Associate in Pre-Engineering - Civil and Mechanical 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**
ENGR 2010	Engineering Statics	3
ENGR 2030	Engineering Dynamics	3
ENGR 2140	Mechanics of Materials	3
or ENGR 2160	Introduction to Materials Science and Engineering	
or ENGR 2450	Computational Methods for Engineering Analysis	
Emphasis Elective Requirements		
Students should carefully select electives from the following list, based on the engineering discipline (Civil or Mechanical) they are interested in and the college or university they want to attend to finish their BS degree. See your advisor.		16
ECE 1000	Introduction to Electrical and Computer Engineering (undefined)	
ECE 2210	Fundamentals of Electric Circuit Analysis (3)	
EGDT 1040	Fundamentals of Technical Engineering Drawing (3)	
EGDT 1071	3 Dimensional Modeling--Solidworks (3)	
EGDT 1400	Surveying Applications and Field Techniques I (3)	
ENGR 1000	Introduction to Engineering WE (3)	
ENGR 1020	Survey of Engineering (1)	
ENGR 2140	Mechanics of Materials (3)	
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 & 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		
Semester 1		**Credit Hours**
ENGR 1030	Engineering Programming	3
American Institutions Course		3
Social/ Behavioral Science		3
ENGL 1010 or ENGH 1005	Introduction to Academic Writing CC or Literacies and Composition Across Contexts CC	3
Humanities		3
	Credit Hours	**15**
Semester 2		
MATH 1210	Calculus I QL	4
CHEM 1210	Principles of Chemistry I PP	4
CHEM 1215	Principles of Chemistry I Laboratory	1
ENGL 2010	Intermediate Academic Writing CC	3
Biology		3
	Credit Hours	**15**
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
ENGR 2010	Engineering Statics	3
	Credit Hours	**12**
Semester 4		
PHYS 2220	Physics for Scientists and Engineers II PP	4
PHYS 2225	Physics for Scientists and Engineers II Lab	1
ENGR 2140	Mechanics of Materials	3
ENGR 2030	Engineering Dynamics	3
Elective		3
	Credit Hours	**14**
Third Year		
Semester 5		
Elective		4
Elective		3
Elective		3
Elective		3
	Credit Hours	**13**
	Total Credit Hours	**69**

Program Learning Outcomes

1. Ability to apply knowledge of mathematics, science, and engineering.
2. Know the basic knowledge and fundamental principles of engineering.
3. Be able to apply these principles to solving various engineering problems.
4. Value mathematics, science, and their application in engineering design.