Environmental Technology and Analysis Emphasis

Master of Science in Environmental Science and Policy

Students who select the Environmental Technology and Analysis emphasis may study concepts of: environmental modeling and remediation; municipal, industrial, and agricultural waste transformation, utilization and disposal; alternative energy systems and energy efficiency; or chemical, biological and geological aspects of ground or surface water systems. Students may be involved with evaluating alternative technologies and strategies for effective planning and policy implementation for the future. Principles and techniques of quantitative and qualitative analysis are applied to problems of supply, distribution, and utilization of natural resources and to the optimization of treatment and management costs in the context of public agencies, consulting firms and industries.

The Environmental Technology and Analysis area of emphasis prepares students to:

- design and conduct scientific investigations;
- collect, evaluate, and interpret data;
- make responsible decisions to implement appropriate technologies and strategies to solve environmental problems; and
- effectively communicate the results of environmental studies to other scientists, decision makers and the general public.

Graduates typically work as scientists, environmental specialists, or project managers with industry, commercial laboratories, engineering firms, or government agencies, where their work involves analysis, research, consulting, compliance, or enforcement.

Environmental Technology and Analysis (16 credits minimum)

Code	Title	Credits
Required Quantitative Course:		4
ENV S&P 755	Environmental Data Analysis	
Additional Courses - 12 credits		12
Choose any combination of the following courses listed below:		
Chemistry		
CHEM 520	Thermodynamics and Kinetics	
CHEM 522	Therymodynamics and Kinetics Laboratory	
CHEM 530	Biochemistry	
CHEM 531	Biochemistry Laboratory	
CHEM 602	Advanced Organic Chemistry	
CHEM 603	Advanced Organic Chemistry Laboratory	
CHEM 613	Instrumental Analysis	
Environmental Science:		
BIOLOGY 522	Environmental Microbiology	
ENV SCI 505	Environmental Systems	
ENV SCI 518	Pollution Control	
ENV SCI 520	The Soil Environment	
ENV SCI 523	Pollution Prevention	
ENV SCI 530	Hydrology	
ENV SCI 535	Water and Waste Water Treatment	
ENV SCI 615	Solar and Alternate Energy Systems	
ENV SCI 632	Hydrogeology	
ENV SCI 660	Resource Management Strategy	
ENV SCI 633	Ground Water: Resources and Regulations	
ENV SCI 664	Atmospheric Pollution and Abatement	
ENV S&P 724	Hazardous and Toxic Materials	
ENV S&P 740	Ecology and Management of Ecosystems	
ENV S&P 767	Environmental Technology and Analysis	
Environmental Policy and Planning:		
PU EN AF 551	Water Resources Policy and Management	
PU EN AF 578	Environmental Law	

PU EN AF 580	Global Environmental Politics and Policy
PU EN AF 615	Public and Nonprofit Budgeting
ENV S&P 713	Environmental & Natural Resource Economics
ENV S&P 752	Environmental Policy and Administration
Math and Statistics	
ENV S&P 760	Social Research Methods
MATH 529	Applied Regression Analysis
MATH 630	Design of Experiments
Seminar and Special Topics:	
ENV S&P 715	Seminar in Ecology and Evolution
ENV S&P 795	Special Topics
Total Credits	16