ECE

Electrical and Computer Engineering Graduation Requirements
University of Washington
https://ece.uw.edu

ENGRUD Requirement Sheet - Key:
◆ = Placement Requirements
★ = *Pick one to satisfy placement requirements*

Placement: July 1 at the end of the first year
CSE 123 - Computer Programming III (4cr)
  [pr: CSE 122]

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

Mathematics (15-21cr)
◆ **MATH 124, 125, 126 - Calc w/ Analytic Geom I-III (15cr)**

Math 207 - Intro. to Differential Equations (3cr)
  [pr: MATH 125]

MATH 208 - Matrix Algebra w/Applications (3cr)
  [pr: MATH 126]   (TOTAL: 21cr)
                        OR
MATH 134, 135, 136 – Accelerated [Honors] Calc I-III (15cr)

Statistics (3-4cr)
One of the following: IND E 315 (3cr); STAT 390 (4cr)

Sciences (15cr min.)
◆ **CHEM 142 - General Chemistry (5cr)**

◆ **PHYS 121 - Mechanics (5cr)**
  [pr: MATH 124 or MATH 134]

★ *PHYS 122 - Electromagnetism (5cr)*
  [pr: MATH 125 or MATH 134]

★ *PHYS 123 - Waves (5cr)* (Not absolutely required for degree)
  [pr: MATH 126 or MATH 134; PHYS 122] OR Other
  Natural World (5cr)

Engineering General Education Requirements (69cr)
Areas of Inquiry:
Arts & Humanities – A&H (10cr)

Social Sciences - SSc (10cr)

Additional A&H or SSc (4cr)

Diversity - DIV (3cr) - (may overlap with A&H or SSc)

Natural Science (45 cr) (Includes Math, Stats, Sciences, & Additional NSc categories below)
Additional NSc (to reach 45cr)
Must complete two courses from the following: BIOL 130, BIOL 220, CHEM 142 (or CHEM 143 or CHEM 145), MATH 224, PHYS 123 (or PHYS 143)

Complete additional NSc courses from approved list if needed

Written and Oral Communication (12cr):
◆ **English Composition (5cr)**
ENGR 231 - Introduction to Technical Communication (3cr)
E E 393 - Adv Tech Comm (4cr) or Dept. alternative

Computer Programming (8cr)
★ *CSE 122 - Computer Programming II (4cr)*

Departmental Core (21cr)
E E 201 – Computer Hardware Skills (1cr)
  [pr: Either CSE 142 or CSE 143, either may be concurrent]
E E 215 – Fundamentals of Electrical Engineering (4cr)
  [pr: MATH 126; MATH 207, may be concurrent; PHYS 122]
E E 241 – Programming for Signal & Information Processing Applications (2cr)
  [pr: CSE 142 or CSE 143 or CSE 160]
E E 242 – Signal Processing I (5cr)
  [pr: MATH 136 or MATH 207 or AMATH 351; E E 241 (may be concurrent) or CSE 163]
E E 271 – Digital Circuits & Systems (5cr)
  [pr: Either CSE 142 or CSE 143]
E E 280 – Exploring Devices (4cr)
  [pr: PHYS 122]

Advanced Elec. & Comp. Engr. Electives (36cr)
Professional Issues (1-5cr)
See adviser for list of approved courses.

Capstone (4-8cr)
See adviser for list of approved courses.

Additional 300 & 400 level EE Courses (to reach 36cr)
Minimum of 20cr at the 400 level

Suggested Pathways
These suggested pathways are comprised of groupings of courses within specified areas relevant to future electrical and computer engineers. **Students are encouraged to view the pathways below as guides rather than strict requirements.** Contact dept for list of current pathways.

Free Electives (To reach 180 total credits)
Additional coursework in any subject area not used elsewhere in degree.

Total credits required for graduation: 180cr

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements. AMATH 351/352 may be alternatives to MATH 207/208, work with the department to confirm.

This resource is for ENGRUD students who entered the UW in AUT22 or later.

ECE

**Electrical and Computer Engineering
Sample Curriculum**
University of Washington
https://ece.uw.edu

Electrical & Computer Engineering Advising
Office: AE 100R, Paul Allen Center, Box 352500
Seattle, WA 98195-2500
Phone: (206) 221-5270
Email: undergrad@ece.uw.edu

This is a sample four-year plan for ENGRUD students. 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; MATH 124, MATH 125, MATH 126; CHEM 142, PHYS 121; English Composition; ENGRUD students who are interested in EE should choose one of the following: CSE 122, PHYS 122, PHYS 123.**

First Year

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
◆ **MATH 124 - Calc w Analytic Geom I**	5	◆ **MATH 125 - Calc w Analytic Geom III**	5	◆ **MATH 126 - Calc w Analytic Geom III**	5
◆ **CHEM 142 - General Chemistry**	5	★ *CSE 122 - Comp Programming II*	4	◆ **PHYS 121 - Mechanics**	5
A&H/SSc/DIV	5	◆ **English Composition**	5	CSE 123 – Comp Programming III	4
◆ **E-FIG: ENGR 101 & GEN ST 199**	2				
Qtr. Total:	**17**	Qtr. Total:	**14**	Qtr. Total:	**14**

Second Year

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
PHYS 122 - Electromagnetism	5	PHYS 123 - Waves	5	EE 393 - Advanced Technical Comm	4
MATH 207 - Differential Equations	3	MATH 208 - Matrix Algebra	3	EE 215– Fundamentals of EE	4
EE 241- Prog. Signal Processing	2	EE 242- Signal Processing I	5	EE 280- Exploring Devices	4
Free Elective	5	ENGR 231 - Intro to Technical Comm	3	Additional NSc	4
Qtr. Total:	**15**	Qtr. Total:	**16**	Qtr. Total:	**16**

Third Year

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
EE 271– Digital Circuits and Systems	5	EE 398 (Professional Issues)	1	Advanced ECE Elective	5
EE 201– Computer HW Skills	1	Advanced ECE Elective	5	Advanced ECE Elective	5
Statistics	3	Advanced ECE Elective	5	SSc	5
SSc	5	A&H	5		
Qtr. Total:	**14**	Qtr. Total:	**16**	Qtr. Total:	**15**

Fourth Year

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
Advanced ECE Elective	5	Advanced ECE Elective	5	Advanced ECE Elective	5
Advanced ECE Elective	5	Capstone (Advanced ECE Elective)	4	Capstone (Advanced ECE Elective)	4
A&H	5	Free Elective	5	Free Elective	5
Qtr. Total:	**15**	Qtr. Total:	**14**	Qtr. Total:	**14**

◆ = **Placement Requirement**

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

Honors or accelerated sequences of chemistry, math and physics will satisfy the placement requirements. AMATH 351/352 may be alternatives to MATH 207/208, work with the department to confirm.