



Aeronautics and Astronautics Graduation Requirements

University of Washington
www.aa.washington.edu

Requirement Sheet Key

- ◆ = Upper-Division Admission Requirements
- * = Must be taken no later than Autumn Quarter of Admission

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]
- *Math 324 (3cr) – Multivariable Calculus [pr: Math 126]
(AMATH 351/352 may substitute for Math 307/308)

Sciences (25 Credits)

- ◆ Chem 142 (5cr) – General Chemistry with lab
- Chem 152 (5cr) – General Chemistry with lab
-or- NW elective (see departmental adviser)
(145 series can substitute for 142 series)
- ◆ 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 (12 Credits)

- ◆ English Comp (5cr) – English Composition
- HCDE 231 (3cr) – Intro to Technical Writing [pr: Engl. Comp]
- HCDE 333 (4cr) – Adv. Tech Writing [pr: HCDE 231]
-or- department approved alternative

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.

Engineering Fundamentals (16 Credits)

- ◆ AA 210 (4cr) – Engineering Statics [pr: Math 126, Phys 121]
- ◆ CEE 220 (4cr) – Intro to Mech. Of Materials [pr: AA 210]
- ◆ ME 230 (4cr) – Kinematics & Dynamics [pr: AA 210]
- ◆ AA 260 (4cr) – Thermodynamics [pr: Math 126, Phys 121, Chem 142]

A&A Core Courses (58 Credits)

- *AMATH 301(4cr) – Beg. Scientific Computing
- AA 301 (4cr) - Compressible Aerodynamics
- AA 302 (4cr) – Incompressible Aerodynamics
- AA 310 (4cr) – Orbital/Space Flight Mech
- AA 311 (4cr) – Atmospheric Flight Mechanics
- AA 312 (4cr) – Structural Vibration
- AA 320 (3cr) – Aerospace Instrumentation
- AA 321 (3cr) – Aerospace Laboratory I
- AA 322 (3cr) – Aerospace Laboratory II
- AA 331 (4cr) – Aerospace Structures I
- AA 332 (4cr) – Aerospace Structures II
- AA 360 (4cr) – Propulsion
- AA 410 (4cr) – Aircraft Design I
OR
AA 420 (4cr) – Spacecraft and Space Systems Design I
- AA 411 (4cr) – Aircraft Design II
OR
AA 421 (4cr) – Spacecraft and Space Systems Design II
- AA 447 (4cr) – Control in Aerospace Systems
- AA 496 (1cr) – Undergraduate Seminar

A&A Technical Electives (15 Credits)

See A&A Advising Guide for list of technical electives.

Free Electives (6 Credits)

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.
Students must have completed 75 credits in order to apply to AA for upper-division.

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Aeronautics and Astronautics Sample Curriculum

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Freshman – Autumn Quarter		Freshman – Winter Quarter		Freshman – Spring Quarter	
◆ Math 124 – Calculus I	5	◆ Math 125 – Calculus II	5	◆ Math 126 – Calculus III	5
◆ Chem 142 – Chem & Lab I	5	Chem 152 – Chem & Lab II	5	◆ Phys 121 – Mechanics & Lab I	5
◆ English Composition	5	VLPA/I&S	5	VLPA/I&S	5
		AA 496	1		
Quarter Total	15	Quarter Total	16	Quarter Total	15
Sophomore – Autumn Quarter		Sophomore – Winter Quarter		Sophomore – Spring Quarter	
◆ Math 307 – Diff. Equations	3	◆ Math 308 – Matrix Algebra	3	◆ AA 260 – Thermodynamics	4
◆ AA 210 – Statics	4	◆ ME 230 – Kinematics/Dynamics	4	◆ CEE 220 – Mech. of Materials	4
◆ Phys 122 – Electro & Lab I	5	◆ Phys 123 – Waves & Lab I	5	VLPA/I&S	5
HCDE 231 –Tech Writing	3	*AMATH 301 –Scientific Computing	4	Or *Math 324	
Quarter Total	15	Quarter Total	16	Quarter Total	13
Junior – Autumn Quarter		Junior – Winter Quarter		Junior – Spring Quarter	
AA 310 –Space Flight Mech.	4	AA 301 - Compressible Aerodynamics	4	AA 302– Incompressible Aerodynamics	4
AA 311 – Flight Mechanics	4	AA 312 – Structural Vibration	4	AA 322 – Aerospace Laboratory II	3
AA 320 – Aerospace Instrumentation	3	AA 321 – Aerospace Laboratory	3	AA 332 – Aerospace Structures II	4
*AMATH 301 –Scientific Computing	4	AA 331 – Aerospace Structures I	4	AA 360 – Propulsion	4
Or *Math 324		AA 496 – Undergraduate Seminar	1		
Quarter Total	14	Quarter Total	16	Quarter Total	15
Senior – Autumn Quarter		Senior – Winter Quarter		Senior – Spring Quarter	
HCDE 333 – Adv. Tech Writing	4	AA 410 or 420 – Integrated Design I	4	AA 411 or 421 – Integrated Design II	4
AA 447 – Control in Aerospace Systems	4	Tech. Elective	3	Tech. Elective	3
Tech. Elective	3	Tech. Elective	3	VLPA/I&S	5
Tech. Elective	3	VLPA/I&S	5	Free Elective	3
		Free Elective	2		
Quarter Total	14	Quarter Total	16	Quarter Total	15

Bold face courses are required for upper-division admission.

*Must be taken no later than Autumn Quarter of Admission with at least one of the two complete prior to Autumn Quarter.

^Chem 152 Recommended for students considering multiple engineering programs
See A&A Advising Guide for list of technical electives.

For more information contact:

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-or-

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