

B.S. IN ENVIRONMENTAL ENGINEERING

CATALOG YEAR 2021-2022

Below is the *advised sequence* of courses for this degree program and prerequisites as of 12/18/20.

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
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	<u>ENGR102A</u> : MATH 112; <u>ENGR102B</u> : Concurrently enrolled or completion of MATH 122B or 125; FR & SOPH Status
Tier I General Education	3	
Semester Total		18/16
2ND SEMESTER		
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
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
Tier I General Education	3	
Semester Total		17
3RD SEMESTER		
CHEE 270 Intro to Environmental Engineering	4	CHEE 201, CHEM 241A or 242A or 246A and CHEM 243A or 247A
CHEE 205 Intro to MATLAB and Excel	3	MATH 122B or MATH 125
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
Semester Total		15
4TH SEMESTER		
CHEE 202 Elements of Chemical & Environmental Engineering II	4	CHEE 201, and (CHEE 201L and AME 105 and AME 205 or CHEE 205); Completion or concurrent enrollment in MATH 254
CHEE 300 Intro to Water Chemistry for Engineers	3	CHEM 241A or 242A or 246A and CHEM 243A or 247A and CHEE 270
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	
Semester Total		18

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)

5TH SEMESTER

CE 218 Mechanics of Fluids	3
CHEE 377 Microbiology for Engineers	3
Earth Science Elective	3
Technical Elective – See major advisor for course approval	3
Tier II General Education	3
Semester Total	15

6TH SEMESTER

CHEE 370R Environmental and Water Engineering	3
SIE 305 Introduction to Engineering and Probability and Statistics or MATH 363 Introduction to Statistical Methods	3
Technical Elective – See major advisor for course approval	3
Engineering Elective – See major advisor for course approval	3
Tier II General Education	3
Semester Total	15

7TH SEMESTER

CHEE 442 Chemical Engineering Design Principles (Fall only, must take CHEE 443 in spring semester) OR ENGR 498A Cross-disciplinary Design (Fall only, must take with ENGR 498B in spring semester)	3
CHEE 475 Water Treatment System Design	3
CHEE 476 Wastewater Treatment Design System	3
CHEE 400A Environmental Engineering Laboratory I	1
Advanced Science Course: EHS 418, ATMO 469A, ENV5 464 (Fall Only)	3
Tier II General Education	3
Semester Total	16

8TH SEMESTER

ENGR 498B Cross-disciplinary Design (if on ENGR 498 sequence) or CHEE 443 Chemical Engineering Plant Design (if on CHEE 442/443 sequence)	3
CHEE 474 Fate and Transport Processes in Environmental Engineering	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
Semester Total	16

*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.