# ENGINEERING - TRANSFER - DEGREE

Associate of Science in Engineering

#### **Faculty Adviser**

John Dryden: 503-491-7065 | Room AC2687 | John.Dryden@mhcc.edu (john.dryden@mhcc.edu)

The Engineering transfer curriculum offered at MHCC is designed to closely follow the pre-engineering program at regional universities and to meet the requirements for an Associate of Science degree. This course plan is tailored for civil and mechanical engineering majors. However, the student should meet with his or her adviser to create an educational plan that meets his or her specific needs.

## **Curricular Outcomes**

At the completion of this curriculum, students should be able to:

- · Apply mathematics, science and engineering skills
- Design and conduct experiments, as well as analyze and interpret data
- Design a system, component or process to meet desired needs within realistic constraints
- · Function on multidisciplinary teams
- · Identify, formulate and solve engineering problems
- · Describe professional and ethical responsibility

**Note:** This plan is specifically designed for transfer to a four-year college, and is *not* intended for students who seek direct entry into the job market after completion of an associate degree. For the direct-to-job-market program, see: Engineering Technology (https://catalog.mhcc.edu/programs-majors/engineering-technology-degree/).

General education courses (such as math, writing, health, etc.) can be taken during any term, or before starting the program. Students are expected to meet the following course requirements before starting the first term courses:

- Placement into RD115+, or completion of RD090.
- · Placement into WR121Z, or completion of WR115.
- Placement into MTH251Z+, or completion of MTH112Z with a grade of "C" or higher.

#### First Quarter

Fall		Credits
CH221Z	General Chemistry I	5
& CH227Z	and General Chemistry I Laboratory	
GE101	Engineering Orientation	4
MTH251Z	Differential Calculus	4
WR121Z	Composition I ★	4
	Credits	17
Second Quarter		
Winter		
CH222Z	General Chemistry II	5
& CH228Z	and General Chemistry II Laboratory	
COMM111Z	Public Speaking ★	4

GE115 or FNGB248	Engineering Graphics or Engineering Graphics: Solidworks	3
MTH252Z	Integral Calculus	4
	Credits	16
Third Quarter		
Spring		
GE102	Engineering Computations	3
MTH261	Linear Algebra	4
WR227Z	Technical Writing ★	4
Arts and Letters r	equirement (https://catalog.mhcc.edu/	3
degree-certificate	-requirements/as-engineering/#arts-letters)	
Social Science re	quirement (https://catalog.mhcc.edu/	3
degree-certificate	-requirements/as-engineering/#social)	
	Credits	17
Fourth Quarter		
Fall		
ENGR211	Statics	4
MTH254	Calculus IV: Multivariable/Vector Calculus Part 1	5
PH211	General Physics with Calculus I	5
	Credits	14
Fifth Quarter		
Winter		
ENGR213	Strength of Materials	4
ENGR201 (winter)	) for Mechanical Engineering transfer, or	4-5
ETT50 (spring) to	r Civil Engineering transfer	_
PH212	General Physics with Calculus II	5
Social Science re degree-certificate	quirement (https://catalog.mhcc.edu/ -requirements/as-engineering/#social)	3-4
Health and Physic	cal Education requirement (https://	3
catalog.mhcc.edu	J/degree-certificate-requirements/as-	
engineering/#nea	Credite	10-21
Sixth Quarter	cieuts	19-21
Spring		
ENGB212	Dynamics	4
FT150 (spring) fo	r Civil Engineering transfer or ENGB201	-
(winter) for Mech	anical Engineering transfer	
MTH256	Differential Equations	5
PH213	General Physics with Calculus III	5
Arts and Letters r	equirement (https://catalog.mhcc.edu/	3
degree-certificate	-requirements/as-engineering/#arts-letters)	
	Credits	17
	Total Credits	100-102

Note: Not every course required by different schools is offered at MHCC.

### **Transfer Schools**

- Oregon State University (http://engineering.oregonstate.edu/)
- Oregon Institute of Technology (http://www.oit.edu/academics/ degrees/)
- Portland State University (http://www.pdx.edu/cecs/)
- Washington State University (http://www.vcea.wsu.edu/)