ENGINEERING, ASSOCIATE OF SCIENCE

Program Description

The AS transfer track closely follows the first two years of study for engineering programs at most universities in Oregon. Majors offered at OSU include Architectural Engineering, Electrical and Computer Engineering, Civil Engineering, Construction Engineering Management, Environmental Engineering, Mechanical, Industrial and Manufacturing, and Chemical Engineering, as well as BioMedical, Forest, Geological, Mining, Metallurgical, and Nuclear Engineering. PSU and OIT offer degrees in Civil and Environmental, Mechanical, Manufacturing, Electrical and Computer Engineering. OIT also offers majors in Geomatics (Surveying) and Renewable Energy. Many of the core classes taken during the first two years of study are the same for all engineering majors. However, it is important that students work closely with your UCC advisor to develop a custom student educational planner (SEP) for transfer to the university of choice.

Program Outcomes

Students who complete the Engineering Associate of Science will have the knowledge, skills, and abilities to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. Demonstrate ability to communicate effectively with a range of audiences
3. Take part in participating on teams whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
4. Develop and utilize appropriate experimentation, analyze and interpret data, and make use of engineering judgment to draw conclusions
5. Discover and make use of new knowledge as needed, using appropriate learning strategies

Career Considerations

Engineering is a broad field with more than 20 specialties. Engineering is widely considered as one of the most lucrative and in-demand career choices, with multiple options for engineering disciplines and job types.

Program Course Requirements

Course	Title	Credits
First Year		
First Term		
CH 221	General Chemistry I [4]	5
ENGR 111	Engineering Orientation I	3
MTH 251	Calculus I	5
WR 121Z	Composition I [5]	4
	Credits	**17**
Second Term		
CH 222	General Chemistry II [4]	5
ENG 106Z	Introduction to Poetry [3]	4
ENGR 112	Problem Solving and Technology	3
MTH 252	Calculus II	4
	Credits	**16**
Third Term		
ECON 201	Microeconomics [2]	4
ENGR 245	Engineering Graphics [1]	3
CS 161 or MTH 253	Computer Science I or Calculus III	4
MTH 261	Intro to Linear Algebra [1]	2
COM 111Z or COM 218Z	Public Speaking or Interpersonal Communication	4
	Credits	**17**
Second Year		
First Term		
ENGR 201	Electrical Fundamentals I	4
ENGR 211	Statics	4
MTH 254	Vector Calculus I [1]	4
PH 211	General Physics w-Calculus I [4]	5
	Credits	**17**
Second Term		
ENGR 202	Electrical Fundamentals II	4
ENGR 213	Strength of Materials	4
MTH 256	Differential Equations [1]	4
PH 212	General Physics w-Calculus II [4]	5
	Credits	**17**
Third Term		
ENGR 212	Dynamics [1]	4
MTH 265	Statistics-Scientists-Engineer	4
PH 213	General Physics w-Calculus III [4]	5
WR 227Z	Technical Writing [5]	4
	Credits	**17**
	Total Minimum Credits	**101**

1. Program Elective - these may vary and are specific to both the transfer university and engineering major.
2. Satisfies required Social Sciences
3. Satisfies required Arts and Letters
4. Satisfies required Science w/lab
5. Course offered every term, including Summer

Advising Notes

- Careful Advising is required to insure proper transfer. ENGR111 and consultation with Advisor should be used to develop the correct term-by-term planner.