

Major Offered At:

**CORVALLIS**

**Portland  
Community College**

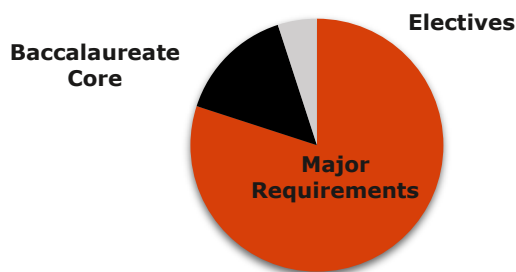
## Ecological Engineering

The Ecological Engineering (EcoE) program at OSU was the first-of-its-kind in the nation, and the discipline is rapidly developing as an important emerging area of engineering. Ecological Engineering blends engineering and scientific principles/problem-solving techniques to optimize the design of sustainable systems (natural, urban, and agricultural) that integrate human activities into the natural environment to the benefit of both.

EcoE graduates are highly employable and have found work in a variety of employment sectors, including:

- Engineering design & consulting firms
- Government agencies (federal, state, local)
- Natural resource management/ restoration firms
- Sustainable farms & vineyards
- Surveying & ecological modeling firms
- Water and wastewater treatment facilities

## Your Bachelor's Degree (BS) in the College of Engineering



- A minimum of 180 credits are required for graduation; 60 must be upper division (300 and 400-level courses).
- A maximum of 135 credits earned at a community college may be applied toward a bachelor's degree at OSU.
- Some courses can count towards your major and the Baccalaureate Core. Advisors can assist in selection.
- More info at [bee.oregonstate.edu/biological-and-ecological-engineering/ecological-engineering-](http://bee.oregonstate.edu/biological-and-ecological-engineering/ecological-engineering-)

## Courses Required for Ecological Engineering Major

This list is comprehensive. Speak with OSU advisor for more information

Ecological Engineering Core Requirements	PCC Equivalent Course	OSU Course	Notes
Ecological Engineering I	ENGR 101	BEE 101	Starting Fall 2021, will be offered at OSU as ENGR 100
Ecological Engineering II	None	BEE 102	Starting Winter 2022, will be offered at OSU as ENGR 102; can sub this course with additional elective if both ENGR 101 ENGR 114 taken at PCC
Ecological Engineering III	ENGR 114	BEE 103	Starting Spring 2022, will be offered at OSU as ENGR 103
Fundamentals of Eco Engr.	None	BEE 221	
Ecological Engr. Computation	None	BEE 222	
Ecology for Engineers	None	BEE 270	
Statics	ENGR 211	ENGR 211	
Strength of Materials	ENGR 213	ENGR 213	
General Chemistry (with lab)	CH 221	CH 231/261	
General Chemistry (with lab)	CH 222	CH 232/262	
General Chemistry (with lab)	CH 223	CH 233/263	
Differential Calculus	MTH 251	MTH 251	
Integral Calculus	MTH 252	MTH 252	
Vector Calculus I	MTH 254	MTH 254	
Applied Differential Equations	MTH 256	MTH 256	
Intro to Matrix Algebra & Series	MTH 253+MTH 261	MTH 264+MTH 265	MTH 261 transfers as general MTH credit, BEE will honor towards our matrix algebra requirement
Intro to Statistics for Engineers	None	ST 314	
General Physics (with Calculus)	PH 211	PH 211	
General Physics (with Calculus)	PH 212	PH 212	
General Physics (with Calculus)	PH 213	PH 213	

## Courses Required for Ecological Engineering Major, cont.

Ecological Engineering Core Requirements	PCC Equivalent Course	OSU Course	Notes
Soil Science (with lab)	None	SOIL 205/206	
Technical Writing	WR 227	WR 327 (LD)	LD = Lower-division transfer
Public Speaking Argument & Critical Discourse Interpersonal Communication	COMM 111 COMM 112 COMM 214	COMM 111 COMM 114 COMM 218	Complete 1(one) course
Intro to Environ. Econ & Policy Intro to Microeconomics	EC 291	AEC 250 ECON 201	Complete 1(one) course
Ethics	PHL 102	PHL 205	Other courses available post-transfer

## Important Notes & Resources

### Important Notes for the College of Engineering and Ecological Engineering Major:

- Grade requirements: Grade of C or better in all major coursework.
- See a sample degree plan by searching "Ecological Engineering" at [admissions.oregonstate.edu/find-your-major](http://admissions.oregonstate.edu/find-your-major)
- Other similar majors to explore: Environmental Engineering, Environmental Science
- The best time to transfer is **Fall**. Talk with OSU Ecological Engineering advisor, Rachel Jones, about your specific timeline. It is important to speak with Rachel early and often, to ensure correct course selection and sequencing.

### Resources and OSU Information:

- Students do not have to complete a transfer degree in order to transfer to OSU.
  - If you've completed the Oregon AAOT, all requirements of the Baccalaureate Core are complete except for Synthesis Courses and Writing Intensive Courses.
- Preparing to apply to OSU? See admissions info: [transfer.oregonstate.edu](http://transfer.oregonstate.edu)
- Want to take classes at both OSU and an Oregon community college? Check out the Degree Partnership Program: [partnerships.oregonstate.edu/students](http://partnerships.oregonstate.edu/students)
- Schedule your OSU campus tour and meet with an advisor at [visitosu.oregonstate.edu/visit-campus](http://visitosu.oregonstate.edu/visit-campus)

## General Education Courses (called the Baccalaureate Core)

- Complete one course in each Perspective category with no more than two in the same department.
- Full listing of PCC courses that fulfill Bacc Core requirements: [admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-portland-community-college](http://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-portland-community-college)

<b>SKILLS COURSES</b>	Math Writing I Writing II Speech (Writing III) Fitness	Completed as part of the major WR 121. Required to transfer. Completed as part of the major Completed as part of the major HE 295 (lecture) + PE 295 (physical activity course)
<b>PERSPECTIVE COURSES</b>	Biological Science Physical Science Additional Biological or Physical Science Cultural Diversity Literature and the Arts Social Processes and Institutions Western Culture	Completed as part of major Completed as part of major Completed as part of major Choose one course from BaccCore link above Choose one course from BaccCore link above Completed as part of major Can be completed as part of major: see advisor
<b>DPD COURSE</b>	Difference, Power, & Discrimination	Choose one course from BaccCore link above
<b>SYNTHESIS COURSES</b>	Contemporary Global Issues Science, Technology, & Society	Upper division course, take through OSU Upper division course, take through OSU

## Advising Contacts

Academic advisors at your community college and OSU are available to answer your questions and assist you in creating a transfer plan. **See your community college advisor first and use this Transfer Guide to help you plan.** It is important to speak with your OSU academic advisor early on, and often, to ensure correct course selection and sequencing. See [visitosu.oregonstate.edu/visit-campus](http://visitosu.oregonstate.edu/visit-campus) to schedule your personalized visit.

<b>Portland Community College</b>	<a href="http://pcc.edu/advising/">pcc.edu/advising/</a>
<b>OSU Ecological Engineering</b>	Rachel Jones: <a href="mailto:rachel.jones@oregonstate.edu">rachel.jones@oregonstate.edu</a>
<b>OSU College of Engineering Main Office</b>	<a href="mailto:askengineering@oregonstate.edu">askengineering@oregonstate.edu</a>