

# B.S. IN ENVIRONMENTAL ENGINEERING

## CATALOG YEAR 2020-2021

Below is the *advised sequence* of courses for this degree program and prerequisites as of 12/18/19.

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 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 112 or 120R & CHEM 151; 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 with C or better
CHEM 152 General Chemistry II or CHEM 162/164 or MSE 110	4	For CHEM 152 and MSE 110: CHEM 151 or 161/163
AME 105 Introduction to MATLAB I	1	Concurrent enrollment or completion of MATH 122B or 125
ENGL 102 or 108 or 109H First-Year Composition	3	ENGL 101 or ENGL 107
PHYS 141 Introductory Mechanics or PHYS 161H	4	MATH 122B or 125 or appropriate Math Placement Level
<b>3<sup>RD</sup> SEMESTER</b>		
CHEE 201 Elements of Chemical and Environmental Engineering I (Fall Only)	3	MATH 122B or 125 & Completion or concurrent enrollment MATH 129, CHEM 152 or 162/164
CHEE 201L Elements of Chemical and Environmental Engineering I Computational Lab (Fall Only)	1	AME 105, Concurrent Enrollment or completion of AME 205
AME 205 Introduction to MATLAB II	1	AME 105; Concurrent Enrollment or completion of CHEE 201L
MATH 223 Vector Calculus	4	MATH 129 with C or better
CHEM 241A Lectures in Organic Chemistry or CHEM 242A or 246A	3	CHEM 152 or 162/164
CHEM 243A Organic Chemistry Laboratory I or CHEM 247A	1	CHEM 152 or 162/164; Prerequisites or concurrent in CHEM 241A or 242A or 246A
Tier I General Education	3	
<b>4<sup>TH</sup> SEMESTER</b>		
CHEE 202 Elements of Chemical & Environmental Engineering II	4	CHEE 201, 201L, Prerequisite or concurrent enrollment in MATH 254
CHEE 270 Intro to Environmental Engineering	1	CHEE 201, CHEM 241A or 242A or 246A and CHEM 243A or 247A
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	For PHYS 241 or 261H: PHYS 141 or 161H; MATH 129 or appropriate Math Placement Level
ENGR 211C Engineering Science Module - Statics	1	PHYS 141, MATH 129
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>	
Earth Science Elective	3
CE 218 Mechanics of Fluids	3
CHEE 377 Microbiology for Engineers	3
CHEM 480A Physical Chemistry (Fall only)	3
Technical Elective – See major advisor for course approval	3
Tier II General Education	3
<b>6<sup>TH</sup> SEMESTER</b>	
CHEE 300 Intro to Water Chemistry for Engineers	3
SIE 305 Introduction to Engineering and Probability and Statistics or MATH 363 Introduction to Statistical Methods	3
CHEE 370R Environmental and Water Engineering	3
Technical Elective – See major advisor for course approval	3
Tier I General Education	3
<b>7<sup>TH</sup> SEMESTER</b>	
CHEE 400A Environmental Engineering Laboratory I	1
ENGR 498A Cross-disciplinary Design (Fall only, must take with ENGR 498B in spring semester <b>or</b> CHEE 442 Chemical Engineering Design Principles (Fall only, must take CHEE 443 in spring semester)	3
CHEE 476A Water Treatment System Design	3
CHEE 476B Wastewater Treatment Design System	3
Engineering Elective – See major advisor for course approval	3
Tier II General Education	3
<b>8<sup>TH</sup> SEMESTER</b>	
CHEE 474 Fate and Transport Processes in Environmental Engineering	3
ENGR 498B Cross-disciplinary Design (if on ENGR 498 sequence) <b>or</b> CHEE 443 Chemical Engineering Plant Design (if on CHEE 442/443 sequence)	3
CHEE 400B Environmental Engineering Laboratory II	1
ATMO 469B Air Pollution II: Aerosols	3
CHEE 478 Introduction to Hazardous Waste Management	3
Engineering 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.