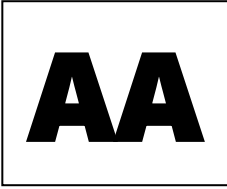


This resource is for ENGRUD students who entered the UW in AUT23 or later.



**Aeronautics & Astronautics
Graduation Requirements**
University of Washington
<http://aa.washington.edu>

ENGRUD Requirement Sheet – Key:

◆ = Placement Requirements;

★ = *Pick one to satisfy placement requirement*

Placement: July 1 at the end of the first year

◆ **E-FIG: ENGR 101 and GEN ST 199 (2cr)**

Mathematics (24cr)

◆ **MATH 124, 125, 126 - Calc w/ Analytic Geom. I-III (15cr)**

MATH 207 - Intro to Differential Equations (3cr)
[pr: MATH 125]

MATH 208 - Matrix Algebra with Applications (3cr)
[pr: MATH 126]

MATH 224 - Advanced Multi-Variable Calculus (3cr)
[pr: MATH 126 or MATH 136]

Sciences (25cr)

◆ **CHEM 142 - General Chemistry (5cr)**

★ **CHEM 152 - General Chemistry (5cr)**
[pr: CHEM 142] OR Other Natural Science* (5cr)

◆ **PHYS 121 - Mechanics (5cr)**
[pr: MATH 124 or MATH 134]

★ **PHYS 122 - Electromagnetism (5cr)**
[pr: MATH 125 or MATH 134; PHYS 121]

★ **PHYS 123 - Waves (5cr)**
[pr: MATH 126 or MATH 134; PHYS 122]

Engineering General Education Requirements (31cr)

Written and Oral Communications:

◆ **English Composition (5cr)**

Areas of Inquiry:

Arts & Humanities – A&H (10cr)

Social Sciences - SSc (10cr)

Additional A&H or SSc (4cr)

Diversity - DIV (5cr) - (may overlap with A&H or SSc)

Engineering Fundamentals (20cr)

A A 210 - Engineering Statics (4cr)
[pr: MATH 126, PHYS 121]

A A 260 - Thermodynamics (4cr)
[pr: CHEM 142; MATH 126; PHYS 121]

CEE 220 - Intro. to Mechanics of Materials (4cr)
[pr: AA 210]

M E 230 - Kinematics and Dynamics (4cr)
[pr: AA 210]

★ **AMATH 301 - Beginning Scientific Computing (4cr)**
[pr: either MATH 125, Q SCI 292, or MATH 135]

Departmental Core (54cr)

A A 301 - Compressible Aerodynamics (4cr)

A A 302 - Incompressible Aerodynamics (4cr)

A A 310 - Orbital and Space Flight Mechanics (4cr)

A A 311 - Atmospheric Flight Mechanics (4cr)

A A 312 - Structural Vibrations (4cr)

A A 320 - Aerospace Instrumentation (3cr)

A A 321 - Aerospace Laboratory I (3cr)

A A 322 - Aerospace Laboratory II (3cr)

A A 331 - Aerospace Structures I (4cr)

A A 332 - Aerospace Structures II (4cr)

A A 395 - Undergraduate Seminar (1cr)

A A 410 & 411 - Aircraft Design I & II (4cr, 4cr)
OR

A A 420 & 421 - Spacecraft Space Sys. Design I & II (4cr, 4cr)

A A 447 - Control in Aerospace Systems (4cr)

A A 460 - Propulsion (4cr)

Senior Technical Electives (15cr)

Any 400-level A A courses not used elsewhere in degree.

Free Electives (~9cr)

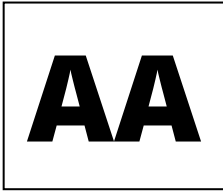
Additional coursework in any subject area not used elsewhere in degree.

Total credits required for graduation: 180cr

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements

Updated September 2023

This resource is for ENGRUD students who entered the UW in AUT23 or later.



