ENGINEERING - TRANSFER - DEGREE

Associate of Science in Engineering | mhcc.edu/EngineeringTechnology

Faculty Adviser
Andy Dryden: 503-491-7482 | Room AC2581 | Andrew.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

The MHCC curriculum has entry-level expectations of students for skills in reading, writing and mathematics.

Note: This plan is specifically designed for transfer to a four-year institution and is not intended for students who seek direct entry into the job market after completion of an associate degree.

Course Title Credits
First Quarter
Fall
CH221 General Chemistry I 5
GE101 Engineering Orientation 4
MTH251 Calculus I: Differential Calculus 5
WR121 English Composition ★ 4
Credits 18

Second Quarter
Winter
CH222 General Chemistry II 5
COMM111 Fundamentals of Public Speaking ★ 4
GE115 Engineering Graphics 1 or Engineering Graphics: Solidworks 3
ENGR248 3
MTH252 Calculus II: Integral Calculus 5
Social Science requirement (https://catalog.mhcc.edu/degree-certificate-requirements/as-engineering/#social) 3
Credits 20

Third Quarter
Spring
GE102 Engineering Computations 1 3

MTH299M or MTH253 Multi-Variable Calculus or Calculus III 2-4
WR227 Technical Report Writing ★ 4
Arts and Letters requirement (https://catalog.mhcc.edu/degree-certificate-requirements/as-engineering/#arts-letters) 3
Social Science requirement (https://catalog.mhcc.edu/degree-certificate-requirements/as-engineering/#social) 3
Credits 15-17

Fourth Quarter
Fall
ENGR211 Statics 4
MTH254 Calculus IV: Vector Calculus 5
PH211 General Physics with Calculus I 5
Health and Physical Education requirement (https://catalog.mhcc.edu/degree-certificate-requirements/as-engineering/#health) 3
Credits 17

Fifth Quarter
Winter
ENGR213 Strength of Materials 4
ENGR201 Electrical Fundamentals I or ET150 or Plane Surveying 4-5
MTH256 Differential Equations 5
PH212 General Physics with Calculus II 5
Credits 18-19

Sixth Quarter
Spring
ENGR212 Dynamics 4
MTH261 Linear Algebra 4
PH213 General Physics with Calculus III 5
Arts and Letters requirement (https://catalog.mhcc.edu/degree-certificate-requirements/as-engineering/#arts-letters) 3
Credits 16

Total Credits 104-107

1 Please consult with your adviser for major-specific advising regarding this course. ET150 Plane Surveying may be required for some degree options.

Note: Not every course required by the various programs at 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)

★ Course offered online
 Cultural Literacy course