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	3
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
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		**110-111**

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 the College of Engineering).

Any student majoring in computer engineering may accumulate no
more than five (5) letter grades of Ds and Fs 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.

Four-Year Plan

Fall Term 1		Hours
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
CS 120	Computer Science I	4
ENGL 101	Writing and Rhetoric I	3
MATH 170	Calculus I	4
MATH 176	Discrete Mathematics	3
	Hours	18
Spring Term 1		
CS 121	Computer Science II	3
ECE 101	Foundations of Electrical and Computer Engineering	2
ENGL 102	Writing and Rhetoric II	3
MATH 175	Calculus II	4
PHYS 211	Engineering Physics I	3
PHYS 211L	Laboratory Physics I	1
	Hours	16
Fall Term 2		
COMM 101	Fundamentals of Oral Communication	3
ECE 210	Electrical Circuits I	3
ECE 211	Electrical Circuits Lab I	1
MATH 310	Ordinary Differential Equations	3
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1
ECON 201 OR ECON 202 OR ECON 272		3
	Hours	17
Spring Term 2		
CS 150	Computer Organization and Architecture	3
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
MATH 330	Linear Algebra	3
Social and Behavioral Ways of Knowing Course		3
	Hours	17
Fall Term 3		
CS 210	Programming Languages	3
CS 270	System Software	3
ECE 310	Microelectronics I	3
ECE 311	Microelectronics I Lab	1
ECE 340	Microcontrollers	3
ECE 341	Microcontrollers Lab	1
STAT 301	Probability and Statistics	3
	Hours	17
Spring Term 3		
CS 240	Computer Operating Systems	3
ECE 350	Signals and Systems I	3
ECE 351	Signals and Systems I Lab	1
ECE 440	Digital Systems Engineering	3

AMST 301	Studies in American Culture	3
or PHIL 103	or Introduction to Ethics	
	Hours	13
Fall Term 4		
ECE 482	Computer Engineering Senior Design I	3
ECE 491	Senior Seminar	0
American Diversity Course		3
Humanistic and Artistic Ways of Knowing Course		3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
	Hours	15
Spring Term 4		
ECE 483	Computer Engineering Senior Design II	3
International Course		3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
	Hours	15
	Total Hours	128

Five-Year Plan

Fall Term 1		Hours
COMM 101	Fundamentals of Oral Communication	3
ENGL 101	Writing and Rhetoric I	3
MATH 143	College Algebra	3
MATH 144	Precalculus II: Trigonometry	1
ECE 101	Foundations of Electrical and Computer Engineering	2
Humanistic and Artistic Ways of Knowing Course		3
	Hours	15
Spring Term 1		
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
CS 120	Computer Science I	4
ENGL 102	Writing and Rhetoric II	3
MATH 170	Calculus I	4
	Hours	15
Fall Term 2		
CS 121	Computer Science II	3
MATH 175	Calculus II	4
MATH 176	Discrete Mathematics	3
PHYS 211L	Laboratory Physics I	1
PHYS 211	Engineering Physics I	3
	Hours	14
Spring Term 2		
CS 150	Computer Organization and Architecture	3
ECE 210	Electrical Circuits I	3
ECE 211	Electrical Circuits Lab I	1
PHYS 212	Engineering Physics II	3
PHYS 212L	Laboratory Physics II	1
Social and Behavioral Ways of Knowing Course		3
	Hours	14
Fall Term 3		
CS 210	Programming Languages	3
CS 270	System Software	3
MATH 310	Ordinary Differential Equations	3
ECON 201 OR ECON 202 OR ECON 272		3
	Hours	12
Spring Term 3		
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
MATH 330	Linear Algebra	3
American Diversity Course		3
	Hours	**14**
Fall Term 4		
ECE 310	Microelectronics I	3
ECE 311	Microelectronics I Lab	1
ECE 340	Microcontrollers	3
ECE 341	Microcontrollers Lab	1
STAT 301	Probability and Statistics	3
AMST 301 OR PHIL 103		3
	Hours	**14**
Spring Term 4		
CS 240	Computer Operating Systems	3
ECE 350	Signals and Systems I	3
ECE 351	Signals and Systems I Lab	1
ECE 440	Digital Systems Engineering	3
	Hours	**10**
Fall Term 5		
ECE 482	Computer Engineering Senior Design I	3
ECE 491	Senior Seminar	0
International Course		3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
	Hours	**12**
Spring Term 5		
ECE 483	Computer Engineering Senior Design II	3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
Technical, Major Elective Course		3
	Hours	**12**
	Total Hours	**132**

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

The student will be able to:

1.   identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

2.   apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

3.   communicate effectively with a range of audiences.

4.   recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

5.   function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

6.   develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

7.   acquire and apply new knowledge as needed, using appropriate learning strategies.