This resource is for ENGRUD students who entered the UW in AUT21 or later.

**Electrical Engineering Graduation Requirements**

University of Washington

[https://ece.uw.edu](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

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

**Mathematics (24cr)**
- ✦ 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]
  - MATH 224 - Advanced Multi-Variable Calculus (3cr)  
    [pr: MATH 126]

**Statistics (3-4cr)**
- One course from the following: IND E 315 (3cr); STAT 390 (4cr); STAT 391 (4cr); MATH/STAT 394 (3cr)

**Sciences (20cr)**
- ✦ 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)  
  [pr: MATH 126 or MATH 134; PHYS 122]

**Engineering General Education Requirements (37cr)**

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

**Areas of Knowledge:**
- Visual, Literary & Performing Arts - VLPA (10cr)
  - Individuals & Society - I&S (10cr)
- VLPA or I&S (5cr)
  - Diversity-DIV (3cr) (may overlap with VLPA/I&S)

**Computer Programming (9cr)**
- ★ CSE 142 - Computer Programming I (4cr)
  - CSE 143 - Computer Programming II (5cr)  
    [pr: CSE 142]

**Departmental Core (14cr)**
- E E 215 - Fundamentals of Electrical Engineering (4cr)  
  [pr: MATH 126; MATH 207, may be concurrent; PHYS 122]
- E E 233 - Circuit Theory (5cr)
- E E 242 – Signal Processing I (5cr)  
  [pr: MATH 126 or MATH 207; E E 241; both may be concurrent]

**Departmental Concentration (min 24cr)**

Complete one concentration below. See department for list of approved courses.

- a. Advanced Electronic and Photonic Devices
- b. Biomedical Instrumentation
- c. Communications
- d. Controls
- e. Digital Signal and Image Processing
- f. Digital Very Large Scale Integration (VLSI)
- g. Embedded Computing Systems
- h. Integrated Systems
- i. Neural Engineering
- j. Power Electronics and Drives
- k. Sustainable Power Systems

**Electrical Engineering Electives (up to 20cr)**

See department for list of approved courses.

**Professional Issues (1cr minimum)**

Choose one course from the following: E E 398, 406, 418, or 456

**Engineering Electives (10cr)**

See department for list of approved courses.

**Approved non Electrical Engineering Electives (10cr)**

Any course offered at the University of Washington numbered 200 or higher may be used for this requirement with the following exceptions:
- courses cross listed with an E E course
- courses in the BEE & TEE curriculum
- courses required for the degree
- independent study courses
- seminar courses subject to credit limit

**Free Electives (6-7cr)**

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.

*Updated October 2021*
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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 142, PHYS 122, PHYS 123.

### First Year

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<thead>
<tr>
<th>Quarter</th>
<th>Course</th>
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<th>Quarter</th>
<th>Course</th>
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<tr>
<td>Autumn</td>
<td>MATH 124 - Calc w Analytic Geom I</td>
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<td>Winter</td>
<td>MATH 125 - Calc w Analytic Geom III</td>
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<td>VLPA / I&amp;S</td>
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