

ARCHITECTURAL ENGINEERING EMPHASIS, AS - WITH OREGON STATE UNIVERSITY

Program Code: AS.OSUARCHENGR

The Associate of Science with an emphasis in Engineering is for students interested in transferring a bachelor's degree to Portland State University, Oregon State University, or Oregon Tech (Oregon Institute of Technology).

For information contact Eric Lee, 503-594-6163 or elee@clackamas.edu

Outcomes

Program Outcomes

Upon successful completion of this program, students should be able to:

- apply the fundamental elements of engineering design;
- employ mathematics, science, and computing techniques in a systematic and rigorous manner to support the study and solution of engineering problems;
- conduct and document laboratory experiments in the sciences and engineering, effectively communicating determined quantitative relationships using both graphs and equations;
- exhibit good teamwork skills and serve as effective members of laboratory and project teams;
- articulate and justify technical solutions to an audience through oral, written, and graphical communication.

Requirements

First Year

Fall Term		Credits
CH-221	General Chemistry	5
ENGR-111	Introduction to Engineering	3
MTH-251	Calculus I	5
WR-121Z	Composition I	4
Credits		17

Winter Term

CDT-103	Computer-Aided Drafting I	3
CH-222	General Chemistry	5
ENGR-112	Engineering Programming	3
MTH-252	Calculus II	5
Credits		16

Spring Term

COMM-111Z	Public Speaking	4
EC-201	Principles of Economics: Micro	4
MTH-254	Vector Calculus	5
WR-227Z	Technical Writing	4
Credits		17

Summer Term

MTH-256	Differential Equations	4
Credits		4

Second Year

Fall Term

ENGR-211	Statics	4
PH-211	General Physics With Calculus	5
PHL-102	Ethics	4
MTH-253	Calculus III	5
Credits		18

Winter Term

PH-212	General Physics With Calculus	5
CS-161	Computer Science I	4
HPE-295	Health & Fitness for Life	3
Cultural Diversity Electives (p. 1)		4
Credits		16

Spring Term

ENGR-201	Electrical Fundamentals	4
ENGR-213	Strength of Materials	4
PH-213	General Physics With Calculus	5
Difference, Power, and Discrimination Electives (p. 1)		4
Credits		17
Total Credits		105

Cultural Diversity Electives

Code	Title	Credits
ANT-232	Native Americans of North America	4
ENG-213	U.S. Latinx Literature	4
ENG-252	Hindu Mythology	4
GEO-110	Cultural & Human Geography	4
R-101	Judaism and Foundations of Religion	4
R-102	Christianity and Islam	4
R-103	Asian Religions	4
R-210	World Religions	4

Difference, Power, and Discrimination Elective

Code	Title	Credits
HST-201	History of the United States	4
HST-202	History of the United States	4
HST-203	History of the United States	4
SOC-225	Social Problems	4

Optional

While not required for the AS degree, students may complete additional coursework at CCC that will meet requirements for the Bachelor of Science degree at Oregon State University. The Bachelor of Science degree requires the completion of one course from each category below.

Biological Science Elective

Code	Title	Credits
BI-101	General Biology; Cellular Biology	4
BI-102	General Biology; Animal Systems	4
BI-103	General Biology; Plants & The Ecosystem	4
BI-165CL	Natural History of the Oregon Coast with Lab	4

Code	Title	Credits
BI-175	Integrated Science Inquiry	4
BI-176	Integrated Science Inquiry	4
BI-177	Integrated Science Inquiry	4
BI-204	Elementary Microbiology	4
BI-211	General Biology for Science Majors (Cellular Biology)	5
BI-212	General Biology for Science Majors (Animal Biology)	5
BI-213	General Biology for Science Majors (Plant Biology & Ecology)	5
BI-234	Introductory Microbiology	4
ESR-171	Introduction to Environmental Science	4
ESR-172	Introduction to Climate Change	4
ESR-173	Introduction to Sustainability	4
Z-201	General Zoology	4
Z-202	General Zoology	4
Z-203	General Zoology	4