



**Aeronautics & Astronautics
Degree Requirements**
<http://aa.washington.edu>
ugadvising@aa.washington.edu

ENGRUD Requirement Key:

◆ = Placement Requirements

★ = *Pick one to satisfy placement requirement*

Placement: July 1 at the end of the first year

Engineering First-year Interest Group (E-FIG)

◆ **ENGR 101 (1cr)**

GEN ST 199 (1cr)

Mathematics (27cr)

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

MATH 207 - Intro to Differential Equations (4cr)

[pr: MATH 125]

MATH 208 - Matrix Algebra with Applications (4cr)

MATH 224 - Advanced Multivariable Calculus (4cr)

[pr: MATH 126]

Sciences (25cr)

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

One course from the following:

★ **CHEM 152 - General Chemistry (5cr);**

ME 123 (4cr); CSE 160 (4cr); Other Natural Science

◆ **PHYS 121 - Mechanics (5cr)**

[pr: MATH 124]

★ **PHYS 122 - Electromagnetism (5cr)**

[pr: MATH 125; PHYS 121]

★ **PHYS 123 - Waves (5cr)**

[pr: MATH 126; PHYS 122]

General Education Requirements (29-41cr)

Written and Oral Communications:

◆ **English Composition (5cr)**

Writing (7cr) - met by coursework in the major

Areas of Inquiry:

Arts & Humanities - A&H (10cr)

Social Sciences - SSc (10cr)

Additional A&H or SSc (4cr)

Diversity - DIV (5cr) (may overlap with Areas of Inquiry or W)

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: MATH 125]

Major Core Requirements (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)

One course pair from

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

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

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

A A 460 - Propulsion (4cr)

Senior Technical Electives (15cr)

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

Free Electives (to reach 180 credits total credits)

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

Total credits required for graduation: 180cr

Minor available (32cr)

[Visit this website](#) to learn more about the minor.

This resource is for ENGRUD students who entered the UW-Seattle in AUT25.

Aeronautics & Astronautics

Questions? Contact ENGRUD Advising

Email: engradv@uw.edu

Office: IEB 307

Phone: (206) 543-1770

This is a sample four-year plan for Aeronautics & Astronautics to provide ENGRUDs a framework to create their individual academic plan.

Courses required to request placement for ENGRUD students: **ENGR 101; MATH 124, 125, 126; CHEM 142; PHYS 121; English Composition; choose one: AMATH 301, CHEM 152, ME 123, PHYS 122, PHYS 123.**

<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, ME 123, or other NSc	5	◆ PHYS 121 - Mechanics	5
◆ E-FIG: ENGR 101 & GEN ST 199	2	◆ English Composition		A&H / SSc	5
A&H / SSc	3		5		
Qtr. Total:	15	Qtr. Total:	15	Qtr. Total:	15

<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	4	MATH 208 - Matrix Algebra	4	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	4
A&H / SSc	2	A&H / SSc	4	AMATH 301 - Beg Scientific Comp	4
Qtr. Total:	15	Qtr. Total:	17	Qtr. Total:	16

<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

<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	Free Elective	3
A A Technical Elective	3	A A Technical Elective	3	A&H / SSc	5
A A Technical Elective	4	Free Elective	4	Free Elective	2
Qtr. Total:	14	Qtr. Total:	14	Qtr. Total:	14

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

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