Computer Engineering Degree 2024-2025

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

Pre-Computer Core: 27 - 31 credits

Complete the following with a "C-" or higher:
ECE 1240 (3.0) – Introduction to ECE Design
ECE 1245 (0.5) – Introduction to ECE Design Lab
ECE 1050 (0.5) – Introduction to ECE Design MatLab
PHYS 2210 (4.0) – Physics for Engineers I
CS 1400(4.0) – Object-oriented Programming (Java)
&
CS 1410 (4.0) – Object-oriented Programming
OR
CS 1420- Object-oriented Programming
CS 2420 (4.0) – Algorithms & Data Structures
WRTG 2010 (3.0) – Intermediate Writing

Complete the following with a "C" or higher:
MATH 1210/1310 (4.0) – Calculus I
MATH 1220/1320 (4.0) – Calculus II

ADMISSION: Students should apply for admission to the B.S. Electrical Engineering program when they are taking their final pre-major course(s) by submitting an online application at https://www.ece.utah.edu/major-status-application/
Pre-major GPA: 3.0 or higher
Cumulative GPA: 2.5 or higher

TRANSFER CREDIT: Students who have transfer credit that may fulfill a B.S. Electrical Engineering requirement may petition for equivalency at https://www.ece.utah.edu/petition-for-acceptance-of-transfer-courses/

Writing Core: 3 - 6 credits

ECE 3030 (3.0) – Technical Communications
OR
HONOR 3200 (3.0)- Research University
OR
WRTG 3015 (3.0)- Professional Writing
&
COMM 1020 (3.0)- Principles of Public Speaking

Math/Science Core: 29 credits

Math 1210/1310 (4.00)- Calculus I
Math 1220/1320 (4.00)- Calculus II
Math 2250 (4.00)- Differential Equations & Linear Algebra
(or **Math 2270** (4.00)- Linear Algebra and **2280** (4.00)- Differential Equations)
PHYS 2210 (4.00)- Physics for Engineers I
PHYS 2220 (4.00)- Physics for Engineers II
CS 2100 OR Math **2200** (3.00)- Discrete Structures
ECE 3530 OR **CS 3130** (3.00)- Probability & Statistics

If students take MATH 1210/1220, then:
Math 2210 (3.0) – Calculus III

If students take MATH 1310/1320, then:
Additional Math/Sci Elective(0-4 credits):
Math/Phys/Chem/Biol 1210 or higher level, CS 3200, or LS course

Major Requirements: 39 credits

ECE 1900 (1.0) – Freshman Seminar
LEAP 1501 (3.0) – Ethics in Engineering, *recommended*
ECE 2240 (3.0) – Circuits & Systems: Linear- Lecture
ECE 2245 (1.0)- Circuits & Systems: Linear- Lab
ECE 2280 (4.0) – Circuits & Systems: Active- Lecture
ECE 2285 (1.0)- Circuits & Systems: Active- Lab
CS 3500 (3.0) – Software Practice
CS 4400 (4.0) – Computer Systems
CS/ECE 3700 (4.0) – Digital System Design
CS/ECE 3710 (4.0) – Computer Design Lab
CS/ECE 5780 (4.0) – Embedded System Design
CS/ECE 3810 (4.0) – Computer Organization

Capstone Experience: 7-9 credits

CS/ECE 3991 (1.0) – Junior Seminar

CS/ECE 3992 (3.0) – Pre-Thesis/Clinic
CS/ECE 4710 (3.0) – Senior Project
or
CS/ECE 4998 (4.0) – Senior Thesis I, Honors
CS/ECE 4999 (4.0) – Senior Thesis II, Honors
or
ECE 4900 (4.0) – Senior Clinic I
ECE 4910 (4.0) – Senior Clinic II

Advanced Technical Electives: 18 credits

Select CS/ECE 3xxx or higher courses not used in your core courses
Totaling 18 credit hours
EAE classes are **not** permitted

General Education: 39-40 credits

American Institutions- 1 course

Writing 1 (WR1)- 1 course

WRTG 1010 or WRTG 1009, international students

Writing 2 (WR2)- 1 course

WRTG 2010, ENGL 2010, ENGL 2211, or HONOR2211

***Quantitative Literacy (QL)-** 1 course (Completed with required MATH course)

***Humanities (HF)**- 1 course (LEAP 1500 recommended)

Fine Arts (FF)- 1 course

***Life Science (LS)-** 1 course (Completed with required Addt. Math/Sci Elective)

***Physical Science (PS)-** 1 course (Completed with required PHYS courses)

***Social Science (BF)-** 1 course (LEAP 1501 recommended)

***Upper-Division Writing (CW)-** 1 course (Completed w/ ECE 3030 or WRTG 3015)

***Diversity (DV)-** 1 course (LEAP 1500 recommended)

International Requirement (IR)- 1 course

***Methods Requirement (QI)-** 1 course (Completed w/ ECE 3700 or ECE 3530)

Some requirements are fulfilled through major required courses

Departmental Requirements

3.0 Pre-Major GPA (all Pre-Major courses)
2.5 Cumulative GPA (all U of U courses)
2.5 Technical GPA (all U of U ECE and CS courses)
Total degree hours: 127-136