Sustainable Water Development, Graduate Certificate

Requirements

The graduate Certificate in Sustainable Water Development requires 15 s.h. of credit, including at least 9 s.h. earned at the University of Iowa. The 5000-level courses required for the certificate must be taken at the University of Iowa. Students must maintain a grade-point average of at least 2.50 in work for the certificate. The certificate is open to graduate students currently enrolled at the University of Iowa who are completing a degree program.

The Certificate in Sustainable Water Development requires the following coursework.

Required Courses

Course #	Title	Hours
All of these:		
CEE:5096	Water, Energy, and Food Nexus Seminar (taken for two semesters)	0
CEE:5350	Watershed Hydrology and Ecosystem Processes	3
CEE:5410	Politics and Economics of the Food, Energy, Water Nexus	3
URP:6209/ SDG:6000	Sustainable Communities Lab I	3

Electives

Students take two elective courses selected from the following list. For more information about approved certificate electives, contact the Sustainable Water Development Program coordinator.

Course #	Title	Hours
Two of these for at least 6 s.h.:		
CEE:4102	Groundwater	3
CEE:4104/EES:4660	Groundwater Modeling	3
CEE:4107/CBE:4410	Sustainable Systems	3
CEE:4118	Statistical Methods in Water and the Environment	3
CEE:4158/ OEH:4920	Solid and Hazardous Wastes	3
CEE:4187/ OEH:4540	Statistics for Experimenters	3
CEE:4370	Open Channel Flow and Sediment Transport	3
CEE:4385	International Perspectives in Water Sciences and Management	3
CEE:5156	Physical and Chemical Environmental Processes	3
CEE:6223	Environmental Boundary Layers	4
CEE:6253	Environmental Organic Chemistry	3
CEE:6255	Environmental Biotechnology and Bioremediation	3
ABRD:3445	India Winterim	arr.
ACCT:4300	Accounting Ethics and Law	3
ANTH:3110/ GHS:3110/ NAIS:3110	Colonialism and Indigenous Health Equity	3
BIOL:3663	Plant Response to the Environment	3
CBE:5140/ CEE:5513/ME:5113	Mathematical Methods in Engineering	3
CBE:5405	Green Chemical and Energy Technologies	3
CBE:5415/IGPI:5415	Satellite Image Processing and Remote Sensing of Atmosphere	3
CBE:5425/CEE:5115	Atmospheric Chemistry and Physics	3
CBH:5305	Evaluation: Approaches and Applications	3
CBH:6205	Designing and Implementing Interventions	3
CHEM:4760	Radiochemistry: Energy, Medicine, and the Environment	3
CHEM:4873	Atmospheric and Environmental Chemistry	3
CPH:3500/ GHS:3500	Global Public Health	3
ECE:5630	Sustainable Energy Conversion	3
ECON:3345	Global Economics and Business	3
ECON:3625/ URP:3135	Environmental and Natural Resource Economics	3
ECON:3800	Law and Economics	3
ECON:4090	Natural Resource Economics	3
ECON:4140	Labor Economics	3
EES:3390	Integrated Watershed Analysis	3
GEOG:3070/ GHS:3070	Hungry Planet: Global Geographies of Food	3
GEOG:3780/ GHS:3780/ HIST:3240	U.S. Energy Policy in Global Context	3
GEOG:4150/ GHS:4150/ IGPI:4150	Health and Environment: GIS Applications	3
GEOG:4500/ IGPI:4500	Advanced Remote Sensing	4
GEOG:4520/ IGPI:4520	GIS for Environmental Studies: Applications	3
GEOG:4580/ IGPI:4581	Introduction to Geographic Databases	3
GEOG:4750/ URP:4750	Environmental Impact Analysis	3
LAW:8433	Environmental Law	2-3
LAW:8622	International Environmental Law	3

LAW:8992	Water Law	arr.
MATH:4740/ CS:4740/IGPI:4740/ STAT:4740	Large Data Analysis	3
ME:4048	Energy Systems Design	4
OEH:4240	Global Environmental Health	3
OEH:4260/ GHS:4260	Global Water and Health	3
OEH:5620	Occupational Health	3
OEH:6460	Quantitative Exposure Assessment: Study Design and Evaluation	3
OEH:6710	Human Toxicology and Risk Assessment	3
PHYS:5811	Classical Electrodynamics I	3
PHYS:5812	Classical Electrodynamics II	3
URP:6205/ PBAF:6205	Economics for Policy Analysis	1,3
URP:6225/ PBAF:6225	Applied GIS for Planning and Policy Making	1-3
URP:6233/ PBAF:6233	Public Finance and Budgeting	3
URP:6242	Planning and City Administration	1
URP:6253/ PBAF:6253	Designing Sustainable and Healthy Cities	1-3
URP:6256/ PBAF:6256	Environmental Policy	3
URP:6257/ PBAF:6257	Environmental Management	3
URP:6258/ PBAF:6258	Systems and Scenario Thinking	3
URP:6273/ PBAF:6273	Community Development Through Creative Placemaking	3
URP:6295/ PBAF:6295	Economic Development Policy	3