

# B.S. IN ENGINEERING MANAGEMENT

## CATALOG YEAR 2018-2019

Below is the *advised sequence* of courses for this degree program and prerequisites as of 3/07/18.

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	Appropriate Math Placement
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 125
Tier I General Education	3	
<b>2<sup>ND</sup> SEMESTER</b>		
MATH 129 Calculus II	3	MATH 122B or 125
CHEM 152 General Chemistry II or CHEM 105B/106B or MSE 110	4	For CHEM 152: CHEM 151 or 105A/106A For MSE 110: CHEM 151
ECE 175 Computer Programming for Engineering Applications OR CSC 110 Intro to Computer Programming I	3/4	For ECE 175: Concurrent Enrollment or completion of MATH122B or 125 CSC 110: MATH 112
ENGL 102 or 108 First-Year Composition	3	ENGL 101 or ENGL 107
Tier I General Education	3	
<b>3<sup>RD</sup> SEMESTER</b>		
MATH 223 Vector Calculus	4	MATH 129 with C or better
PHYS 141 Introductory Mechanics or PHYS 161H	4	MATH 122B or 125; concurrent enrollment or completion of MATH 129
SIE 265 Engineering Management I	3	ENGR 102 A/B or 102 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 (Fall Only) or AME 230 Thermodynamics	3	For CHEE 201: MATH 122B or 125, concurrent enrollment or completion MATH 129 and CHEM152 or 105B, 106B; For AME 230: PHYS 141
PHYS 241 Introductory Electricity and Magnetism or PHYS 261H	4	PHYS 141 or 161H; MATH 129
SIE 295S Systems & Industrial Engineering Sophomore Colloquium	1	SIE 265
SIE 270 Mathematical Foundations of Systems and Industrial Engineering	3	MATH 129, PHYS 141, ECE 175 or CSC 127A or CSC 110
Tier I General Education	3	

COURSE NUMBER AND TITLE	UNITS
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**CURRENT PREREQUISITES FOR UPPER DIVISION COURSES CAN BE FOUND IN THE UA GENERAL CATALOG**

**ADVANCED STANDING IS REQUIRED FOR 3XX AND 4XX COURSES (SEE ADVISOR FOR REQUIREMENTS)**

**5<sup>TH</sup> 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
Engineering Minor Course	3
Engineering Minor Course	3

**6<sup>TH</sup> SEMESTER**

SIE 367 Engineering Management II	3
SIE 431 Simulation Modeling and Analysis	3
SIE 462 Production Systems Analysis	3
Engineering Minor Course	3
Engineering Minor Course	3

**7<sup>TH</sup> SEMESTER**

SIE 415 Technical Sales and Marketing	3
ENGR 498A Cross-Disciplinary Design (Fall Only) – Senior Status	3
SIE 457 Project Management	3
COMM 312 Applied Organizational Communication OR ENGL 308 Technical Writing OR ENGL 307 Business Writing	3
Engineering Minor Course	3

**8<sup>TH</sup> SEMESTER**

ENGR 498B Cross-Disciplinary Design (Spring Only) – Senior Status	3
SIE 414 Law for Engineers and Scientists	3
SIE 464 Cost Estimation	3
SIE 406 Quality Engineering or MIS 465 Managing for Quality Improvement	3
Tier II General Education	3
Engineering Minor Course	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.