

B.S. IN ENGINEERING MANAGEMENT

CATALOG YEAR 2019-2020

Below is the *advised sequence* of courses for this degree program and prerequisites as of 12/13/18.

The official degree requirements and prerequisites found in the University General Catalog and the prerequisites are subject to change.

COURSE NUMBER AND TITLE	UNITS	PREREQUISITES
1ST SEMESTER		
MATH 122A/B or MATH 125 Calculus I with Applications	5/3	Appropriate Math Placement
CHEM 151 General Chemistry I or CHEM 161/163	4	Appropriate Math Placement
ENGL 101 or 107 or 109H First-Year Composition	3	
ENGR 102A/B Introduction to Engineering or ENGR 102	3	ENGR102A: MATH 113 or 120R & CHEM 151; ENGR102B: Concurrent enrollment or completion of MATH 122B or 125
Tier I General Education	3	
2ND SEMESTER		
MATH 129 Calculus II	3	MATH 122B or 125
CHEM 152 General Chemistry II or CHEM 162/164 or MSE 110	4	For CHEM 152: CHEM 151 or 161/163 For MSE 110: CHEM 151
ECE 175 Computer Programming for Engineering Applications OR CSC 110 Introduction 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	
3RD SEMESTER		
MATH 223 Vector Calculus	4	MATH 129 with C or better
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
Tier I General Education	3	
Tier II General Education	3	
4TH SEMESTER		
CE 214 Statics	3	PHYS 141 or 161H; 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 162/164; For AME 230: PHYS 141
PHYS 241 Introductory Electricity and Magnetism or PHYS 261H	4	For PHYS 241 or 261H: PHYS 141 or 161H; MATH 129 or appropriate Math Placement Level
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	

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)****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
Engineering Minor Course	3
Engineering Minor Course	3

6TH 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

7TH SEMESTER

SIE 415 Technical Sales and Marketing	3
SIE 498A or ENGR 498A Cross-Disciplinary Design (Fall Only) – Senior Status	2/3
SIE 457 Project Management	3
ENGL 308 Technical Writing	3
Engineering Minor Course	3

8TH SEMESTER

SIE 498B or 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	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.