Senior Elective	4	VLPA/I&S	4
	VLPA/I&S	3	Additional Writing	4		
<b>Qtr. Total:</b>	<b>15</b>	<b>Qtr. Total:</b>	<b>15</b>	<b>Qtr. Total:</b>	<b>12</b>	

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