



Umpque Community College Transfer Guide Bachelor of Science in Energy Systems Engineering

Important Note:

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.

Transfer Admissions:

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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.

- 180 total college credits
- 60 upper division credits
- 45 out of last 75 credits must be OSU credits

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>

Important Notes:

- **It is the student's responsibility to double check that all requirements are met.** The advisor can suggest courses and assist the student in constructing a plan of study, but the student in the end is responsible for assuring all requirements for graduation are met.
- Degree requirements are subject to change and dependent on catalog year of admission and major declaration.
- MECOP Internship information: www.mecopinc.org/

Students will work with their Academic Advisor and use the Bacc Core approved list for OSU-Cascades to choose courses for the Bacc Core requirements. To find information about Bacc Core or for the approved list, visit:

<https://admissions.oregonstate.edu/course-articulations>

Baccalaureate Core:

x	Skills Requirements	Non-AAOT course	AAOT or ASOT
	Health/Fitness	HPE 295	AAOT completes
	Mathematics	MTH 251 in major	AAOT completes
	Writing I [^]	WR 121 in major	AAOT completes
	Writing II	WR 227 in major	AAOT completes
	Speech [^]	SP 111/112 in major	AAOT completes
x	Perspective Requirements: no more than 2 from 1 department		
	Cultural Diversity	See Bacc Core guide	AAOT completes
	Literature & the Arts	See Bacc Core guide	AAOT completes
	Social Processes & Institutions	ECON 201 in major	AAOT completes
	Western Culture	See Bacc Core guide	AAOT completes
	Physical Science	PH 211-213 in major	AAOT completes
	Biological Science	See Bacc Core guide	AAOT completes
	Additional Science (Physical or Biological)	CH 221-222 in major	AAOT completes
	Difference, Power & Discrimination	See Bacc Core guide	AAOT completes
x	Synthesis Requirements: cannot be from the same department		
	Contemporary Global Issues – Met by SUS 350 (in ESE Major)	OSU Only	OSU Only
	Science, Technology & Society	OSU Only	OSU Only

A student who has completed (or plans on completing) an ASOT-Business or an AAOT has completed all Skills & Perspectives requirements in the Bacc Core. Students still need to complete synthesis courses.

Major Requirements

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

x	Major Requirement (OSU)	Umpqua CC Approved Transfer Courses:
	ENGR 112: Intro. to Engineering Computing	ENGR 112: Problem Solving & Technology
	ENGR 201: Electrical Fundamentals I	ENGR 201: Electrical Fundamentals
	ENGR 211: Statics	ENGR 211: Statics
	ENGR 212: Dynamics	ENGR 212: Dynamics
	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: Differential Equations
	MTH 341: Linear Algebra I	MTH 253 + MTH 261: Calculus III + Intro. to Linear Algebra
	CH 201: Chemistry for Engineering Majors	CH 221: General Chemistry w/Lab
	PH 211: General Physics with Calculus	PH 211: General Physics I w/Calculus
	PH 212: General Physics with Calculus	PH 212: General Physics II w/ Calculus
	PH 213: General Physics with Calculus	PH 213: General Physics III w/Calculus
	COMM 111 or COMM 114: Public Speaking or Argument & Critical Discourse	SP 111/112: Fundamentals of Public Speaking/ Persuasive Speech
	WR 121: English Composition	WR 121: Academic Composition
	IE 212: Computational Methods for IE	OSU Only
	MIME 101: Introduction to MIME	ENGR 111: Engineering Orientation I
	ENGR 202: Electrical fundamentals II	ENGR 202: Electrical Fundamentals II
	ST 314: Intro. to Statistics for Engineers	MTH 265: Stats for Science and Engineers
	CH 202/205: Chem. For Engineering Major + Lab	CH 222: General Chemistry II w/Lab
	WR 327: Technical Writing	WR 227: Technical Report Writing
	Choose one (Lower Division Tech Elective): ENGR 213: Strength of Materials or ENGR 248: Engineering Graphics & 3-D Modeling	Choose one (Lower Division Tech Elective): ENGR 213: Strength of Materials or ENGR 245: Engineering Graphics & Design

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

x	Major Requirement (OSU)	Umpqua CC Approved Transfer Courses:
	ME 311: Introduction to Thermal-Fluid Sciences	OSU Only
	ME 312: Thermodynamics	OSU Only
	ME 331: Introductory to Fluid Mechanics	OSU Only
	ME 332: Heat Transfer	OSU Only
	ESE 450: Energy Generation Systems	OSU Only
	ESE 470: Energy Distribution Systems	OSU Only
	ESE 471: Energy Storage Systems	OSU Only
	ESE 355: Energy Regulation	OSU Only
	ESE 330: Modeling & Analysis of Dynamic Systems	OSU Only
	ESE 360: Energy Consumption Analysis	OSU Only
	ESE 430: Feedback Control Systems	OSU Only
	IE 415: Simulation and Decision Support Systems	OSU Only
	IE 425: Industrial Systems Optimization	OSU Only
	IE 471: Project Management in Engineering	OSU Only
	ESE 497: MIME Capstone Design	OSU Only
	ESE 498: MIME Capstone Design	OSU Only
	Choose one (Lower Division Tech Elective): ME 444 or ESE 499	OSU Only

Business & Sustainability Courses: All courses must be completed with a C grade or better

x	Major Requirement (OSU)	Umpqua CC Approved Transfer Courses:
	BA 357: Operations Management	OSU Only
	ENGR 390: Engineering Economy	OSU Only
	ECON 201: Intro. to Microeconomics	ECON 201: Intro to Microeconomics
	SUS 350: Sustainable Communities	OSU Only

NOTES

* All info is subject to change at catalog policy

See Academic Advisor for Restricted Elective information

All PH courses need to be taken at the same institution