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| ECE | **Electrical and Computer Engineering**  **Degree Requirements**  <https://ece.uw.edu>  [undergradece@uw.edu](mailto:undergradece@uw.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 (24-27cr)**   **MATH 124, 125, 126 - Calc. w/ Analytic Geom I-III (15cr)**  MATH 207 - Intro to Differential Equations (4cr)  [pr: MATH 125] OR AMATH 351 (3cr) [pr: MATH 125]  MATH 208 - Matrix Algebra with Applications (4cr)  OR AMATH 352 (3cr) [pr: MATH 126]  One course from the following: IND E 315 (3cr), STAT 390 (4cr)  **Sciences (19-20cr)**   **CHEM 142 - General Chemistry (5cr)**   **PHYS 121 - Mechanics (5cr)**  [pr: MATH 124]  ** *PHYS 122 - Electromagnetism (5cr)***  [pr: MATH 125, PHYS 121]  One course from the following: BIOL 130 (4cr); BIOL 220 (5cr); MATH 224 (4cr); PHYS 123 (5cr)  **General Education Requirements (41cr)**  ***Written and Oral Communication:***   **English Composition (5cr)**  E E 393 - Adv Tech Comm (4cr) or Dept. alternative  Add’l writing (3cr) (may overlap with Areas of Inquiry or DIV)  ***Areas of Inquiry:***  Arts & Humanities - A&H (10cr)  Social Sciences - SSc (10cr)  Additional A&H or SSc (4cr)  Additional NSc (to reach 45cr, if needed). See adviser for approved list  ***Diversity*** - DIV (5cr) (may overlap with Areas of Inquiry or W)  **Engineering Fundamentals (4-5cr)**  ** *CSE 123 - Computer Programming III (4cr)***  [pr: Recommended: CSE 122 or completion of Paul G. Allen School's Guided Self-Placement]  OR  ** *CSE 143 - Computer Programming II (5cr)*** [pr: CSE 142] | [**Major Core Requirements**](https://myplan.uw.edu/course/#/courses?states=N4Igwg9grgTgzgUwMoIIYwMYAsQC4TAA6IAZhDALYAiqALqsbkSBqhQA5RyPGJ20AbBMQA0xAJZwUGWuIgA7FOmyMSqAYjEhJASXlxaMKDPJLMWVes3EAjlAQwAnkkPj5Acx4gA5AFEABL7eosQAJqiO3HjMAIyWGghaAEzx1iAAzKmJxAAsWVoArPnEAGxZAL5aBui0vvKhACriFAhRuADaAAwiAJwlnQC6Wm4YAlChCAByCgDy7AiKCDJy%2BoyG9sPyo%2BMIAEqtrjIIodKyCm3r2dpbYxMACjAOCDZw%2B3bij6FrRlcjtwgNABGqFOKwuPyqWAgAHcZvIBI47hhkEszqs8GoEpCYXCEXo7g44ApQecKtjoQAhGAwxDFEBYVBSNDmY7fDZhSSjCCIACCoQAbqgtsczCoMVYEOUQCIQND2HA8ARiNC3KEYQAJBDidxYWiMADs6X1OS0KvqMLu3PEaMYSU6PSl5SAA) **(22-24cr)**  E E 201 - Computer Hardware Skills (2cr)  [pr: CSE 122, CSE 123, CSE 142, or CSE 143, may be concurrent]  E E 215 - Fundamentals of Electrical Engineering (4cr)  [pr: MATH 126; MATH 207, may be concurrent; PHYS 122]  E E 241 - Prog. for Signal & Info. Processing App. (2cr)  OR  CSE 163 - Intermediate Data Programming (4cr)  [pr: CSE 122, CSE 123, CSE 142, CSE 143, or CSE 160]  E E 242 - Signals, Systems, and Data I (5cr)  [pr: MATH 207 or AMATH 351, may be concurrent; and either E E 241 concurrent, or CSE 163]  E E 271 - Digital Circuits & Systems (5cr)  [pr: Either CSE 121, CSE 122, CSE 123, CSE 142, or CSE 143]  E E 280 - Exploring Devices (4cr)  [pr: PHYS 122]  **Advanced Elec. & Comp. Engr. Electives (39cr)**  ***Professional Issues (1-4cr)***  Visit an adviser for the list of approved courses.  ***Additional 300 & 400 level E E Courses (to reach 39 credits)***  These credits are subject to the following:   * A max of 2 credits of seminar courses (Visit an adviser for approved list) * Max of 6 credits of E E 499 * The following may count: E E 233, CSE 373, CSE 374, and ENGR 321 (max of 4cr for ENGR 321) * 6 credits max combining ENGR 321 and E E 499 may apply * Min of 20 credits at the 400 level * Students may pursue optional pathways to complete their 39 credits of ECE course. Visit an adviser for more details.   **Capstone (4-8cr)**  Visit an adviser for the list of approved courses.  **Free Electives (to reach 180 total credits)**  Additional coursework in any subject area is not used elsewhere in degree.  **Total credits required for graduation: 180cr** |

