COMPUTER ENGINEERING (B.S.COMP.E.)

Required course work includes the university requirements (see regulation J-3 (https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/)) and:

Code	Title	Hours
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
COMM 101	Fundamentals of Oral Communication	2
CS 120	Computer Science I	4
CS 121	Computer Science II	3
CS 150	Computer Organization and Architecture	3
CS 210	Programming Languages	3
CS 240	Computer Operating Systems	3
CS 270	System Software	3
ECE 101	Foundations of Electrical and Computer Engineering	2
ECE 210	Electrical Circuits I	3
ECE 211	Electrical Circuits Lab I	1
ECE 212	Electrical Circuits II	3
ECE 213	Electrical Circuits II Lab	1
ECE 240	Digital Logic	3
ECE 241	Logic Circuit Lab	1
ECE 292	Sophomore Seminar	0
ECE 310	Microelectronics I	3
ECE 311	Microelectronics I Lab	1
ECE 340	Microcontrollers	3
ECE 341	Microcontrollers Lab	1
ECE 350	Signals and Systems I	3
ECE 351	Signals and Systems I Lab	1
ECE 440	Digital Systems Engineering	3
ECE 482	Computer Engineering Senior Design I	3
ECE 483	Computer Engineering Senior Design II	3
ECE 491	Senior Seminar	0
ENGL 317	Technical Writing	3
MATH 170	Calculus I	4
MATH 175	Calculus II	4
MATH 176	Discrete Mathematics	3
MATH 310	Ordinary Differential Equations	3
MATH 330	Linear Algebra	3
PHIL 103	Introduction to Ethics	3
or AMST 301	Studies in American Culture	
PHYS 211	Engineering Physics I	3
PHYS 211L	Laboratory Physics I	1
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1
STAT 301	Probability and Statistics	3
Select one of the following:		3-4
ECON 201	Principles of Macroeconomics	
ECON 202	Principles of Microeconomics	
ECON 272	Foundations of Economic Analysis	
Technical Electives		
Select from upper-division computer engineering, electrical engineering, and computer science courses:		15
Total Hours		112-113

Courses to total 128 credits for this degree, not counting ENGL 101, MATH 143, and other courses that might be required to remove deficiencies.

Students majoring in computer engineering must earn a grade of P in ECE 292 and a grade of C or better in each of the following courses for graduation, and before registration is permitted in upper-division engineering courses:

Code	Title	Hours
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
CS 120	Computer Science I	4
ECE 210	Electrical Circuits I	3
ECE 211	Electrical Circuits Lab I	1
ECE 212	Electrical Circuits II	3
ECE 213	Electrical Circuits II Lab	1
ECE 240	Digital Logic	3
ECE 241	Logic Circuit Lab	1
MATH 170	Calculus I	4
MATH 175	Calculus II	4
MATH 310	Ordinary Differential Equations	3
PHYS 211	Engineering Physics I	3
PHYS 211L	Laboratory Physics I	1
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1

Students majoring in computer engineering must earn a grade of C or better in each of the following courses for graduation, and before registration is permitted in 200-level CS courses:

Code	Title	Hours
CS 120	Computer Science I	4
CS 121	Computer Science II	3
CS 150	Computer Organization and Architecture	3
MATH 176	Discrete Mathematics	3

Students majoring in computer engineering must earn a grade of 'C' or better in each of the following courses for graduation, and before registration is permitted in upper-division CS courses:

Code	Title	Hours
CS 210	Programming Languages	3
CS 240	Computer Operating Systems	3
CS 270	System Software	3
MATH 170	Calculus I	4
MATH 175	Calculus II	4
MATH 176	Discrete Mathematics	3

Students majoring in computer engineering must meet the college requirements for admission to classes (see 'Admission to Classes

(https://catalog.uidaho.edu/colleges-related-units/engineering/#text)'
under college of Engineering, part four).

Any student majoring in computer engineering may accumulate no more
than five (5) letter grades of 'D's and 'F's in mathematics, science, or
engineering courses that are used to satisfy graduation requirements.
Included in this number are multiple repeats of a single class or
single repeats in multiple classes and courses transferred from other
institutions. Specifically excluded are 'D' or 'F' grades from laboratory
sections associated with courses.

1. An ability to function on multi-disciplinary teams.
2. An ability to communicate effectively.
3. An understanding of the impact of engineering solutions in a global, economic, environmental and societal context.
4. A recognition of the need for, and an ability to engage in, life-long learning.
5. An ability to understand professional and ethical responsibility.
6. A knowledge of contemporary issues.
7. An ability to apply knowledge of mathematics, sciences, and engineering.
8. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
9. A broad knowledge in the areas of digital systems, computer architecture, microcontrollers, operating systems, software engineering, electronic circuits, and signals and systems; and in-depth knowledge in selected areas of electrical engineering, computer engineering, or computer science.
10. An ability to design and conduct experiments, as well as to analyze and interpret data.
11. An ability to design a system, component, or process to meet desired needs within realistic constraints.
12. An ability to identify, formulate, and solve engineering problems.