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| HCDE | **Human Centered Design & Engineering**  **Degree Requirements**  <http://hcde.washington.edu>  [askhcde@uw.edu](mailto:askhcde@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 and Statistics (15-20cr)**  ⯁ **MATH 124, 125, 126** **– Calc. w/ Analytical Geom. I-III** **(15cr)**  One course from the following:  **★*****STAT 220 (5cr)\*;*** STAT 290 - AP Statistics (5cr);  STAT 311 (5cr); Q SCI 381 (5cr)  [Visit department website for full list](https://www.hcde.washington.edu/bs/requirements/2024/natural-sciences).  **Sciences (15cr)**  ⯁ **CHEM 142 -** **General Chemistry** **(5cr)**  [pr: CHEM 110 or passing score on placement exam]  ⯁ **PHYS 121 - Mechanics** **(5cr)**  [pr: MATH 124]  Additional science from list below to reach 15 credits  **Additional Math/Statistics/Science (15-20cr)**  Visit department website for [a list of approved courses](https://www.hcde.washington.edu/bs/requirements/2024/natural-sciences). Course options recommended for the placement process include:  **★** ***CHEM 152 - General Chemistry (5cr)*** [pr: CHEM 142]  **★** ***CHEM 162 - General Chemistry (5cr)*** [pr: CHEM 152]  **★** ***PHYS 122 - Electromagnetism (5cr)***  [pr: MATH 125, PHYS 121]  **★ *PHYS 123 - Waves, Light, and Heat (5cr)***  [pr: MATH 126, PHYS 122]  **General Education Requirements (35cr)**  ***Written and Oral Communication:***  ⯁ **English Composition** (5cr)  Writing (7cr) (may overlap with Areas of Inquiry, DIV, or major requirements)  ***Areas of Inquiry:***  Arts & Humanities - A&H (10cr)  Social Sciences - SSc (10cr)  Additional A&H or SSc (10cr)  A&H and SSc cannot overlap with HCDE major requirements  ***Diversity*** - DIV (5cr) (may overlap with Areas of Inquiry or W)  **Engineering Fundamentals (12cr)**  One course from the following  ***★ CSE 121 - Intro to Computer Programming I (4cr)***  ***★ CSE 122 - Intro to Computer Programming II (4cr)***  ***★ CSE 123 - Intro to Computer Programming III (4cr)***  ***★ CSE 160 - Data Programming (4cr)***  Eight additional credits from HCDE engineering fundamentals list  Examples include: A A 210, AMATH 301, BIOEN 215, CEE 220, CSE 163, CSE 180, E E 215, ENGR 115, M E 123, M E 230, MSE 170, NME 220,  [Visit department website for full list](https://www.hcde.washington.edu/bs/requirements/2024/engineering-fundamentals). | [**Major Core Requirements**](https://myplan.uw.edu/course/#/courses?states=N4Igwg9grgTgzgUwMoIIYwMYAsQC4TAA6IAZhDALYAiqALqsbkSBqhQA5RyPGJ20AbBMQA0xAJZwUGWuIgA7FOmyMSqAYjEhJASXlxaMKDPJLMWVes3EAjlAQwAnkkPj5Acx4gA5AAkwVACi3qLEACaojtx4zACMlhoIWgBMCdYgAMxpScQALNlaAKwFxABs2QC%2BWgbotIHyYQAq4hQI0bgA2gAMIgCcpV0AulpuGAJQYQgAcgoA8uwIiggycvqMhvYj8mMTCABKba4yCGHSsgrtGzna2%2BOTAAowDgg2cAd24k9h60bXo3cIRoAI1QZ1Wl1%2B1SwEAA7rN5AJHPcMMhluc1ng1IkobD4Yi9PcHHAFGCLpUcTCAEIwWGIEogLCoKRocwnH6bcKSMYQRAAQTCADdUNsTmYVJirAgKiAKkA) **(46cr)**  HCDE 302 - Foundations of HCDE I (5cr)  HCDE 303 - Foundations of HCDE II (5c)  HCDE 308 - Visual Communication in HCDE (5cr)  HCDE 310 - Interactive Systems Design and Technology (5cr)  HCDE 313 - Intro to User Research (5cr) (W)  One course from:   * HCDE 315 - Inclusive Design (5cr) (SSc, DIV) * HCDE 316 - Sustainable Design (5cr)   HCDE 321 - Professional Portfolio (2cr)  HCDE 322 - Organizational Teamwork (2cr)  HCDE 351 - User Experience Prototyping Techniques (5cr)  HCDE 492 - Capstone Planning (2cr)  HCDE 493 - Senior Capstone (5cr)  **Experiential Learning (2cr)**  Any combination of the following:  ENGR 321 - Engineering Internship Education (variable cr)  ENGR 490 - Engineering Leadership (2cr)  HCDE 496 - Directed Research in HCDE (variable cr)  HCDE 497 - Study Abroad: HCDE (variable cr)  HCDE 499 - Individual Research (variable cr)  **HCDE Electives (23cr)**  15 credits from HCDE engineering electives and 8 credits from the System and Society electives list. Visit department website for [a list of approved courses](https://www.hcde.washington.edu/bs/requirements/2024#electives).  **Total credits required for graduation: 180cr** |

