

ELECTRICAL ENGINEERING EMPHASIS, AS - WITH OREGON INSTITUTE OF TECHNOLOGY (OREGON TECH)

Program Code: AS.OITELECENGR

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 graphical, numerical, and analytical solutions to an audience through oral and written communication.

Requirements

First Year

Fall Term		Credits
CH-221	General Chemistry	5.00
CS-161	Computer Science I	4.00
ENGR-111	Introduction to Engineering	3.00
MTH-251	Calculus I	5.00
Credits		17

Winter Term

CH-222	General Chemistry	5.00
ENGR-112	Engineering Programming	3.00
ENGR-171	Digital Logic	4.00
MTH-252	Calculus II	5.00
Credits		17

Spring Term

COMM-111Z	Public Speaking	4.00
ENGR-271	Digital Systems	4.00
MTH-261	Linear Algebra	4.00
WR-121Z	Composition I	4.00
Credits		16

Summer Term

Social Science Electives (p. 1)		3.00-4.00
Credits		3-4

Second Year

Fall Term

ENGR-221	Electrical Circuit Analysis I	4.00
MTH-254	Vector Calculus	5.00
PH-211	General Physics With Calculus	5.00
Select one of the following:		3.00-4.00
Humanities Electives (p. 1)		
Social Science Electives (p. 1)		
Credits		17-18

Winter Term

ENGR-222	Electrical Circuit Analysis II	4.00
MTH-256	Differential Equations	4.00
PH-212	General Physics With Calculus	5.00
WR-227Z	Technical Writing	4.00
Credits		17

Spring Term

ENGR-223	Electrical Circuit Analysis III	4.00
MTH-253	Calculus III	5.00
PH-213	General Physics With Calculus	5.00
Credits		14
Total Credits		101-103

HUMANITIES ELECTIVES

Any course from **ART**, **ASL** (200-level), **ENG**, **FR** (200-level), **GER** (200-level), **HUM**, **MUS**, **PHL**, **R**, **SPN** (200-level), **TA**

Social Science Electives

Any course from **ANT**, **EC**, **GEO**, **HST**, **PS**, **PSY**, **SOC**, **SSC**, **WS**

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 Institute of Technology and is listed below.

- COMM-219 Small Group Discussion
- Up to 9 additional Social Science Elective credits
- Up to 6 additional Humanities Elective credits