



COCC Transfer Guide

Bachelor of Science in Engineering Science

Important:

Students are encouraged to dually enroll at OSU-Cascades Spring term of their second year, to avoid a year delay in the ESE program. ST 314 is only offered spring term and once a year. ST 314 is an important pre-requisite for upper division courses offered fall term of third year. Failure to take ST 314 could result in a year delay in the ESE program.

Program Requirements

OSU Graduation Requirement:

Students are required to meet the University Graduation requirements as well as complete course work required for their major to graduate with a Bachelor of Science in Energy Systems Engineering. **All catalog and course selection information is subject to change pending catalog declaration year.* catalog.oregonstate.edu/regulations/#text

- 180 minimum = total number of credits required to graduate
- 60 minimum = number of upper division credits required
- 45 of last 75 credits must be OSU credits
- Max 135 credits transferred to OSU
- Max 18 W grades (withdraw)
- Max 11 credits PAC (Physical Activity Course)

College of Engineering Academic Standing

Progression Model

- Grades of C or better and a minimum of 2.50 cumulative OSU GPA
- Maintain 2.50 term and/or cumulative OSU GPA and 65% of courses completed
 - Warning: OSU term GPA is below a 2.50 and/or completion is under 65%
 - Probation: After 24 OSU credits attempted, if both term and cumulative standards are not met
 - Suspension: If on probation and have a subsequent term OSU GPA under 2.50 and/or pace under 65%
- No major courses may be taken with S/U grading.

Academic Progression Model Information: <https://engineering.oregonstate.edu/current-students/advising/progression>

Major Requirements

First & Second year courses: All courses must be completed with a C grade or better

x	Major Requirement (OSU)	COCC Approved Transfer Courses:
	CH 201: Chemistry for Engineering Majors	CH 221: General Chemistry
	CH 202/205: Chem. For Engineering Major + Lab	CH 222: General Chemistry II
	COMM 114: Argument & Critical Discourse	COMM 114: Argument & Discourse
	CS 162: Intro. to Computer Science II	CS 162: Computer Science II
	ECON 201: Intro. to Microeconomics	EC 201: Microeconomics
	ENGR 100: The OSU Engineering Student	ENGR 100: Intro to Engineering I
	ENGR 102: Design Engineering & Problem Solving	ENGR 102: Intro to Engineering II
	ENGR 103: Engineering Computation & Algorithmic Thinking	ENGR 103: Intro to Engineering III
	ENGR 201: Electrical Fundamentals I	ENGR 201: Electrical Fundamentals I

ENGR 202: Electrical Fundamentals II	ENGR 202: Electrical Fundamentals II
ENGR 211: Statics	ENGR 211: Statics
ME 217: Mechanical Engineering Dynamics	OSU Only
MTH 251: Differential Calculus	MTH 251: Calculus I
MTH 252: Integral Calculus	MTH 252: Calculus II
MTH 254: Vector Calculus I	MTH 254: Vector Calculus I
MTH 256: Applied Differential Equations	MTH 256: Applied Differential Equations
MTH 264: Intro to Matrix Algebra	MTH 261A: Intro to Linear Algebra
PH 211: General Physics with Calculus	PH 211: General Physics I
PH 212: General Physics with Calculus	PH 213: General Physics III
PH 213: General Physics with Calculus	PH 212: General Physics II
ST 314: Introduction to Statistics for Engineers	OSU Only
WR 121Z: Composition I	WR 121Z: Composition I
WR 227Z: Technical Writing	WR 227Z: Technical Writing

Third & Fourth year courses: All courses must be completed with a C grade or better

x	Major Requirement (OSU)	COCC Approved Transfer Courses:
	ECE 271/272: Digital Logic Design + Lab	OSU Only
	ECE 322: Electronics I	OSU Only
	ESC 322: Electronics I Laboratory	OSU Only
	ENGR 390: Engineering Economy	OSU Only
	ESC 331: Intro to Fluid Mechanics	OSU Only
	ESC 340: Intro. to Experimentation	OSU Only
	MATS 321: Introduction to Materials Science	OSU Only
	ESC 440: Computational Methods for Engineers	OSU Only
	ENGR 415: Engineering Capstone Design I	OSU Only
	ENGR 416: Engineering Capstone Design II	OSU Only
	ESE 330: Modeling & Analysis of Dynamic Systems	OSU Only
	ESC 395: Engineering Project Management	OSU Only
	ME 310: Introduction to Thermodynamics	OSU Only

Restricted Electives or Option

Students who select an Engineering Science degree option must complete 28 unique credits to meet the option requirement. Refer to each option for a list of its unique courses.

Energy Systems Engineering Option: The Energy Systems Engineering option provides Engineering Science students with the opportunity to focus on the design, processes, and systems used to convert, distribute, and store energy with the 28 CH of required electives listed below.

x	Major Requirement (OSU)	COCC Approved Transfer Courses:
	ESE 355: Energy Regulation	OSU Only
	ESE 430: Feedback Control Systems	OSU Only
	ESE 450: Energy Generation Systems	OSU Only
	ESE 470: Energy Distribution Systems	OSU Only
	ESE 471: Energy Storage Systems	OSU Only
	IE 415: Simulation and Decision Support Systems	OSU Only
	IE 425: Industrial Systems Optimization	OSU Only

Engineering Computing Option: The Engineering Computing Option provides students the opportunity to apply computer science techniques for processing, analyzing, and extracting meaning from collections of data with the 28 CH of required electives listed below.