**Aeronautics & Astronautics
Sample Curriculum**
University of Washington
<http://aa.washington.edu>

Aeronautics & Astronautics Advising
Office: 211 Guggenheim Hall, Box 352400
Seattle, WA 98195-240
Phone: (206) 616-1115
Email: ugadvising@aa.washington.edu

This is a sample four-year plan for ENGRUD students that prepares them to be able to request placement at the end of the first year. 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: **ENGR 101; MATH 124, 125, 126; CHEM 142, PHYS 121, English Composition; *ENGRUD students who are interested in AA should choose one of the following: AMATH 301, CHEM 152, PHYS 122, PHYS 123.**

First Year

<u>Autumn Quarter</u>	<u>cr</u>	<u>Winter Quarter</u>	<u>cr</u>	<u>Spring Quarter</u>	<u>cr</u>
◆ MATH 124 - Calc. w Analytic Geom I	5	◆ MATH 125 - Calc. w Analytic Geom II	5	◆ MATH 126 - Calc. w Analytic Geom III	5
◆ CHEM 142 - General Chemistry	5	★ CHEM 152 - General Chemistry <u>OR</u>	5	◆ PHYS 121 - Mechanics	5
◆ E-FIG: ENGR 101 & GEN ST 199	2	other approved science course (*see	5	A&H / SSc	5
A&H / SSc	3	italicized note above)			
		◆ English Composition			
Qtr. Total:	15	Qtr. Total:	15	Qtr. Total:	15

Second Year

<u>Autumn Quarter</u>	<u>cr</u>	<u>Winter Quarter</u>	<u>cr</u>	<u>Spring Quarter</u>	<u>cr</u>
MATH 207 - Intro to Differential Equations	3	MATH 208 - Matrix Algebra	3	A A 260 - Thermodynamics	4
PHYS 122 - Electromagnetism	5	PHYS 123 - Waves	5	CEE 220 - Intro to Mech. of Materials	4
A A 210 - Engineering Statics	4	ME 230 - Kinematics & Dynamics	4	MATH 224 - Multivariable Calculus	3
A&H / SSc	2	A&H / SSc	4	AMATH 301 - Beg Scientific Comp	4
Qtr. Total:	14	Qtr. Total:	16	Qtr. Total:	15

Third Year

<u>Autumn Quarter</u>	<u>cr</u>	<u>Winter Quarter</u>	<u>cr</u>	<u>Spring Quarter</u>	<u>cr</u>
A A 310 - Orbital & Space Flight Mech.	4	A A 302 - Incompressible Aerodynamics	4	A A 301 - Compressible Aerodynamics	4
A A 311 - Atmospheric Flight Mechanics	4	A A 312 - Structural Vibrations	4	A A 322 - Aerospace Lab II	3
A A 320 - Aerospace Instrumentation	3	A A 321 - Aerospace Lab I	3	A A 332 - Aerospace Structures II	4
A A 395 - Undergraduate Seminar	1	A A 331 - Aerospace Structures I	4	A A 447 - Control in Aerospace	4
A&H / SSc	3				
Qtr. Total:	15	Qtr. Total:	15	Qtr. Total:	15

Fourth Year

<u>Autumn Quarter</u>	<u>cr</u>	<u>Winter Quarter</u>	<u>cr</u>	<u>Spring Quarter</u>	<u>cr</u>
A A 460 - Propulsion	4	A A 410 or 420 - Capstone Design I	4	A A 411 or 421 - Capstone Design II	4
A A Technical Elective	3	A A Technical Elective	3	A A Technical Elective	3
A A Technical Elective	3	A A Technical Elective	3	A&H / SSc	5
Free Elective	4	Free Elective	4	Free Elective	3
Qtr. Total:	14	Qtr. Total:	14	Qtr. Total:	15

◆ = Placement Requirement

★ = Pick one to satisfy placement requirements

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements