



## Electrical Engineering Degree 2021-2022

To schedule an appointment with an academic advisor, please visit us at [ECE.utah.edu/advising](http://ECE.utah.edu/advising).  
ALL MAJOR CLASSES MUST BE LETTER GRADED | CR/NC IS **NOT** AN OPTION

### Pre-major requirements:

**MATH 1210/1310** (4.0) – Calculus I  
**Cumulative GPA: 2.8 or higher**

**ADMISSION:** Students should apply for admission to the B.S. Electrical Engineering program. Students will be Pre-Electrical Engineering Status until they have completed the pre-major requirements. When they are taking their final pre-Electrical course(s), they can apply for full major status by submitting an online application at [ece.utah.edu/admissions](http://ece.utah.edu/admissions)

Pre-major GPA: 2.8 or higher  
Cumulative GPA: 2.8 or higher

**TRANSFER CREDIT:** Students who have transfer credit that may fulfill a B.S. Electrical Engineering requirement may petition for equivalency at [ECE.utah.edu/transfer](http://ECE.utah.edu/transfer)

### Writing Core: 6 credits

**WRTG 2010** (3.0) – Intermediate Writing  
Will accept Honor 2211  
**ECE 3030** (3.0) – Technical Communications  
Will accept Honor 3200

### Math/Science Core: 19-24 credits

If students take MATH 1310/1320, then:  
**Math 3140** (4.0) – PDEs and Vector Calculus

If students take MATH 1210/1220, then:  
**Math 2210** (3.0) – Calculus III  
**Math 3150** (2.0) – Partial Differential Equations

All students must complete:  
**MATH 2250** (4.0) – Differential Equations/Linear Algebra  
**PHYS 2210** (4.0) – Physics for Engineers I  
**PHYS 2220** (4.0) Physics for Engineers II

Then choose one additional science lecture and lab component:  
**CHEM 1210** (4.0) – General Chemistry  
or  
**BIOL 1210** (4.0) – General Biology

*and*

**CHEM 1215** (1.0) – General Chemistry Lab  
or  
**PHYS 2215** (1.0) – Physics for Engineers I Lab  
or  
**PHYS 2225** (1.0) – Physics for Engineers II Lab

\*Labs will count for 1.0 c/h of non-ECE technical elective credit

### **Major Requirements: 43-47 credits**

**ECE 1240** (4.0) – Introduction to ECE Design  
**ECE 1245** (0.5) – Introduction to ECE Design Lab  
**ECE 1050** (0.5) – MATLAB  
**LEAP 1500** (3.0) – LEAP Seminar in Humanities  
**LEAP 1501** (3.0) – Ethics in Engineering  
**CS 1420** (4.0) – Accelerated Object-oriented Programming *OR* **CS 1400 (4.0) & CS 1410 (4.0)**  
**ECE 1900** (1.0) – Freshman Seminar  
**ECE 2240** (3.0) – Circuits  
**ECE 2245** (1.0) - Circuits Lab  
**ECE 2280** (3.0) – Electronics Fundamentals  
**ECE 2285** (1.0) - Lab  
**ECE 3200** (4.0) – Semiconductor Devices  
**ECE 3300** (4.0) – EM & Transmission Lines  
**ECE 3500** (4.0) – Signals & Systems  
**ECE 3530** (3.0) – Engineering Probability & Statistics  
**ECE 3700** (4.0) – Digital System Design

### **Capstone Experience: 9 credits**

**ECE 3900** (1.0) – Junior Seminar  
**ECE 4900** (4.0) – Senior Thesis I  
**ECE 4910** (4.0) – Senior Thesis II

### **Advanced Technical Electives: 24 credits**

Pick 3 Breadth Electives

#### **Electronics & Semiconductor Dev.**

ECE 3110

#### **Microwaves & Optics**

ECE 5320, 5324, 5325, 5330, 5340, 5410

#### **Signals & Systems**

CE 3510, 5510, 5530

#### **Computer & Digital Design**

ECE 3810

#### **Power, Energy, & Control**

ECE 3600

Then pick additional classes to total 24 credits:

ECE 3xxx or higher, not already required

### **General Education: 15-18 credits**

#### **American Institutions**

ECON 1740, HIST 1700 or POLS 1100

#### **Fine Arts 1 (FF)**

#### **Fine Arts 2 (FF)**

#### **Humanities 1 (HF)**

Satisfied by LEAP 1500 (3.0)

#### **Humanities 2 (HF)**

#### **Behavioral Science 1 (BF)**

Satisfied by LEAP 1501 (3.0)

#### **Behavioral Science 2 (BF)**

#### **Diversity (DV)**

Satisfied by LEAP 1500 (3.0)

#### **International Requirement (IR)**

### **Departmental Requirements**

2.5 Cumulative GPA (all U of U courses)  
2.5 Technical GPA (all U of U ECE and CS courses)  
Total degree hours: 126-130

