

Associate in Pre-Engineering - Computer and Electrical Engineering Emphasis, A.P.E.

The pre-engineering program at UVU has been created for students who plan to complete the first two to three years of their engineering education at the ABET accredited UVU, then either continue at UVU or transfer to a baccalaureate university to complete their engineering degree. With adequate planning, pre-engineering coursework completed at UVU will be sufficient for students to remain at UVU or to transfer to all of the Utah universities with baccalaureate engineering degrees. All students who declare pre-engineering as their major are automatically accepted into pre-engineering status. After completion of the pre-engineering program at UVU, the student applies for professional status at UVU or at an institution of the student's choice.

Program Requirements

Code	Title	Credit Hours
Total Credit Hours		69
Associate in Pre-Engineering Requirements		44 Credits
Complete the requirements		44
Emphasis Requirements		25 Credits
ECE 1000	Introduction to Electrical and Computer Engineering	3
ECE 2250	Circuit Theory	3
ECE 2255	Circuit Theory Lab	1
ECE 2700	Digital Design I	3
ECE 2705	Digital Design I Lab	1
Emphasis Elective Requirements		
Students should carefully select electives from the following list (or other advisor approved courses), based on the engineering discipline (Computer or Electrical) they are interested in and the college or university they want to attend to finish their BS degree. See your advisor.		14
CS 1410	Object Oriented Programming (3)	
CS 2300	Discrete Mathematical Structures I (3)	
CS 2420	Introduction to Algorithms and Data Structures (3)	
CS 2600	Computer Networks I (3)	
CS 2810	Computer Organization and Architecture (3)	
ENGR 1000	Introduction to Engineering WE (3)	
ENGR 2450	Computational Methods for Engineering Analysis (3)	
ENGR 1020	Survey of Engineering (1)	
MATH 2210	Calculus III (4)	
MATH 2250	Differential Equations and Linear Algebra (4)	
or		
MATH 2270 & MATH 2280	Linear Algebra and Ordinary Differential Equations (6)	

Graduation Requirements

1. Completion of a minimum of 69 semester credits.
2. Overall grade point average of 2.0 (C) or above. 2.5 or above in Math, Science, and Engineering
3. Residency hours -- minimum of 20 credit hours through course attendance at UVU.
4. Completion of GE and specified departmental requirements.

Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (<http://www.uvu.edu/wolverinetrack/>).

First Year

		Credit Hours
Semester 1		
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC or Literacies and Composition Across Contexts CC	3
Any approved Social/Behavioral Science, Humanities, or Fine Arts Distribution		3
CHEM 1210	Principles of Chemistry I PP	4
CHEM 1215	Principles of Chemistry I Laboratory	1
ECE 1000	Introduction to Electrical and Computer Engineering	3
Credit Hours		14
Semester 2		
ENGL 2010	Intermediate Academic Writing CC	3
MATH 1210	Calculus I QL	4
American Institutions		3
CS 1400 or ENGR 1030	Fundamentals of Programming or Engineering Programming	3
Credit Hours		13
Second Year		
Semester 3		
MATH 1220	Calculus II	4
PHYS 2210	Physics for Scientists and Engineers I PP	4
PHYS 2215	Physics for Scientists and Engineers I Lab	1
ECE 2700	Digital Design I	3
ECE 2705	Digital Design I Lab	1
Credit Hours		13
Semester 4		
Biology Distribution		3
PHYS 2220	Physics for Scientists and Engineers II PP	4
PHYS 2225	Physics for Scientists and Engineers II Lab	1
Elective		3
Elective		3
Credit Hours		14
Third Year		
Semester 5		
Any approved Social/Behavioral Science, Humanities, or Fine Arts Distribution		3
ECE 2250	Circuit Theory	3
ECE 2255	Circuit Theory Lab	1
Elective		3
Elective		3
Elective		2
Credit Hours		15
Total Credit Hours		69

Program Learning Outcomes

1. Ability to apply knowledge of mathematics, science, and engineering.