x	Major Requirement (OSU)	COCC Approved Transfer Courses:
	CS 261: Data Structures	CS 260: Data Structures
	CS 290: Web Development	OSU Only
	CS 325: Analysis of Algorithms	OSU Only
	CS 340: Introduction to Databases	OSU Only
	CS 434: Machine Learning and Data Mining	OSU Only
	CS 450: Introduction to Computer Graphics	OSU Only
	MTH 231: Elements of Discrete Mathematics	MTH 231: Discrete Mathematics I

Choose Your Own Path: Students may also design their own individualized track by taking 28 credits from the list below.

x	Major Requirement (OSU)	COCC Approved Transfer Courses:
	CS 261: Data Structures	CS 260: Data Structures
	CS 290: Web Development	OSU Only
	CS 325: Analysis of Algorithms	OSU Only
	CS 340: Intro. to Databases	OSU Only
	CS 434: Machine Learning & Data Mining	OSU Only
	CS 450: Introduction to Computer Graphics	OSU Only
	ENGR 213: Strength of Materials	ENGR 213: Strength of Materials
	ENGR 248: Engineering Graphics & 3-D Modeling	CIS 135S1: Solidworks I
	ESE 355: Energy Regulation	OSU Only
	ESE 430: Feedback Control Systems	OSU Only
	ESE 450: Energy Generation Systems	OSU Only
	ESE 470: Energy Distribution Systems	OSU Only
	ESE 471: Energy Storage Systems	OSU Only
	ESE 499: Special Topics	OSU Only
	IE 415: Simulation and Decision Support Systems	OSU Only
	IE 425: Industrial Systems Optimization	OSU Only
	ME 316: Mechanics of Materials	OSU Only
	ESC 332: Introductory Heat Transfer	OSU Only
	ME 333: Thermodynamics II	OSU Only
	ME 382: Intro. To Design	OSU Only
	ME 383: Mechanical Component Design	OSU Only
	MTH 231: Elements of Discrete Mathematics	MTH 231: Discrete Mathematics

NOTES

* All info is subject to change at catalog policy
 All PH courses need to be taken at the same institution

Baccalaureate Core (Students admitted Spring 2025 and earlier only)

- Complete one course in each Perspective category with no more than two in the same department.
- Full listing of Central Oregon CC courses that fulfill Bacc Core requirements:
admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-central-oregon-community-college

	Baccalaureate Core Requirement	Non-AAOT/ASOT track	AAOT/ASOT track
SKILLS COURSES	Writing I Writing II Speech (Writing III) Fitness (HHS 231 and 241)	WR 121Z English Comp WR 227Z in Major COMM 114 in Major See COCC Bacc Core guide	AAOT completes AAOT completes AAOT completes AAOT completes

	Math	MTH 251 in Major	AAOT completes
PERSPECTIVE COURSES	Biological Science Physical Science Additional Bio or Phys Science Cultural Diversity (CD) Difference, Power, & Discrimination (DPD) Literature and the Arts (LA) Social Processes & Institutions (SPI) Western Culture (WC)	See COCC Bacc Core guide PH 211-213 in Major CH 221-222 in Major See COCC Bacc Core guide See COCC Bacc Core guide See COCC Bacc Core guide ECON 201 in Major See COCC Bacc Core guide	AAOT completes AAOT completes AAOT completes AAOT completes AAOT completes AAOT completes AAOT completes AAOT completes
SYNTHESIS COURSES	Contemporary Global Issues Science, Technology, & Society	SUS 350 in Major (at OSU) OSU Only	OSU Only OSU Only

Core Education (Students admitted Summer 2025 and onward)

- Students who complete the Core Transfer Map (CTM) or the Associate of Arts Oregon Transfer (AAOT) degree will have completed the Foundational Core requirements. Course specific transfer tables to be published soon.

FOUNDATIONAL CORE	Writing Foundations	WR 121Z
	Arts and Humanities: General	CTM or AAOT
	Arts and Humanities: Global	CTM or AAOT
	Quantitative Literacy and Analysis	CTM or AAOT
	Communication, Media and Society	CTM or AAOT
	Social Science	CTM or AAOT
	Scientific Inquiry and Analysis (2 courses)	CTM or AAOT
SIGNATURE CORE	Difference, Power and Oppression Foundations	CTM or AAOT
	Transitions	OSU Only
	Difference, Power and Oppression Advanced	OSU Only
	Seeking Solutions	OSU Only
	Writing Elevation	WR 227z or OSU Only
Writing Intensive Curriculum	OSU Only	

COCC - The Core Transfer Map (CTM) is designed for students who plan to transfer to an Oregon public university. Composed of 30 credits in writing, math, social sciences, sciences, arts and letters, and electives, the CTM meets at least 30 credits of general education requirements for a bachelor's degree at any Oregon public university. Students interested in transferring in a specific major should consult with an academic advisor to select specific CTM classes that can also fulfill lower-division requirements in their planned major. Students who believe they have completed CTM requirements and would like it notated on their transcripts should submit a request via the [application for Certificate/Degree form](#).

Students admitted Spring 2025 or prior will complete the Baccalaureate Core for general education. AAOT, ASOT, MTM complete Skills and Perspectives of Baccalaureate Core.

coreeducation.oregonstate.edu/bacc-core-students-starting-spring-2025-and-prior

Advising Contacts

Central Oregon Community College	COCC Career Services, Academic Advising, Personal Counseling (CAP) cocc.edu/departments/cap/advising/default.aspx
Cascades Admissions Advisor	OSU Cascades Admissions Advisor Schedule appt: osucascades.edu/admissions/admissions-advising
Consider Degree Partnership Program (DPP) take courses at COCC and OSU	osucascades.edu/degree-partnership-program

declare your major at COCC early meet with your OSU Advisor while completing COCC courses	
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