### Freshman – Autumn Quarter
- **MATH 124 – Calculus I** 5
- **CHEM 142 – Chem & Lab I** 5
- **ENGL COMP** 5

**QUARTER TOTAL** 15

### Freshman – Winter Quarter
- **MATH 125 – Calculus II** 5
- Chem 152 or NW alternative ♦ 5
- **PHYS 121 – Mechanics & Lab** 5
- **VLPA/I&S** 5

**QUARTER TOTAL** 15

### Freshman – Spring Quarter
- **MATH 126 – Calculus III** 5
- **PHYS 122 – Electro & Lab** 5
- **MATH 324** ♦ 3

**QUARTER TOTAL** 15

#### Notes:
- Chem 152 recommended if considering multiple engineering programs.
- Must be taken no later than Autumn Quarter of Admission.

### Sophomore – Autumn Quarter
- **MATH 307 – Differential Equations** 3
- **AA 210 – Statics** 4
- **PHYS 122 – Electro & Lab** 5
- **VLPA/I&S** 2

**QUARTER TOTAL** 14

### Sophomore – Winter Quarter
- **MATH 308 – Matrix Algebra** 3
- **ME 230 – Kinematics/Dynamics** 4
- **PHYS 123 – Waves & Lab** 5
- **HCDE 231** 3

**QUARTER TOTAL** 15

### Sophomore – Spring Quarter
- **CEE 220 – Mech. of Materials** 4
- **AA 260 – Thermodynamics** 4
- **VLPA/I&S** 2

**QUARTER TOTAL** 13

### Junior – Autumn Quarter
- AA 310 – Space Flight Mech. 4
- AA 311 – Atmos Flight Mech 4
- AA 320 – Aerospace Instrumentation 3
- **AMATH 301 – Beg. Scientific Comp.** 4

**QUARTER TOTAL** 18

### Junior – Winter Quarter
- AA 301 – Compressible Aerodynamics 4
- AA 312 – Structural Vibrations 4
- AA 321 – Aerospace Laboratory I 3
- AA 331 – Aerospace Structures I 4
- AA 496 – Undergraduate Seminar 1

**QUARTER TOTAL** 16

### Junior – Spring Quarter
- AA 302 – Incompressible Aerodynamics 4
- AA 322 – Aerospace Laboratory II 3
- AA 332 – Aerospace Structures II 4
- AA 360 – Propulsion 4

**QUARTER TOTAL** 15

### Senior – Autumn Quarter
- AA 409 – Computer Tools 2
- AA 447 – Control in Aerospace Sys 4
- HCDE 333 – Adv. Tech. Writing 3
- **OR** Department Approved Alternative Technical Elective – (405,430,461, 470) 3

**QUARTER TOTAL** 16

### Senior – Winter Quarter
- AA 410 or 420 – Integrated Design I 4
- Tech. Elect – (AA 400, 419, 432, 440, 448) 3
- **VLPA/I&S** 5

**QUARTER TOTAL** 15

### Senior – Spring Quarter
- AA 411 or 421 – Integrated Design II 4
- Tech. Elect – (AA 402, 441, 449, 462, 480) 3
- **VLPA/I&S** 5

**QUARTER TOTAL** 12

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**Bold face courses are required for Upper-Division Admission**

See the University of Washington Course Catalog for a description of "Technical Elective" courses.

**For more information contact:** Engineering Advising, 301 Loew Hall, Box 352180, Seattle, Washington 98195-2180
- Phone (206) 543-1770 – Email (engradv@engr.washington.edu)

**OR**
Aeronautics & Astronautics, 211 Guggenheim Hall, Box 352400, Seattle, Washington 98195
- Phone (206) 616-1115 – Email (ugadvising@aa.washington.edu)
AERONAUTICS & ASTRONAUTICS GRADUATION REQUIREMENTS

University of Washington

See end for Early Admission Requirements.

Upper-Division Admission Requirements.

* Must be taken no later than Autumn Quarter of Admission

Mathematics ................................................................. [24 Credits]

♦ MATH 124 [5cr] Calculus with Analytic Geometry I
♦ MATH 125 [5cr] Calculus with Analytic Geometry II
♦ MATH 126 [5cr] Calculus with Analytic Geometry III
♦ MATH 307 [3cr] Intro to Differential Equations [pr: MATH 125]
♦ MATH 308 [3cr] Matrix Algebra [pr: MATH 126]
* MATH 324 [3cr] Advance Calculus I [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 [pr: CHEM 142]
  OR NW Elective (see department adviser)
  (CHEM 145, 155 can substitute for CHEM 142, 152)
♦ 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 and Oral Communication .................... [12 Credits]

♦ ENGL COMP [5cr] English Composition
♦ HCDE 231 [3cr] Intro to Technical Writing [pr: ENGL COMP]
  OR Tech Writing/Oral Present [pr: TC 231]
  OR Department Approved Alternative

Visual, Literary & Performing Arts

Individuals & Societies [VLPA/I&S] .................. [24 Credits]

Minimum 10 credits in VLPA (formerly Humanities) required.
Minimum 10 credits in I&S (formerly Social Sciences) 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 Mechanics of Material [pr: AA 210]
♦ AA 260 [4cr] Thermo. [pr: MATH 126/PHYS 121/ CHEM 142
  pr: CHEM E 260]

A & A Core Courses ................................. [60 Credits]

*AMATH 301 [4cr] Beg. Scientific Computing
AA 301 [4cr] Compressible Aerodynamics
AA 302 [4cr] Incompressible Aerodynamics
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 409 [2cr] Comp. Tools for Engineers
AA 410 [4cr] Aircraft Design I
  OR
AA 420 [4cr] Spacecraft and Space Systems I
AA 411 [4cr] Aircraft Design II
  OR
AA 421 [4cr] Spacecraft/Space Systems Design II
AA 447 [4cr] Control in Aerospace Systems
AA 496 [1cr] Undergraduate Seminar

A & A Technical Electives ...................... [15 Credits]


Free Electives ............................. [4 credits]

Total credits required for graduation ...... [180]

Early Admission Requirements

1. Early Admission is an option for AUTUMN QUARTER ONLY.
2. Student MUST be enrolled at UW.
3. Math 124,125 & 126; or equivalent.
4. 10 credits of physical sciences courses plus the accompanying lab at the level of PHYS 121, 122, 123; CHEM 142, 152.
5. 5 credits of English Composition.
6. 15 credits MUST have been completed at the UW.