OREGON STATE UNIVERSITY ARCHITECTURAL ENGINEERING

2024-2025 Catalog Year

FIRST YEAR

Fall	Winter	Spring
ENGR 100 The OSU Engineering Student F, W, S, U (3)	**ENGR 102** Design Engineering & Problem Solving F, W, S, U (3)	**ENGR 103** Computation & Algorithmic Thinking F, W, S, U (3) *ENGR 102*
MTH 251 Differential Calculus BaccCore: Math F, W, S, U (4) *MTH 112Z*	**MTH 252** Integral Calculus F, W, S, U (4) *MTH 251*	**MTH 254** Vector Calculus I F, W, S, U (4) *MTH 252*
CH 201 Chemistry for Engineers 1 F, W (3) *MTH 111Z*	**CH 202** Chemistry for Engineers 2 W, S (3) *CH 201*	**AEC 250, ECON 201, GEOG 240, or GEOG 250** BaccCore: SPI F, W, S, U (3/4)
WR 121Z Composition I BaccCore: WR 1 F, W, S, U (4)	**CH 205** Chemistry for Engineers Lab W, S (1) *CH 202 (co-req)*	**Bacc Core:** Western Culture* F, W, S, U (3)
HHS 231 BaccCore: Lifetime Fitness for Health F, W, S, U (2)	**COMM 111Z or 114** BaccCore: Comm F, W, S, U (4/3)	**PAC** Bacc Core: Physical Activity* F, W, S, U (1)

SECOND YEAR

Fall	Winter	Spring
ENGR 211 Statics F, W, S, U (3) *MTH 252*	**ENGR 213** Strength of Materials F, W, S, U (3) *ENGR 211*	**WR 227Z** Technical Writing BaccCore: WR2 F, W, S, U (4) *WR 121Z*
MTH 264+265 Matrix Algebra & Series F, W, S, U (2+2) *MTH 252*	**MTH 256** Applied Differential Equations F, W, S, U (4) *MTH 254*	**ST 314** Statistics for Engineers F, W, S, U (3) *MTH 252*
PH 211 Physics w/ Calc 1 BaccCore: PhySci F, W, S, U (4)	**PH 212** Physics w/ Calc 2 BaccCore: PhySci F, W, S, U (4) *PH 211*	**PH 213** Physics w/ Calc 3 F, W, S, U (4)
CCE 207 CCE Seminar F (1) *ENGR 103*	**CCE 201** Graphics & Design F, W (3) *MTH 111Z*	**CCE 203** Virtual Design & Construction W, S (3) *CCE 201*
Bacc Core: Cultural Diversity* F, W, S, U (3)	**ART 321, 322, or 323** Architecture History BaccCore: Lit & Arts W, S (3)	**Bacc Core:** Difference, Power, & Discrimination* F, W, S, U (3)

KEY:

F, W, S, U – Term course is offered (F - Fall, W - Winter, S - Spring, U - Summer).

(X) – Number of credits. ***Course in italics –*** Prerequisite (or co-requisite).

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THIRD YEAR

Fall	Winter	Spring
CE 311 Fluid Mechanics F (4) *MTH 256, ENGR 211, PH 213*	**ARE 341** Fundamentals of HVAC W (4) *CE 311*	**CCE 321** CCE Materials F, W, S (4) *ENGR 213*
CEM 471 Electrical Facilities F (4) *CCE 207*	**ARE 361** Fundamentals for Lighting Design W (4) *CEM 471*	**ENGR 201** Electrical Fundamentals F, W, S, U (3) *MTH 251 & 252*
CEM 442 Building Construction Management F, S (4) *CCE 207*	**CE 381** Structural Theory I F, W (4) *ENGR 213*	**CE 382** Structural Theory II W, S (4) *CE 381, MTH 264+265*
ARE 310 Architecture Studio F (4) *Junior Standing*	**CEM 472** Mechanical Facilities W, S (3) *CCE 207*	**Focus Area Technical Elective**** S (3/4)

FOURTH YEAR

Fall	Winter	Spring
CE 383 Design of Steel Structures F, W (4) *CE 382*	**ARE 418** Professional Practice W (4) *See Notes^*	**ARE 419** ARE Design S (3) *ARE 418^*
ARE 451 Advanced Building Construction Methods F (4) *CCE 442*	**CCE 422** Green Building Materials F, W (3) *CCE 321*	**Bacc Core:** Contemporary Global Issues* F, W, S, U (3)
CE 420 Engineering Planning F, W (4) *Senior Standing*	**Bacc Core:** Biological Sciences* F, W, S, U (4)	**Bacc Core:** Science, Technology, & Society* F, W, S, U (3)
Focus Area Technical Elective** F (3/4)	**Focus Area Technical Elective**** W (3/4)	**Focus Area Technical Elective**** S (3/4)

NOTES:

***Bacc Core:** Recommended courses below. For full list of Bacc Core course options, visit https://catalog.oregonstate.edu/earning-degrees/bcc/

Biological Sciences: BI 101 or SUS 102. **Western Culture:** AEC 253, ART 210, or PHL 205. **Difference, Power, & Discrimination:** ES 353, GEOG 203, GEOG 333, or SUS 331. **Cultural Diversity:** choice.
Contemporary Global Issues: BA 432, BI 301, FES 365, GEOG 300, GEOG 331, H 388, PHL 440, or SUS 350. **Science, Technology & Society:** ENGR 350, PH 313, PPOL 441, or WSE 385.

^ARE 418 & 419: Capstone course series that must be taken in consecutive terms. **ARE 418 prerequisites:** ARE 341, ARE 361, CE 382, & one focus area technical elective.

****Focus Area Technical Electives:** Course recommendations below for each focus area. Students must take at least 14 credit hours of technical electives.
Lighting Focus: ARE 461-Lighting Design For Built Environment 1, ARE 462-Lighting Design For Built Environment 2, ARE 499-Daylighting, ARE 499-Parametric Design.
HVAC Focus: ARE 499-Indoor Air Quality, ARE 499-Building Energy Analysis Modeling, ARE 499-Parametric Design, 4th course-choice.
Structures Focus: CE 372-Geotechnical Engineering I, CE 481-Reinforced Concrete, CE 484-Wood Design, 4th course-choice.