

# B.S. IN ENGINEERING MANAGEMENT

## CATALOG YEAR 2015-2016

Below is the *advised sequence* of courses for this degree program and prerequisites as of 4/30/15. The official degree requirements and prerequisites can be found in the University General Catalog and the prerequisites are subject to change.

COURSE NUMBER AND TITLE	UNITS	PREREQUISITES
<b>1<sup>ST</sup> SEMESTER</b>		
MATH 122A/B OR MATH 125 Calculus I with Applications	5/3	Appropriate Math Placement
CHEM 151 General Chemistry I OR CHEM 105A/106A	4	
ENGL 101 OR 107 OR 109H First-Year Composition	3	
ENGR 102A/B Introduction to Engineering OR ENGR 102	3	Concurrent Enrollment or completion of MATH 122B or MATH 125
Tier I General Education	3	
<b>2<sup>ND</sup> SEMESTER</b>		
MATH 129 Calculus II	3	MATH 122B or MATH 125
CHEM 152 General Chemistry II OR CHEM 105B/106B OR MSE 110	4	For CHEM 152: CHEM 151. For MSE 110: CHEM 105A or CHEM 151
ECE 175 Computer Programming for Engineering Applications OR CSC 127A Introduction to Computer Science OR CSC 227 Program Design Development	3	For ECE 175: Concurrent Enrollment or completion of MATH122B or MATH 125
ENGL 102 OR 108 OR 109H First-Year Composition	3	ENGL 101, ENGL 107
Tier I General Education	3	
<b>3<sup>RD</sup> SEMESTER</b>		
MATH 223 Vector Calculus	4	MATH 129 with C or higher
PHYS 141 Introductory Mechanics OR PHYS 161H	4	MATH 122B or MATH 125; concurrent enrollment or completion of MATH 129
SIE 265 Engineering Management I	3	ENGR 102 or ENGR 102 A/B and MATH 122B or 125
Tier I General Education	3	
Tier II General Education	3	
<b>4<sup>TH</sup> SEMESTER</b>		
CE 214 Statics	3	PHYS 141; MATH 129
CHEE 201 Elements of Chemical Engineering I OR AME 230 Thermodynamics	3	For CHEE 201: MATH 122B or 125, ECE 175, CHEM 152, ENGR 102 or ENGR 102 A/B. For AME 230: MATH 223
PHYS 241 Introductory Electricity and Magnetism OR PHYS 261H	4	PHYS 141 or PHYS 161H; MATH 129
SIE 295S Systems & Industrial Engineering Sophomore Colloquium	1	
SIE 270 Mathematical Foundations of Systems and Industrial Engineering	3	MATH 129, ECE 175 or CSC 127A, PHYS 141
Tier I General Education	3	

COURSE NUMBER AND TITLE	UNITS
<b>CURRENT PREREQUISITES FOR UPPER DIVISION COURSES CAN BE FOUND IN THE UA GENERAL CATALOG</b>	
<b>ADVANCED STANDING IS REQUIRED FOR 3XX AND 4XX COURSES (SEE ADVISOR FOR REQUIREMENTS)</b>	
<b>5<sup>TH</sup> SEMESTER</b>	
SIE 305 Introduction to Engineering Probability and Statistics	3
SIE 340 Deterministic Operations Research	3
ECE 207 Elements of Electrical Engineering <b>OR</b> ECE 220 Basic Circuits	3/5
Technical Elective - See major advisor for course approval	3
Technical Elective - See a major advisor for course approval	3
<b>6<sup>TH</sup> SEMESTER</b>	
SIE 367 Engineering Management II	3
SIE 457 Project Management	3
SIE 431 Simulation Modeling and Analysis	3
SIE 462 Production Systems Analysis	3
Technical Elective – See major advisor for course approval	3
<b>7<sup>TH</sup> SEMESTER</b>	
SIE 415 Technical Sales and Marketing	3
ENGR 498A <b>OR</b> SIE 498A Senior Design Projects I	3
COMM 312 Applied Organizational Communication <b>OR</b> ENGL 308 Technical Writing <b>OR</b> ENGL 307 Business Writing	2/3
Technical Elective – See major advisor for course approval	3
Technical Elective – See major advisor for course approval	3
<b>8<sup>TH</sup> SEMESTER</b>	
ENGR 498B <b>OR</b> SIE 498B Senior Design Projects II	3
SIE 414 Law for Engineers and Scientists	3
SIE 464 Cost Estimation	3
SIE 406 Quality Engineering <b>OR</b> MIS 465 Managing for Quality Improvement	3
Tier II General Education	3
Technical Elective – See major advisor for course approval	3

\*Tier I and II General Education Courses must meet University general education requirements. One course must be recognized by the university as meeting the Diversity Requirement.