

Major Offered At:

Southwestern Oregon Community College

CORVALLIS

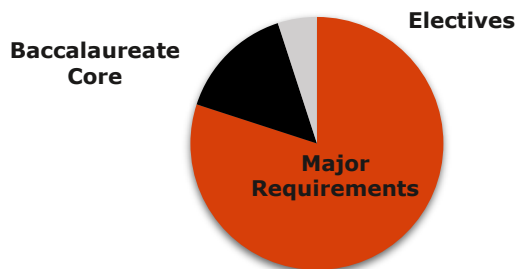
Electrical and Computer Engineering

Electrical and computer engineers apply physics and mathematics to design, build, market, and support electrical and electronic products and computer hardware. They develop new technologies for a broad range of applications, including wireless communications, power systems, health care and medicine, multimedia, and navigation.

Electrical and computer engineers:

- Develop wind, wave, and solar energy systems.
- Design medical imaging systems for hospitals and pacemakers for heart patients.
- Build smaller, faster, and more powerful electronic devices.
- Create versatile smartphones and tablets.

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 eecs.oregonstate.edu/undergraduate/ece

Courses Required for Electrical and Computer Engineering Major

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

Electrical & Computer Engr. Core Requirements	S OCC Equivalent Course	OSU Course	Notes
Intro to Computer Science I	CS 161	CS 161	
Intro to Computer Science II	CS 162	CS 162	
Data Structures	CS 261	CS 261	
Intro to ECE: Tools	ENGR 111	ECE 111	
Intro to ECE: Concepts	ENGR 112	ECE 112	
Digital Logic Design	N/A	ECE 271	
Digital Logic Design lab	N/A	ECE 272	
Electrical Foundations I	ENGR 201	ENGR 201	
Electrical Foundations II	ENGR 202	ENGR 202	
Electrical Foundations III	ENGR 203	ENGR 203	
Elements of Discrete Math	MTH 231	MTH 231	
Differential Calculus	MTH 251	MTH 251	
Integral Calculus	MTH 252	MTH 252	
Vector Calculus I	MTH 254	MTH 254	
Vector Calculus II	MTH 255	MTH 255	
Applied Differential Equations	MTH 256	MTH 256	
Introduction to Series	MTH 253	MTH 264	
Introduction to Matrix Algebra	MTH 260	MTH 265	
Intro to Statistics for Engineers	N/A	ST 314 (LD)	(LD) = Lower Division Transfer
General Physics (Calculus)	PH 211	PH 211	
General Physics (Calculus)	PH 212	PH 212	
General Physics (Calculus)	PH 213	PH 213	

Courses Required for Electrical and Computer Engr. Major, cont.

Electrical & Computer Engr. Core Requirements	S OCC Equivalent Course	OSU Course	Notes
Chemistry for Engineers	CHEM 221	CH 201	
Public Speaking Argument & Critical Discourse	SP 111 SP 112	COMM 111 COMM 114	Complete 1(one) course
Technical Writing	WR 227	WR 327 (LD)	(LD) = Lower Division Transfer

Important Notes & Resources

Important Notes for the College of Engineering and Electrical and Computer Engineering Major:

- Grade requirements: Grade of C or better in all major coursework. See catalog.oregonstate.edu/college-departments/engineering for more information.
- See a sample degree plan by searching "Electrical & Computer Engineering" at admissions.oregonstate.edu/find-your-major
- Other similar majors to explore: Computer Science
- ECE students: the best time to transfer is fall term, particularly due MECOP. Talk with an OSU advisor about your specific timeline.
- ECE majors can participate in two six-month paid internships with MECOP: mecopinc.org

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
- Want to take classes at both OSU and an Oregon community college? Check out the Degree Partnership Program: partnerships.oregonstate.edu/students
- Schedule your OSU campus tour and meet with an advisor at 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 SWCC courses that fulfill Bacc Core requirements: admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-southwestern-ore-comm-college

SKILLS COURSES	Math Writing I Writing II Speech (Writing III) Fitness (Only HHS 231)	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
PERSPECTIVE COURSES	Biological Science Physical Science Additional Biological or Physical Science Cultural Diversity Literature and the Arts Social Processes and Institutions Western Culture	Choose one course from BaccCore link above Completed as part of the major Completed as part of the major Choose one course from BaccCore link above Choose one course from BaccCore link above Choose one course from BaccCore link above Choose one course from BaccCore link above Choose one course from BaccCore link above
DPD COURSE	Difference, Power, & Discrimination	Choose one course from BaccCore link above
SYNTHESIS COURSES	Contemporary Global Issues Science, Technology, & Society	Upper division course, take through OSU Completed as part of the major

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 to schedule your personalized visit.

Southwestern Oregon Community College	http://www.socc.edu/services/32-curry/427-academic-transfer-advising
OSU Electrical Engr. & Comp. Sci.	Eecsundergrad.info@engr.oregonstate.edu
OSU College of Engineering Main Office	askengineering@oregonstate.edu