

This resource is for ENGRUD students who entered the UW in AUT24 or later.



**Human Centered Design & Engineering  
Graduation Requirements**  
University of Washington  
<http://hcde.washington.edu>

**ENGRUD Requirement Sheet – Key:**  
◆ = Placement Requirements;  
★ = *Pick one to satisfy placement requirement*  
**Placement:** July 1 at the end of the first year

◆ **E-FIG: ENGR 101 and GEN ST 199 (2cr)**

**Mathematics and Statistics (15-20cr)**

◆ **MATH 124, 125, 126 - Calc w/ Analytical Geom. I-III (15cr)**

- ★ **STAT 220 - Principles of Statistical Reasoning (5cr)\***  
OR STAT 290 - Advanced Placement (AP) Statistics (5cr)  
OR STAT 311 - Elements of Stat. Meth. (5cr) [pr: MATH 124]  
OR STAT 390 - Stat. Meth. Eng. & Sci. (4cr) [pr: MATH 126]  
OR Q SCI 381 - Intro to Prob. & Stats (5cr) [pr: MATH 124]  
OR INDE 315 - Prob. & Stats for Engrs (3cr) [pr: MATH 207]  
\*see dept website for full list

**Sciences (15cr)**

◆ **CHEM 142 - General Chemistry (5cr)**  
[pr: CHEM 110]

◆ **PHYS 121 - Mechanics (5cr)**  
[pr: MATH 124]

Additional science from list below to reach 15 credits

**Additional Math/Statistics/Science (15-20cr)**

See list of qualifying courses on department website. Courses 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 or DIV)

**Areas of Inquiry:**

- Arts & Humanities - A&H (10cr)
- Social Sciences - SSc (10cr)
- Additional A&H or SSc (10cr)

**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 fundamentals list

- Examples include: A A 210, AMATH 301, BIOEN 215, CEE 220, CSE 163, CSE 180, CSE 373, CSE 374, E E 215, ENGR 115, M E 123, M E 230, MSE 170, NME 220, PHYS 334, PHYS 335

**Departmental Core (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. Please see department website for a list of approved courses.

**Total credits required for graduation: 180cr**

*Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements.*

Updated September 2024

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**Human Centered Design & Engineering  
Sample Curriculum**  
University of Washington  
<http://hcde.washington.edu>

**HCDE Advising**  
Office: 423 Sieg Hall, Box 352315  
Seattle, WA 98195-2315  
Email: [askhcde@uw.edu](mailto:askhcde@uw.edu)

This is a sample four-year plan for ENGRUD students that prepares them to be able to request placement at the end of the first year. It is intended to provide a framework for ENGRUD students to reference as they create their own individual academic plan.

Courses required to request placement for ENGRUD students: **ENGR 101 & GEN ST 199; MATH 124, 125, 126; CHEM 142; PHYS 121; English Composition; ENGRUD students who are interested in HCDE should choose one of the following: 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.**

**First Year**

<u>Autumn Quarter</u>	<u>cr</u>	<u>Winter Quarter</u>	<u>cr</u>	<u>Spring Quarter</u>	<u>cr</u>
◆ MATH 124 - Calc w Analytic Geom I	5	◆ MATH 125 - Calc w Analytic Geom II	5	◆ MATH 126 - Calc w Analytic Geom III	5
◆ CHEM 142 - General Chemistry	5	◆ English Composition	5	◆ PHYS 121 - Mechanics	5
◆ E-FIG: ENGR 101 & GEN ST 199	2	★ STAT 220 - Statistics Reasoning	5	★ CSE 121 <u>OR</u> CSE 122 <u>OR</u> CSE 123	4
A&H / SS / DIV	3-5				
Qtr. Total:	<b>15</b>	Qtr. Total:	<b>15</b>	Qtr. Total:	<b>14</b>

**Second Year**

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

**Third Year**

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

**Fourth Year**

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

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

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements.

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