

**Department of Civil & Environmental Engineering**  
**Departmental Electives: Environmental Engineering**  
**Effective Fall 2022**

*\* **Engineering Technical Electives** for Environmental Engineering (6 credits required)*

<u>Course Number and Title</u>	<u>Credits</u>
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**General Electives**

CIVE 305 Intermediate AutoCAD	3 credits
CIVE 405 Sustainable Civil/Environmental Engineering	3 credits
CIVE 511 Coastal Engineering	3 credits
CIVE 512 Irrigation Engineering	3 credits
CIVE 514 Hydraulic Structures	3 credits
CIVE 526 Pollution, Exposure, and the Environment	3 credits
CIVE 533 Biomolecular Tools for Engineers	3 credits

**Ecological Concentration**

CIVE 330 Ecological Engineering	3 credits
CIVE 413 Environmental River Mechanics	3 credits
CIVE 440 Non-point Source	3 credits
CIVE 521 Pollution Hydrometry	3 credits
CIVE 524 Modeling Watershed Hydrology	3 credits

**Energy Concentration**

MECH 330 Energy Engineering	3 credits
CIVE 424 Modern Oil and Gas	3 credits
CIVE 532 Wells and Pumps	3 credits

**Engineering Management Concentration**

ENGR 501 Foundations of Systems Engineering	3 credits
ENGR 502 Engineering Project and Program Management	3 credits
CIVE 574 Civil Engineering Project Management	3 credits

**Environmental Policy Concentration**

CIVE 525 Water Engineering: International Development	3 credits
CIVE 544 Water Resource Planning and Management	3 credits

### **Hazardous Waste and Remediation Concentration**

CIVE 423	Groundwater Engineering	3 credits
CIVE 458	Environmental Geotechnics	3 credits
CIVE 531	Groundwater Hydrology	3 credits
CIVE 558	Containment Systems for Waste Disposal	3 credits

### **Urban Water/Public Health Concentration**

CIVE 530	Environmental Engineering at the Water-Energy-Health Nexus	3 credits
CIVE 538	Aqueous Chemistry	3 credits
CIVE 540	Advanced Biological Wastewater Processing	3 credits
CIVE 541	Physical Chemical Water Treatment Processes	3 credits
CIVE 572	Analysis of Urban Water Systems	3 credits
CIVE 575	Sustainable Water and Waste Management	3 credits
CIVE 576	Engineering Applications of GIS AND GPS	3 credits
CIVE 578	Infrastructure and Utility and Management	3 credits

*\*Additional Technical Electives for Environmental Engineering (3 credits required)*

### **General Electives**

NR 319	Introduction to Geospatial Science	4 credits
NR 323	Remote Sensing and Image Interpretation	3 credits

### **Air/Climate Concentration**

ATS 555	Air Pollution	3 credits
ERHS 448	Environmental Contaminants: Exposure and Fate	3 credits
ESS 524	Foundations for Carbon/Greenhouse Gas Management	3 credits

### **Ecological Concentration**

BZ 471	Stream Biology and Ecology	3 credits
BZ 472	Stream Biology and Ecology Lab	1 credit
BZ 474	Limnology	3 credits
LIFE 320	Ecology	3 credits
RS 478	Ecological Restoration	3 credits

### **Energy Concentration**

AREC 444 Economics of Energy Resources 3 credits

### **Engineering Management Concentration**

MGT 305 Fundamentals of Management 3 credits

MGT 310 Human Resources Management 3 credits

MGT 320 Contemporary Management Principles/Practices 3 credits

### **Environmental Policy Concentration**

AREC 340 Introduction-Economics of Natural Resources 3 credits

AREC 342 Water Law, Policies, and Institutions 3 credits

JTC 461 Writing About Science, Health, and Environment 3 credits

### **Hazardous Waste and Remediation Concentration**

SOCR 455 Soil Microbiology 3 credits

SOCR 467 Soil and Environmental Chemistry 3 credits

SOCR 470 Soil Physics 3 credits

### **Urban Water/Public Health Concentration**

ERHS 320 Environmental Health – Water and Food Safety 3 credits

PSY 517 Perspectives in Global Health 3 credits

### **Please Note:**

**+At most, one course in business management or economics at the 300-level or above may be counted towards**