

B.S. in Engineering Management

Catalog Year 2025-26

This program is not available for classes 2029 and beyond, please contact the EMG Program for details.

Below is the *advised sequence* of courses for this degree program on Main Campus as of 1/15/2025.

Official degree requirements and course prerequisites are in the University General Catalog; prerequisites are subject to change.

Course Number and Title	Units	Prerequisites/Enrollment Requirements
1st Semester		
MATH 122A/B or MATH 125 Calculus I with Applications	3/5	Appropriate Math Placement
*CHEM 151 Chemical Thinking I or CHEM 161/163 or MSE 109 Foundations of Materials Chemistry for Applications	4	Appropriate Math Placement
ENGL 101 or 107 or 109H First-Year Composition	3	
ENGR 102A/B Introduction to Engineering or ENGR 102	3	<u>ENGR102A & 102B</u> : Pre- or Co-requisite of MATH 112 or higher; First-Year Status; College of Engineering Major; must not have taken ENGR102
UNIV 101 Intro to the General Education Experience	1	
Semester Total	14/16	
2nd Semester		
MATH 129 Calculus II	3	MATH 122B or 125 with C or higher
*CHEM 152 Chemistry Thinking II or CHEM 162/164 or MSE 110 Solid State Chemistry or MCB 181 R/L Into Biology I	4	<u>CHEM 152 & MSE 110</u> : CHEM 151 or 141/143 or 161/163; <u>MCB 181R/L</u> : Appropriate Math Placement
ECE 101 Programming I or CSC 110 Intro to Computer Programming I	4	<u>ECE 101</u> : MATH 112, 120R, 122B or 125 or placement at the level of MATH 120R; <u>CSC 110</u> : MATH 112 with C or higher
ENGL 102 or 108 First-Year Composition	3	ENGL 101 or ENGL 107
†General Education: Building Connections	3	
Semester Total	17	
3rd Semester		
MATH 223 Vector Calculus or MATH 243 Discrete Math or MATH 254 Differential Equations	3/4	MATH 129 with C or higher
*PHYS 141 Introductory Mechanics or PHYS 161H	4	MATH 122B or 125 or Appropriate Math Placement Level
SIE 265 Engineering Management I	3	MATH 122B or 125
General Education: Exploring Perspectives (Humanist)	3	
†General Education: Building Connections	3	
Semester Total	16/17	
4th Semester		
CE 214 Statics	3	PHYS 141 or 161H; MATH 129
CHEE 201 Elements of Chemical & Environmental Engr I (Fall Only) or AME 230 Thermodynamics or BE 284 Biosystems Thermal Engineering (Fall Only)	3	<u>CHEE 201</u> : MATH 122B or 125, concurrent enrollment or completion of MATH 129 and CHEM 152 or 162/164; <u>AME 230</u> : PHYS 141 or PHYS 161H; <u>BE 284</u> : MATH 129, PHYS 141
PHYS 241 Introductory Electricity and Magnetism or PHYS 261H	4	<u>PHYS 241 or 261H</u> : PHYS 141 or 140 or 161H; MATH 129 or Appropriate Math Placement Level
SIE 295S Systems & Industrial Engineering Sophomore Colloquium	1	SIE 265 (concurrent enrollment)
SIE 270 Mathematical Foundations of Systems & Industrial Engineering	3	ECE 101 or 110; MATH 129, PHYS 141
General Education: Exploring Perspectives (Artist)	3	
Semester Total	17	

*Each of the following foundational science courses satisfies the requirements for General Education: Exploring Perspectives (Natural Scientist): CHEM 151 or 152 or 161 or 162; or PHYS 141 or 161H.

Advanced Standing is required for 300- and 400-level engineering courses (see your academic advisor for details).

Course Number and Title	Units	Comments
5th Semester		
SIE 305 Introduction to Engineering Probability and Statistics	3	
SIE 340 Deterministic Operations Research	3	
ECE 207 Elements of Electrical Engineering or ECE 220 Basic Circuits	3/5	If taking ECE 220, consult advisor regarding class schedule
Engineering Minor Course	3	
Engineering Minor Course	3	
Semester Total	15/17	
6th Semester		
SIE 465 Supply Chain Management	3	
SIE 431 Simulation Modeling and Analysis	3	
SIE 462 Production Systems Analysis	3	
SIE 457 Project Management	3	
Engineering Minor Course	3	
General Education: Exploring Perspectives (Social Scientist)	3	
Semester Total	18	
7th Semester		
SIE 415 Technical Sales and Marketing	3	
SIE 498A (Yuma) or ENGR 498A Interdisciplinary Capstone	2-3	Senior Status: pre-requisite: SIE 457; co-requisite: SIE 406
Engineering Minor Course	3	
**Technical Writing: CE 301 or ENGL 306 or 307 or 308	3	Consult major advisor for course approval
SIE 406 Quality Engineering	3	
Semester Total	14/15	
8th Semester		
SIE 498B (Yuma) or ENGR 498B Interdisciplinary Capstone	3	Senior Status
SIE 414 Law for Engineers and Scientists	3	
BNAD 302 Human Side of Organizations or CE 483 Construction Cost Estimating (Fall only)	3	
Engineering Minor Course	3	
Engineering Minor Course	3	
UNIV 301 General Education Portfolio	1	
Free Elective	0-1	Dependent on selection of General Education, 3 rd semester math course, and capstone. Consult advisor for approval
Semester Total	16/17	

†Students should work closely with their academic advisor to select General Education: Building Connections courses; some course work in the major, such as some Technical Elective courses, may also fulfill General Education: Building Connections requirements

**CE 301 or ENGL 307 or 308 (UWGEC Approved) will fulfill GE Building Connections if taken as a technical writing course.