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| AA | **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 |

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| **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**](https://myplan.uw.edu/course/#/courses?states=N4Igwg9grgTgzgUwMoIIYwMYAsQC4TAA6IAZhDALYAiqALqsbkSBqhQA5RyPGJ20AbBMQA0xAJZwUGWuIgA7FOmyMSqAYjEhJASXlxaMKDPJLMWVes3EAjlAQwAnkkPj5Acx4gA5AEEABL7eosQAJqiO3HjMAIyWGghaAEzx1iAAzKmJxAAsWVoArPnEAGxZAL5aBui0AKLyoQAq4hQIUbgA2gAMIgCcJV0AulpuGAJQoQgAcgoA8uwIiggycvqMhvYj8mMTCABKba4yCKHSsgrtG9na2%2BOTAAowDgg2cAd24k%2Bh60bXo3cIRoAI1QZ1Wl1%2BVSwEAA7rN5AJHPcMMhluc1ng1AkobD4Yi9PcHHAFGCLhUcTCAEIwWGIYogLCoKRocwnH6bMKSMYQRC%2BUIAN1Q2xOZhUmKsCHKIBEIBh7DgeAIxBhblCsIAEghxO4sLRGAMYuktCqGrD7jzxOjGAUABwlKXlIA) **(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](https://www.aa.washington.edu/students/academics/minor) to learn more about the minor. |

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| Aeronautics & Astronautics |  | **Questions? Contact ENGRUD Advising** Email: engradv@uw.eduOffice: IEB 307Phone: (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 placementfor 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.**

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| **Autumn Quarter**⯁ **MATH 124 - Calc. w/ Analytic Geom. I**⯁ **CHEM 142 - General Chemistry**⯁ **E-FIG: ENGR 101 & GEN ST 199**A&H / SSc | **cr**5523 | **Winter Quarter**⯁ **MATH 125 - Calc. w/ Analytic Geom. II****★ *CHEM 152, ME 123, or other NSc***⯁ **English Composition** | **cr**555 | **Spring Quarter**⯁ **MATH 126 - Calc. w/ Analytic Geom. III**⯁ **PHYS 121 - Mechanics** A&H / SSc | **cr**555 |
| Qtr. Total: | **15** | Qtr. Total: | **15** | Qtr. Total: | **15** |

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| **Autumn Quarter**MATH 207 - Intro to Differential EquationsPHYS 122 - ElectromagnetismA A 210 - Engineering StaticsA&H / SSc | **cr**4542 | **Winter Quarter**MATH 208 - Matrix AlgebraPHYS 123 - WavesME 230 - Kinematics & DynamicsA&H / SSc | **cr**4544 | **Spring Quarter**A A 260 - ThermodynamicsCEE 220 - Intro to Mech. of MaterialsMATH 224 - Multivariable CalculusAMATH 301 - Beg Scientific Comp | **cr**4444 |
| Qtr. Total: | **15** | Qtr. Total: | **17** | Qtr. Total: | **16** |

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| **Autumn Quarter**A A 310 - Orbital & Space Flight Mech.A A 311 - Atmospheric Flight MechanicsA A 320 - Aerospace InstrumentationA A 395 - Undergraduate SeminarA&H / SSc | **cr**44313 | **Winter Quarter**A A 302 - Incompressible AerodynamicsA A 312 - Structural VibrationsA A 321 - Aerospace Lab IA A 331 - Aerospace Structures I | **cr**4434 | **Spring Quarter**A A 301 - Compressible AerodynamicsA A 322 - Aerospace Lab IIA A 332 - Aerospace Structures IIA A 447 - Control in Aerospace | **cr**4344 |
| Qtr. Total: | **15** | Qtr. Total: | **15** | Qtr. Total: | **15** |

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| **Autumn Quarter**A A 460 - PropulsionA A Technical ElectiveA A Technical ElectiveA A Technical Elective | **cr**4334 | **Winter Quarter**A A 410 or 420 - Capstone Design IA A Technical ElectiveA A Technical ElectiveFree Elective | **cr**4334 | **Spring Quarter**A A 411 or 421 - Capstone Design IIFree ElectiveA&H / SScFree Elective | **cr**4352 |
| Qtr. Total: | **14** | Qtr. Total: | **14** | Qtr. Total: | **14** |

**⯁ = Placement Requirement**

**★ *=*** *Pick* ***one*** *to satisfy placement requirements*