



# ENVIRONMENTAL FOCUS AREA: Informatics

Department of Civil and Environmental Engineering

### General Education (19 sh) sh

ALL	RHET:1030 Rhetoric	4
F/S	Diversity & Inclusion	3
ALL	Be Creative	3
ALL	Approved Gen Ed Course	3
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### Math & Basic Science Core (24 sh) sh

F/S	MATH:1550 Math I: Single Variable Calculus (P: ALEKS score ≥ 75 or MPT Level 3 score ≥ 9)	4
ALL	MATH 1560 Math II: Multivariable Calculus (P: MATH:1550)	4
ALL	MATH:2550 Math III: Matrix Algebra (P: MATH:1550)	2
ALL	MATH:2560 Math IV: Differential Equations (P: MATH:1560 & MATH:2550)	3
F/S	STAT:2020 Probability & Statistics For Engr & Phys Sci (P: MATH:1560)	3
ALL	CHEM:1110 Principles of Chemistry I (P: ALEKS score ≥ 55 or MPT Level 3 score ≥ 9)	4
ALL	PHYS:1611 Introductory Physics I / Lab (C: MATH:1550)	4

### Engineering Core (7 sh) sh

F	ENGR:1000 Engineering Success for First-Year Students (First semester standing)	1
F	ENGR:1100 Intro to Engineering Problem Solving	3
F/S	ENGR:1300 Intro to Engineering Computing (C: MATH:1550)	3

### EnvE Requirements (58 sh) sh

ALL	BIOL:1411 Foundations of Biology (P: CHEM:1110)	4
ALL	CHEM:1120 Principles of Chemistry II (P: CHEM:1110 with a minium grade of C-)	4
ALL	CHEM:2210 Organic Chemistry I (no lab required)	3
ALL	ENGR:2110 Statics (P: MATH:1550; C: MATH:1560 & PHYS:1611)	2
ALL	ENGR:2130 Thermodynamics (P: CHEM:1110 & PHYS:1611; C: MATH:1560)	3
F/S	ENGR:2510 Fluid Mechanics (P: MATH:2560 & ENGR:2710; C: ENGR:2130)	4
ALL*	ENGR:2710 Dynamics (P: ENGR:2110 & MATH:1550)	3
ALL*	ENGR:2720 Materials Science (P: CHEM:1110; C: MATH:1550)	3
ALL	EES:1080 Introduction to Environmental Science (no lab required)	3
S	CEE:3155 Principles of Environmental Engineering (with Lab) (P: CHEM:1110)	4
S	CEE:3371 Principles of Hydraulics and Hydrology (P: ENGR:2510)	3
S	CEE:3430 Water Treatment (with Lab) (P: ENGR:2510 & CEE:3155)	4
F	CEE:4102 Groundwater	3
F	CEE:4150 Environmental Chemistry (P: CHEM:1120)	3
F	CEE:4157 Environmental Engineering Design (P: CEE:3155)	3
F	CEE:4158 Solid and Hazardous Wastes	3
S	CEE:4159 Air Pollution Control Technology	3
F	CEE:4374 Water Resources Design (P: CEE:3371)	3

### CEE Capstone Design Courses (3 sh) sh

F/S	CEE:4850 Project Design & Management in CEE (P: final semester; C: CEE:3003)	3
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### CEE Professional Skills (4 sh) sh

S	CEE:1010 Introduction to Careers in Env. Engineering	0
S	CEE:2010 Professional Practice and Ethics	1
F	CEE:3001 Leadership Skills for Engineers (junior standing)	1
S	CEE:3002 Technical Communication in CEE (sophomore standing)	1
F	CEE:3003 Project Management Skills (senior standing)	1

### Required: Informatics (10 sh) sh

F	CS:2110 Programming for Informatics (P: ENGR:1300)	4
S	CS:2420 Analyzing Data for Informatics (P: CS:2110)	3
S	CS:2520 Human-Computer Interaction for Informatics (P: CS:2110, STAT:2020)	3

### Electives: Informatics (6 sh) sh

#### Electives: Focus Area, Minor, Certificate, etc. sh

select 2 courses from the list below

Any 3000 level or above course(s) in CEE		
F	CEE:2015 Civil Engineering Tools	2
S	ISE:2500 Engineering Economy (C: STAT:2020)	3
F/S	ENGR:2995 Intro to AI & Machine Learning in Engineering (P: ENGR:1300; C: MATH:2550)	3
F/S	ENGR:2730 Computers in Engineering (P: ENGR:1300)	3
F/S	GEOG:1050 Foundations of GIS	4
S	GEOG:3210 Health Work and Environment	3
F/S	OEH:4240 Global Environmental Health	3
F	ECON:3625 Environmental and Natural Resources Economics (P: ECON:1100& ECON:1200)	3

All other course(s) require approval for Focus Area credit  
(see CEE web site regarding the approval process)

Students in the Focus Area will receive a Minor in Informatics. Students must enroll in the minor through Computer Science.

Total Semester Hours Requirements: 130