

# EARTH AND ENVIRONMENTAL SCIENCE (M.S.)

For details about this program, including program description, admission requirements, and contact information, click here (<https://www.montclair.edu/graduate/programs-of-study/earth-environmental-science-ms/>).

## Program Requirements

Code	Title	Credits
<b>Required Core Courses</b>		
EAES 505	Environmental Geoscience	3
EAES 700	Earth Systems Science	3
<b>Research in Geoscience Literature</b>		
EAES 594	Research in Geoscience Literature	1
<b>Required Specialization Courses</b>		
Complete 9-12 semester hours from the following: <sup>1</sup>		9-12
<i>Earth Surface Processes and Hydrology</i>		
EAES 530	Numerical Modeling of Earth Systems	
EAES 531	Hydroclimatology	
EAES 532	Applied Groundwater Modeling	
EAES 533	Water Resource Management	
EAES 539	Principles of Soil Science	
EAES 551	Coastal Geomorphology	
<i>Environmental Quality and Remediation</i>		
EAES 526	Geochemistry	
EAES 527	Organic Geochemistry	
EAES 528	Environmental Forensics	
EAES 529	Instrumental Environmental Analysis	
EAES 586	Urban Contamination	
EAES 591	Methods in Environmental Research	
<i>Geology and Geophysics</i>		
EAES 507	Tectonics	
EAES 508	Field Geology	
EAES 524	Igneous and Metamorphic Geology	
EAES 525	X-ray Microanalysis	
EAES 535	Geophysics	
EAES 544	Sedimentology	
EAES 550	Advanced Marine Geology	
<i>GIS and Remote Sensing</i>		
EAES 510	Geographic Information Systems	
EAES 511	Fundamentals of Remote Sensing of the Environment	
EAES 610	Spatial Analysis	
EAES 710	Advanced Geographic Information Systems	
<b>Free Elective Courses</b>		<b>0-10</b>
Complete 0-10 semester hours from the following:		
EAES 506	Introduction to Geographic Information Science and Remote Sensing	
EAES 541	Stratigraphy	
EAES 521	Optical Mineralogy	
EAES 522	Igneous Metamorphic Petrology	

EAES 592	Pro Seminar
EAES 509	Current Issues in Sustainability Science
EAES 562	Waste Management
EAES 563	Natural Resource Management
EAES 565	Environmental Change and Communication
EAES 575	Environmental Economics
EAES 660	Seminar in Environmental Management
BIOL 550	Special Topics in Microbiology
BIOL 570	Ecology
HLTH 502	Determinants of Environmental Health
HLTH 528	Program Planning and Evaluation
HLTH 565	Foundations of Epidemiology
CHEM 510	Hazardous Materials Management
CHEM 534	Separation and Analysis
CHEM 570	Advanced Biochemistry
STAT 532	Fundamentals of Statistics
<b>Culminating Experience</b>	
Select one of the following two options:	
Thesis	
EAES 698	Master's Thesis
Submit the completed Thesis original and one copy to the Graduate Office. See Thesis Guidelines for details.	
<b>Research &amp; Comprehensive Examination</b>	
EAES 593	Research Seminar
GRAD CMP	Comprehensive Examination
In the semester you will sit for exam, register for the section which matches your major & advisor. Successfully pass exam.	
<b>Total Credits</b>	
<b>32</b>	

<sup>1</sup> With the Thesis option, complete a minimum of 9 semester hours from one area of specialization. With the Research Seminar and Comprehensive Exam option, complete a minimum of 12 semester hours, either from one area of specialization only or from multiple areas.

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