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| AA | **Aeronautics & Astronautics**  **Degree Requirements**  <http://aa.washington.edu>  [ugadvising@aa.washington.edu](mailto: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.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 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**  5  5  2  3 | **Winter Quarter**  ⯁ **MATH 125 - Calc. w/ Analytic Geom. II**  **★ *CHEM 152, ME 123, or other NSc***  ⯁ **English Composition** | **cr**  5  5  5 | **Spring Quarter**  ⯁ **MATH 126 - Calc. w/ Analytic Geom. III**  ⯁ **PHYS 121 - Mechanics**  A&H / SSc | **cr**  5  5  5 |
| Qtr. Total: | **15** | Qtr. Total: | **15** | Qtr. Total: | **15** |

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| **Autumn Quarter**  MATH 207 - Intro to Differential Equations  PHYS 122 - Electromagnetism  A A 210 - Engineering Statics  A&H / SSc | **cr**  4  5  4  2 | **Winter Quarter**  MATH 208 - Matrix Algebra  PHYS 123 - Waves  ME 230 - Kinematics & Dynamics  A&H / SSc | **cr**  4  5  4  4 | **Spring Quarter**  A A 260 - Thermodynamics  CEE 220 - Intro to Mech. of Materials  MATH 224 - Multivariable Calculus  AMATH 301 - Beg Scientific Comp | **cr**  4  4  4  4 |
| 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 Mechanics  A A 320 - Aerospace Instrumentation  A A 395 - Undergraduate Seminar  A&H / SSc | **cr**  4  4  3  1  3 | **Winter Quarter**  A A 302 - Incompressible Aerodynamics  A A 312 - Structural Vibrations  A A 321 - Aerospace Lab I  A A 331 - Aerospace Structures I | **cr**  4  4  3  4 | **Spring Quarter**  A A 301 - Compressible Aerodynamics  A A 322 - Aerospace Lab II  A A 332 - Aerospace Structures II  A A 447 - Control in Aerospace | **cr**  4  3  4  4 |
| Qtr. Total: | **15** | Qtr. Total: | **15** | Qtr. Total: | **15** |

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| **Autumn Quarter**  A A 460 - Propulsion  A A Technical Elective  A A Technical Elective  A A Technical Elective | **cr**  4  3  3  4 | **Winter Quarter**  A A 410 or 420 - Capstone Design I  A A Technical Elective  A A Technical Elective  Free Elective | **cr**  4  3  3  4 | **Spring Quarter**  A A 411 or 421 - Capstone Design II  Free Elective  A&H / SSc  Free Elective | **cr**  4  3  5  2 |
| Qtr. Total: | **14** | Qtr. Total: | **14** | Qtr. Total: | **14** |

**⯁ = Placement Requirement**

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