Associate in Pre-Engineering - Biological and Chemical Engineering Emphasis, A.P.E.

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Requirements

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 and then 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.

Total Program Credits: 69

General Education Requirements:			28 Credits
	ENGL 1010	Introduction to Academic Writing CC	3
or	ENGH 1005	Literacies and Composition Across Contexts CC (5)	
	ENGL 2010	Intermediate Academic Writing CC	3
Complete the following Natural and Physical Science courses:			
	Biology		3
	CHEM 1210	Principles of Chemistry I PP	4
	CHEM 1215	Principles of Chemistry I Laboratory	1
	PHYS 2210	Physics for Scientists and Engineers I PP	4
	PHYS 2215	Physics for Scientists and Engineers I Lab	1
Complete any combination of the following with no more than 1 course each from Humanities, Fine Arts, and Social/Behavioral Science:			6
	Humanities (from list)		
	Fine Arts (from list)		
	Social/Behavioral Sciences (from list)		
Complete any American Institutions course:			3
	POLS 1000	American Heritage SS (3)	
	HIST 2700	US History to 1877 AS (3)	
and	HIST 2710	US History since 1877 AS (3)	
	HIST 1700	American Civilization AS (3)	
	HIST 1740	US Economic History AS (3)	
	POLS 1100	American National Government AS (3)	
Discipline Core Requirements:			18 Credits
	MATH 1210	Calculus I QL	4
	MATH 1220	Calculus II	4
	ENGR 1030	Engineering Programming	3
or	CS 1400	Fundamentals of Programming (3)	
	PHYS 2220	Physics for Scientists and Engineers II PP	4
	PHYS 2225	Physics for Scientists and Engineers II Lab	1
Emphasis Requirements:			5 Credits
	CHEM 1220	Principles of Chemistry II PP	4
	CHEM 1225	Principles of Chemistry II Laboratory	1
Emphasis Elective Requirements:			20 Credits
Students should carefully select electives from the following list, based on the engineering discipline (Biological or Chemical) they are interested in and the college or university they want to attend to finish their BS degree. See your advisor.			20
	BIOL 1610	College Biology I BB (4)	
	BIOL 1615	College Biology I Laboratory (1)	
	BIOL 1620	College Biology II (3)	
	BIOL 1625	College Biology II Laboratory (1)	
	BIOL 3400	Cell Biology (3)	
	CHEM 2310	Organic Chemistry I (4)	
	CHEM 2315	Organic Chemistry I Laboratory (1)	
	CHEM 2320	Organic Chemistry II (4)	
	CHEM 2325	Organic Chemistry II Laboratory (1)	
	CS 1400	Fundamentals of Programming (3)	
	ECE 1000	Introduction to Electrical and Computer Engineering (3)	
	ENGR 1000	Introduction to Engineering WE (3)	
	ENGR 1020	Survey of Engineering (1)	
	ENGR 2160	Introduction to Materials Science and Engineering (3)	
	ENGR 2300	Engineering Thermodynamics (3)	
	ENGR 2450	Computational Methods for Engineering Analysis (3)	
	MATH 2210	Calculus III (4)	
	MATH 2250	Differential Equations and Linear Algebra (4)	
or	MATH 2270	Linear Algebra (3)	
and	MATH 2280	Ordinary Differential Equations (3)	

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.

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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.

Semester 1	Course Title	Credit Hours
CS 1400	Fundamentals of Programming	3
CHEM 1210	Principles of Chemistry I PP	4
CHEM 1215	Principles of Chemistry I Laboratory	1
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC or Literacies and Composition Across Context CC	3
Humanities		3
	Semester total:	14
Semester 2	**Course Title**	**Credit Hours**
MATH 1210	Calculus I QL	4
CHEM 1220	Principles of Chemistry II PP	4
BIOL 1610	College Biology I BB	4
Elective		3
	Semester total:	15
Semester 3	**Course Title**	**Credit Hours**
MATH 1220	Calculus II	4
PHYS 2210	Physics for Scientist and Engineers I PP	4
PHYS 2215	Physics for Scientist and Engineers I Lab	1
ENGL 2010	Intermediate Academic Writing CC	3
	Semester total:	12
Semester 4	**Course Title**	**Credit Hours**
PHYS 2220	Physics for Scientists and Engineers II PP	4
PHYS 2225	Physics for Scientists and Engineers II Lab	1
CHEM 2310	Organic Chemistry I	4
American Institutions course		3
Social/Behavioral Science		3
	Semester total:	15
Semester 5	**Course Title**	**Credit Hours**
Emphasis Elective		4
Emphasis Elective		3
Emphasis Elective		3
Emphasis Elective		3
	Semester total:	13
	Degree total:	69