

Environmental Engineering

Accredited by the Engineering Accreditation Commission of ABET, www.abet.org

1. University Requirements: (23)

Writing, Rhetoric and American Cultures (WRA)	4
Integrative Studies in Humanities (IAH)	8
IAH 201- 210 and IAH 211 or >	
Integrative Studies in Social Sciences (ISS)	8
ISS 2XX and ISS 3XX	
Bioscience: BS161 Cell and Molecular Biology	3

2. College Requirements: (30)

*CEM 141 General Chemistry	4
OR	
*CEM 151 General and Description Chemistry	4
*EGR 100 Introduction to Engineering Design	2
*EGR 102 Introduction to Engineering Modeling	2
*MTH 132 Calculus I	3
*MTH 133 Calculus II	4
MTH 234 Multivariable Calculus	4
MTH 235 Differential Equations	3
*PHY 183 Physics for Scientists & Engineers I	4
PHY 184 Physics for Scientists & Engineers II	4
* College Admission Requirement	

3. Major Requirements: (66-68)

a. Complete all of the following courses: (48)

BS 162 Organismal and Population Biology	3
CE 221 Statics	3
CE 273 Civil & Environmental Engineering Measurements	2
CE 274 Graphics for Civil & Environmental Engineers	1
CE 321 Introduction to Fluid Mechanics	4
CE 371 Sustainable Civil & Environmental Egr Systems	3
CE 372 Risk Analysis in Civil & Environmental Engineering	2
CE 495 Senior Design in Civil & Environmental Engineering	4
CEM 161 Chemistry Laboratory I	1
CHE 201 Materials and Energy Balances	3
ENE 280 Principles of Environ Engineering and Science	3
ENE 421 Engineering Hydrology	3
ENE 422 Applied Hydraulics	3
ENE 480 Environmental Measurements Laboratory	1
ENE 481 Environmental Chemistry: Equilibrium Concepts	3
ENE 483 Water & Wastewater Engineering	3
ENE 487 Microbiology for Environmental Science & Egr	3
ENE 489 Air Pollution: Science and Engineering	3

b. Complete one of the following courses: (3)

CEM 142 General & Inorganic Chemistry	3
CEM 152 Principles of Chemistry	3

c. Complete one of the following courses: (3-4)

CHE 321 Thermodynamics for Chemical Engineering	4
ME 201 Thermodynamics	3

d. Complete one of the following courses: (3-4)

GLG 201 The Dynamic Earth	4
GLG 301 Geology of Continents and Oceans	3

e. Technical Electives. Complete at least three courses for a minimum of 9 credits of electives from the list below or by approval of the department. Students may substitute a 3-credit experiential education experience for one of the three courses. The experience is obtained in a minimum of three out-of-classroom experiences through engineering cooperative education. Students must contact the department for approval.

ANS 427 Environmental Toxicology and Society	3
BE 469 Sustainable Bioenergy Systems	3
BE 482 Diffuse-Source Pollution Engineering	3
CSS 455 Environmental Pollutants in Soil and Water	3
CSUS 320 Environmental Planning and Management	3
CSUS 425 Environmental Impact Assessment	3
FW 414 Aquatic Ecosystem Management	3
FW 417 Wetland Ecology and Management	3
FW 420 Stream Ecology	3
FW 443 Restoration Ecology	3
FW 472 Limnology	3
GLG 411 Hydrogeology	3
GLG 412 Glacial Geology & the Record of Climate Change	3
GLG 421 Environmental Geochemistry	4
IBIO 303 Oceanography	4
IBIO 353 Marine Biology (W)	4
IBIO 355 Ecology	3
IBIO 446 Environmental Issues and Public Policy	3
ISS 310 People and Environment (I)	4

Other Electives (Variable)

Total Credits Required for Degree

The requirements listed above apply to students admitted to the Department of Civil & Environmental Engineering (CEE) beginning Fall 2016. The Department of Civil & Environmental Engineering (CEE) constantly reviews program requirements and reserves the right to make changes as necessary. Consequently, each student is strongly encouraged to consult with his/her adviser to obtain assistance in planning an appropriate schedule of courses. Students who have questions about Environmental Engineering should contact the Civil & Environmental Engineering Department Advising Office, 3579 Engineering Building, phone (517) 355-3274. For scheduling academic advising appointments visit: <https://msu.campus.eab.com>

Last revised May 2017

Environmental Engineering Sample Program

Freshman Year				Sophomore Year			
Fall	Credits	Spring	Credits	Fall	Credits	Spring	Credits
CEM 161	1	CEM 142 or 152	3	CE 274	1	BS 161	3
CEM 141 or 151	4	CE 273	2	ENE 280	3	GLG 201 or 301	4/3
EGR 100	2	EGR 102	2	MTH 234	4	MTH 235	3
MTH 132	3	MTH 133	4	PHY184	4	CE 221	3
WRA 101	4	PHY 183	4	IAH 201-210	4	ISS 2XX	4
		Elective	3				
Total	14	Total	18	Total	16	Total	16/17

Junior Year				Senior Year			
Fall	Credits	Spring	Credit	Fall	Credit	Spring	Credits
BS 162	3	CE 372	2	Tech Elective	3/4	Tech Elective	3/4
CE 371	3	ENE 422	3	Elective	3/4	Elective	3/4
CE 321	4	ENE 487	3	ENE 421	3	CE 495	4
CHE 201	3	ENE 489	3	ENE 483	3	ISS 3XX	4
ENE 480	1	ME 201 or CHE 321	3/4	IAH 211 or >	4		
ENE 481	3	Tech Elective	3/4				
Total	17	Total	17/19	Total	16/18	Total	14/16

Last Revised August 2016

PROGRAM EDUCATIONAL OBJECTIVES FOR CIVIL AND ENVIRONMENTAL ENGINEERING

Department of Civil and Environmental Engineering
 Michigan State University
 November 2013

The Department of Civil and Environmental Engineering has adopted the following program educational objectives (PEOs) which are shared by its baccalaureate programs in both civil and environmental engineering. Recent graduates (e.g., 3-5 years after graduation) of the programs will be enjoying career success and:

- have advanced in civil or environmental engineering practice and/or pursued advanced studies;
- be engaged in life-long learning;
- be engaged in professional practice consistent with the principles of sustainable development;
- have pursued continuing professional development and leadership; and
- have obtained licensure.