ENGINEERING
Associate of Science (AS) Degree
90 credits

COCC offers freshman and sophomore core science, engineering and general education courses needed for most engineering majors. Students earning an engineering degree choose from among the many branches of engineering available, such as: civil, mechanical, electrical, chemical, computer and OSU-Cascades’ energy engineering management. Certain engineering majors and branches may require additional courses not offered at COCC.

Students who wish to complete lower-division science, engineering and general education courses while at COCC may choose either the Associate of Arts Oregon Transfer degree (which allows students to transfer to an Oregon public university having met all lower-division general education requirements) or an Associate of Science (which includes the science and engineering courses and some general education, more closely mirroring a university course of study). Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS
All courses must be completed with a “C” grade or better.

Writing
WR 121 Academic Composition 4
WR 227 Technical Writing 4

Oral communication
SP 111 Fundamentals of Public Speaking 4

Mathematics
MTH 251 Calculus I 4

Health
HHP 295 Health and Fitness 3

GENERAL EDUCATION/DISCIPLINE STUDIES
See the Discipline Studies list for options.

Arts and Letters
Choose two (2) courses from the Discipline Studies list. 6-8

Social Science
Choose two (2) courses from the Discipline Studies list. 6-8
(EC 201 is recommended)

PROGRAM REQUIREMENTS
CH 221 General Chemistry I 5
CH 222 General Chemistry II 5
ENGR 201 Electrical Fundamentals 4
ENGR 202 Electrical Fundamentals II 4
ENGR 211 Statics 4
ENGR 212 Dynamics 4
ENGR 213 Strength of Materials 4
GE 101 Engineering Orientation 3
GE 102 Engineering Problem Solving and Technology 3
MTH 252 Calculus II 4
MTH 253 Calculus III 4
MTH 254 Vector Calculus I 4
MTH 256 Applied Differential Equations 4
PH 211 General Physics I 5
PH 212 General Physics II 5
PH 213 General Physics III 5

ELECTIVES1
Choose enough electives to reach a minimum total of 90 overall degree credits. Elective credits must number 100 or above with a maximum of 12 CTE credits and 15 credits of CWE/HHP performance courses.

ADVISING NOTES
1 Elective Notes: Most engineering majors have few, if any, true electives and students must sequence courses very intentionally. The elective category should be used to tailor the program toward a specific engineering major or branch. Following are some general guidelines. We recommend students research requirements directly.

Chemical: CH 223, MTH 253. Note that OSU requires a year-long sequence prior to the junior year that COCC does not offer.


Mechanical: CIS programming class (CIS 122, CIS 133IS, CIS 133P, CS 161, CS 162), CIS 125A1, CIS 125A2, ENGR 212, MFG 103, MFG 112, MFG 113.
Civil: ENGR 212.