

ASSOCIATE OF SCIENCE ENGINEERING EMPHASIS

The Associate of Science with an emphasis in engineering is designed for students who intend to transfer and earn a Bachelor's degree from a four-year college or university, majoring in one of the mainstream disciplines of chemical, civil, computer, electrical, or mechanical engineering. The curriculum has been specifically designed to meet most of the lower-division requirements for mechanical, electrical, and civil engineering degree programs at Oregon State University and Portland State University. With minor modifications, the curriculum can be adapted

to satisfy most of the lower-division requirements for Computer and Chemical Engineering degree programs. Specific requirements vary depending upon the institution and the discipline, making it very important to work with an advisor and the most current curriculum revisions.

The Associate of Science degree is theoretically oriented, preparing students to use scientific methods for problem solving in practical engineering situations. There are other degrees and certificate programs at Southwestern oriented for students who want to enter

the workforce immediately and/or want to verify that engineering is a suitable career selection.

GRADUATION REQUIREMENTS

Students must complete a minimum of 90 credit hours with a minimum Grade Point Average (GPA) of 2.0 (C) average or better. All courses in this program must be completed with a 'C' or better. Thirty (30) of the last 45 credits must be earned at Southwestern before the Associate of Science degree is awarded.

Courses that are developmental in nature, designed to prepare students for college transfer courses, are not applicable to this degree.

Complete the graduation application process one term prior to the term of completion (i.e., spring term graduates must apply during winter term)



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PREREQUISITES	CIS101 (2) Computers in Society	Reading Score of ASSET39 COMPASS69	MTH112 (4) Elementary Functions	WR90 (3) Paragraph Fundamentals (or placement test score)	
FALL = 15 CREDITS	ENGR111 (3) Engineering Orientation	MTH251 (4) Calculus I (Differential Calculus)	PH211 (5) General Physics with Calculus	WR121 (3) English Composition	
WINTER = 18 CREDITS	ENGR112 (3) Engineering Computation	MTH252 (4) Calculus II (Integral Calculus)	PH212 (5) General Physics with Calculus	WR122 (3) English Composition	(3) Arts and Letters or Social Sciences Course ¹
SPRING = 18 CREDITS	ENGR245 (3) Engineering Graphics and Design	MTH252 (4) Calculus III (Infinite Sequence & Series)	PH213 (5) General Physics with Calculus	WR227 (3) Report Writing	(3) Arts and Letters or Social Sciences Course ¹

51 CREDITS = FIRST YEAR TOTAL

FALL = 18 CREDITS	CHEM221 (5) General Chemistry	ENGR201 (3) Electrical Fundamentals I	ENGR211 (3) Statics	MTH254 (4) Vector Calculus I	(3) Arts and Letters or Social Sciences Course ¹
WINTER = 18 CREDITS	CHEM222 (5) General Chemistry	SP111 (3) Fundamentals of Public Speaking	ENGR212 (3) Dynamics	MTH255 (4) Vector Calculus II	(3) Arts and Letters or Social Sciences Course ¹
SPRING = 14-16 CREDITS	(3) - (5) Engineering Specific Elective ²	(3) Health/Fitness Course ³	(4) Mathematics Specific Elective ⁴	MTH256 (4) Differential Equations	

50-52 CREDITS = SECOND YEAR TOTAL

101-103 CREDITS = TOTAL RECOMMENDED PROGRAM CREDITS

PROGRAM NOTES

¹Arts and Letters/Social Sciences courses selected from each of the following areas: Arts and Letters - two courses from: ENG104, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206; PHL101 or 102 (not both).

Social Sciences - Processes and Institutions, one course from: ANTH103; ECON201, 202; PS201, 202; SOC204, 205; Western Culture, one course from: HST101, 102, 103, 201, 202, 203.

²Engineering Specific Elective: One course selected from the following

list (after consultation with and advisor): CHEM223; ENGR202, 213.

³One health/fitness course selected from HE250, PE231 or three credits of PE185.

⁴Mathematics Specific Elective: One course selected from the following list (after consultation with an advisor): MTH243, 260, 265.

⁵Students planning to transfer to Oregon State University (OSU) should also consider taking one biological science course from the following list (a general Baccalaureate course requirement at OSU): BI101, 201, 234.

- The following courses are also appropriate for various engineering degree programs and will generally transfer to most four-year colleges and universities: CS160, 161, 162; MTH231, 232.