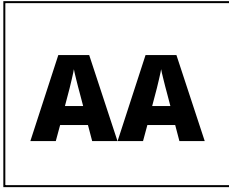


This resource is for ENGRUD students who entered the UW in AUT21 or later.



**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 World (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 (29cr)

Written and Oral Communications:

◆ **English Composition (5cr)**

Areas of Knowledge:

Visual, Literary & Performing Arts - VLPA (10cr)

Individuals & Society - I&S (10cr)

Additional VLPA or I&S (4cr)

Diversity - DIV (3cr) - (may overlap with VLPA/I&S)

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 (~11cr)

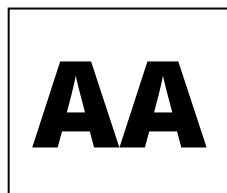
Additional coursework in any subject area not used elsewhere in degree.

Total credits required for graduation: 180cr

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements. AMATH 351/352/353 may be alternatives to MATH 207/208/209, work with the department to confirm.

Updated October 2021

This resource is for ENGRUD students who entered the UW in AUT21 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	5	◆ PHYS 121 - Mechanics	5
VLPA / I&S	5	◆ English Composition	5	VLPA / I&S	5
◆ E-FIG: ENGR 101 & GEN ST 199	2				
Qtr. Total:	17	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
VLPA / I&S	2	VLPA / I&S	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
VLPA / I&S	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	VLPA / I&S	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. AMATH 351/352/353 may be alternatives to MATH 207/208/209, work with the department to confirm.

Updated October 2021