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

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

Courses required to request placement for ENGRUD students: **ENGR 101;** **MATH 124**, **125**, **126;** **CHEM 142;** **PHYS 121;** **English Composition; choose one: (CSE or STAT recommended): AMATH 301, BIOEN 215, CHEM 152, CHEM 162, CSE 121, CSE 122, CSE 123, CSE 160, ENGR 115, ME 123, MSE 170, PHYS 122, PHYS 123, STAT 220.**

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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 / DIV | **cr**  5  5  2  3-5 | **Winter Quarter**  ⯁ **MATH 125** **- Calc. w/ Analytic Geom. II**  ⯁ **English Composition**  **★ STAT 220** - **Statistics Reasoning** | **cr**  5  5  5 | **Spring Quarter**  ⯁ **MATH 126 - Calc. w/ Analytic Geom. III**  ⯁ **PHYS 121 - Mechanics**  **★****CSE 121** OR **CSE 122** OR **CSE 123** | **cr**  5  5  4 |
| Qtr. Total: | **15** | Qtr. Total: | **15** | Qtr.Total: | **14** |

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| **Autumn Quarter**  A&H  Approved Natural Science  Engineering Fundamentals  Free Elective | **cr**  5  5  4  2 | **Winter Quarter**  SSc  Approved Math/Stat/Science  Engineering Fundamentals  A&H or SSc | **cr**  5  5  4  2 | **Spring Quarter**  SSc / Writing Course  Approved Math/Stat/Science  A&H | **cr**  5  5  5 |
| Qtr. Total: | **16** | Qtr. Total: | **16** | Qtr. Total: | **15** |

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| **Autumn Quarter**  HCDE 310 - Interact Sys Design & Tech  HCDE 302 - Foundations of HCDE I  HCDE 313 - Intro to User Research (W) | **cr**  5  5  5 | **Winter Quarter**  HCDE 303 - Foundations of HCDE II  HCDE 315 - Inclusive Design & Engineering (DIV)  HCDE 321 - Professional Portfolio  HCDE 496 - Directed Research in HCDE | **cr**  5  5  2  2 | **Spring Quarter**  HCDE 351 - User Experience Prototyping Techniques  HCDE 308 - Visual Comm. in HCDE  HCDE 322 - Organizational Teamwork  Free Elective | **cr**  5  5  2  3 |
| Qtr. Total: | **15** | Qtr. Total: | **14** | Qtr. Total: | **15** |

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| **Autumn Quarter**  HCDE - Engineering Elective  HCDE - Systems & Society Elective  Approved Math/Science  Free Elective | **cr**  5  4  5  2 | **Winter Quarter**  HCDE 492 - Capstone Planning  HCDE - Engineering Elective  HCDE - Engineering Elective  Free Elective | **cr**  2  5  5  3 | **Spring Quarter**  HCDE 493 - Senior Capstone  HCDE - Systems & Society Elective  A&H / SSc | **cr**  5  4  5 |
| Qtr. Total: | **16** | Qtr. Total: | **15** | Qtr. Total: | **14** |

⯁ = **Placement Requirement**

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