This resource is for ENGRUD students who entered the UW-Seattle in AUT25.

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

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 (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

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

Updated June 2025

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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.**

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
◆ **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	★***CSE 121 - Intro to Computer Programming I***	4	DIV	5
A&H / SSc	5				
Qtr. Total:	**17**	Qtr. Total:	**14**	Qtr. Total:	**15**

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

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

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

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