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| HCDE | **Human Centered Design & Engineering****Degree Requirements**<http://hcde.washington.edu>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 listExamples 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.eduOffice: IEB 307Phone: (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**5523-5 | **Winter Quarter**⯁ **MATH 125** **- Calc. w/ Analytic Geom. II**⯁ **English Composition****★ STAT 220** - **Statistics Reasoning** | **cr**555 | **Spring Quarter**⯁ **MATH 126 - Calc. w/ Analytic Geom. III**⯁ **PHYS 121 - Mechanics****★****CSE 121** OR **CSE 122** OR **CSE 123** | **cr**554 |
| Qtr. Total: | **15** | Qtr. Total: | **15** | Qtr.Total: | **14** |

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| **Autumn Quarter**A&HApproved Natural ScienceEngineering FundamentalsFree Elective | **cr**5542 | **Winter Quarter**SScApproved Math/Stat/ScienceEngineering FundamentalsA&H or SSc | **cr**5542 | **Spring Quarter**SSc / Writing CourseApproved Math/Stat/ScienceA&H | **cr**555 |
| Qtr. Total: | **16** | Qtr. Total: | **16** | Qtr. Total: | **15** |

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| **Autumn Quarter**HCDE 310 - Interact Sys Design & TechHCDE 302 - Foundations of HCDE IHCDE 313 - Intro to User Research (W) | **cr**555 | **Winter Quarter**HCDE 303 - Foundations of HCDE IIHCDE 315 - Inclusive Design & Engineering (DIV)HCDE 321 - Professional PortfolioHCDE 496 - Directed Research in HCDE | **cr**5522 | **Spring Quarter**HCDE 351 - User Experience Prototyping TechniquesHCDE 308 - Visual Comm. in HCDEHCDE 322 - Organizational TeamworkFree Elective | **cr** 5 5  2  3 |
| Qtr. Total: | **15** | Qtr. Total: | **14** | Qtr. Total: | **15** |

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| **Autumn Quarter**HCDE - Engineering ElectiveHCDE - Systems & Society ElectiveApproved Math/ScienceFree Elective | **cr**5452 | **Winter Quarter**HCDE 492 - Capstone PlanningHCDE - Engineering ElectiveHCDE - Engineering ElectiveFree Elective | **cr**2553 | **Spring Quarter**HCDE 493 - Senior Capstone HCDE - Systems & Society ElectiveA&H / SSc | **cr**545 |
| Qtr. Total: | **16** | Qtr. Total: | **15** | Qtr. Total: | **14** |

⯁ = **Placement Requirement**

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