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| ECE | **Electrical and Computer Engineering****Degree Requirements**<https://ece.uw.edu>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. alternativeAdd’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.eduOffice: IEB 307Phone: (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**5525 | **Winter Quarter** **MATH 125 - Calc. w/ Analytic Geom. II** **English Composition** ***CSE 121 - Intro to Computer Programming I*** | **cr**554 | **Spring Quarter** **MATH 126 - Calc. w/ Analytic Geom. III** **PHYS 121 - Mechanics**DIV  | **cr**555 |
| Qtr. Total: | **17** | Qtr. Total: | **14** | Qtr. Total: | **15** |

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| **Autumn Quarter**PHYS 122 - ElectromagnetismMATH 207 - Differential Equations***CSE 122 - Intro to Computer Programming II***Writing | **cr**5443 | **Winter Quarter**MATH 208 - Matrix AlgebraE E 215 - Fundamentals of E EFree elective***CSE 123 - Intro to Computer Programming III*** | **cr**4424 | **Spring Quarter**E E 280 - Exploring DevicesE E 241 - Programming Sig. Proc.Free electiveA&H / SSc | **cr**4235 |
| Qtr. Total: | **16** | Qtr. Total: | **14** | Qtr. Total: | **14** |

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| **Autumn Quarter**E E 242 - Signals, Systems & DataE E 271 - Digital Circuits & SystemsIND E 315 - Probability & StatisticsFree elective | **cr**5532 | **Winter Quarter**E E 201 - Computer HW SkillsE E 393 - Adv. Tech. CommunicationAdvanced ECE ElectiveAdditional Approved NSc Course | **cr**2455 | **Spring Quarter**Advanced ECE ElectiveAdvanced ECE ElectiveA&H / SScFree Elective | **cr**4443 |
| Qtr. Total: | **15** | Qtr. Total: | **16** | Qtr. Total: | **15** |

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| **Autumn Quarter**Advanced ECE ElectiveAdvanced ECE ElectiveAdvanced ECE Elective (Prof. Issues)A&H / SSc | **cr**5515 | **Winter Quarter**CapstoneAdvanced ECE ElectiveAdvanced ECE Elective | **cr**455 | **Spring Quarter**CapstoneAdvanced ECE ElectiveA&H / SSc | **cr**455 |
| Qtr. Total: | **16** | Qtr. Total: | **14** | Qtr. Total: | **14** |

 = **Placement Requirement**

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