

B.S. IN BIOSYSTEMS ENGINEERING

20-21 PCC Transfer guide

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

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

UA COURSE NUMBER AND TITLE	UNITS	PCC course
1ST SEMESTER		
MATH 122A/B or MATH 125 Calculus I with Applications	5/3	MAT220
CHEM 151 General Chemistry I or CHEM 161/163	4	CHEM 151IN
ENGL 101 or 107 or 109H First-Year Composition	3	WRT 101
ENGR 102A/B Introduction to Engineering or ENGR 102	3	ENG 102IN
Tier I General Education	3	
2ND SEMESTER		
MATH 129 Calculus II	3	MATH 122A/B or 125 C or better
CHEM 152 General Chemistry II or CHEM 162/164	4	CHEM 151 or 161/163
PHYS 141 Introductory Mechanics or PHYS 161H	4	PHY 210 IN
ENGL 102 or ENGL 108 First-Year Composition	3	WRT 102
Tier I General Education	3	
3RD SEMESTER		
CE 214 Statics	3	ENG210
BE 284 Biosystems Thermal Engineering (Fall only)	3	ENG 232
BE 201 Introduction to Biosystems Engineering	2	MATH 122B or 125
MATH 223 Vector Calculus	4	MATH 129 with C or better
MCB 181R/L Introductory Biology I OR PLS 240 Plant Bio	4	BIO 181 HC for UA MCB 181 or BIO 184IN for US PLS 240
4TH SEMESTER		
BE 205 Engineering Analytic Computer Skills (Spring only)	3	UA only
MATH 254 Intro to Ordinary Differential Equations	3	MATH 129 or 223 with C or better
PHYS 241 Introductory Electricity and Magnetism or PHYS 261H	4	PHY 216IN
ECOL 182R/L Introductory Biology II or MIC 205 A/L General Microbiology or PSIO 201 Human Anatomy and Physiology	4	BIO 182 HC for UAEcol or BIO 201 IN for UA PSIO
Tier 1 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		
CE 218 Mechanics of Fluids or AME 331 Intro to Fluid Mechanics AME 331 students must take AME 250 prior	3	ENG 218 or ENG 220 (requirement for UA AME331)
SIE 265 Engineering Management I	3	
BE 221 Introduction to Computer Aided Design or BE 220 Engineering Graphics and Design with Auto Cad	3	ENG 122IN for BE 221
BE 447 Sensors and Controls	3	
SIE 305 Engineering Probability and Statistics or AREC 239 Introduction to Statistics and Data Analysis	3	
6TH SEMESTER		
BE 423 Biosystems Analysis and Design	3	
BE Design Elective – See major advisor for course approval	3	
BE Technical Elective – See major advisor for course approval	3	
ALC 422 or ENGL 308 or ENV5 408 or CE 301 Technical Writing	3	
Tier I General Education	3	
7TH SEMESTER		
BE 496A Seminar in Engineering Careers and Professionalism	1	
BE 498A Senior Design: Biosystems Engineering Design I or ENGR 498A Cross-disciplinary Design (Fall Only) – Senior Status	3	
Technical Elective – See major advisor for course approval	3	
BE Design Elective – See major advisor for course approval	3	
BE 493 Internship	1	
AME 324A Mechanical Behavior of Engineering Materials	3	
Tier II General Education	3	
8TH SEMESTER		
BE 498B Senior Design: Biosystems Engineering Design I or ENGR 498B Cross-disciplinary Design (Spring Only) – Senior Status	3	
Technical Elective – See major advisor for course approval	3	
Technical Elective – See major advisor for course approval	3	
BE Design Elective – See major advisor for course approval	3	
Tier II General Education	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.