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| Electrical & Computer Engineering |  | **Questions? Contact ENGRUD Advising**  Email: engradv@uw.edu  Office: IEB 307  Phone: (206) 543-1770 |

This is a sample four-year plan for Electrical & Computer Engineering to provide ENGRUDs a framework to create their individual academic plan.

Courses required to request placement for ENGRUD students: **ENGR 101;** **MATH 124, MATH 125, MATH 126; CHEM 142; PHYS 121; English Composition; choose one: CSE 121, CSE 122, CSE 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  5 | **Winter Quarter**   **MATH 125 - Calc. w/ Analytic Geom. II**   **English Composition**  ***CSE 121 - Intro to Computer Programming I*** | **cr**  5  5  4 | **Spring Quarter**   **MATH 126 - Calc. w/ Analytic Geom. III**   **PHYS 121 - Mechanics**  DIV | **cr**  5  5  5 |
| Qtr. Total: | **17** | Qtr. Total: | **14** | Qtr. Total: | **15** |

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| **Autumn Quarter**  PHYS 122 - Electromagnetism  MATH 207 - Differential Equations  ***CSE 122 - Intro to Computer Programming II***  Writing | **cr**  5  4  4  3 | **Winter Quarter**  MATH 208 - Matrix Algebra  E E 215 - Fundamentals of E E  Free elective  ***CSE 123 - Intro to Computer Programming III*** | **cr**  4  4  2  4 | **Spring Quarter**  E E 280 - Exploring Devices  E E 241 - Programming Sig. Proc.  Free elective  A&H / SSc | **cr**  4  2  3  5 |
| Qtr. Total: | **16** | Qtr. Total: | **14** | Qtr. Total: | **14** |

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| **Autumn Quarter**  E E 242 - Signals, Systems & Data  E E 271 - Digital Circuits & Systems  IND E 315 - Probability & Statistics  Free elective | **cr**  5  5  3  2 | **Winter Quarter**  E E 201 - Computer HW Skills  E E 393 - Adv. Tech. Communication  Advanced ECE Elective  Additional Approved NSc Course | **cr**  2  4  5  5 | **Spring Quarter**  Advanced ECE Elective  Advanced ECE Elective  A&H / SSc  Free Elective | **cr**  4  4  4  3 |
| Qtr. Total: | **15** | Qtr. Total: | **16** | Qtr. Total: | **15** |

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| **Autumn Quarter**  Advanced ECE Elective  Advanced ECE Elective  Advanced ECE Elective (Prof. Issues)  A&H / SSc | **cr**  5  5  1  5 | **Winter Quarter**  Capstone  Advanced ECE Elective  Advanced ECE Elective | **cr**  4  5  5 | **Spring Quarter**  Capstone  Advanced ECE Elective  A&H / SSc | **cr**  4  5  5 |
| Qtr. Total: | **16** | Qtr. Total: | **14** | Qtr. Total: | **14** |

 = **Placement Requirement**

**** = *Pick* ***one*** *to satisfy Placement Requirements*