

# ENVIRONMENTAL STUDIES, MES

The Masters of Environmental Studies (MES) program offers a rigorous academic grounding in environmental science and exceptional opportunities to conduct research in the field. In addition, students gain the professional networks and individualized professional development needed to excel in the environmental field, whether as a researcher, policy advocate, teacher or business executive.

**For more information:** <https://www.sas.upenn.edu/lps/graduate/mes/>  
[curriculum](https://www.sas.upenn.edu/lps/graduate/mes/curriculum/) (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/>)

## Curriculum

The Master of Environmental Studies program provides the knowledge base needed to understand complex environmental issues— and allows the flexibility to develop unique expertise and professional experience in a chosen field. With the help of a dedicated academic adviser, a curriculum suited precisely to the student's goals is developed.

Students will complete 12 course units (CU) that reflect a balance between disciplinary focus and interdisciplinary knowledge. The course of study includes the following elements:

Code	Title	Course Units
<b>Complete each of the following:</b>		
ENVS 5100	Proseminar: Contemporary Issues in Environmental Studies	1
ENVS 6998	Masters of Environmental Studies Capstone Seminar	1
Data Analytics Course		1
ENVS 5706	Modeling Geographical Objects	
ENVS 5716	Modeling Geographical Space	
ENVS 5726	Fundamentals of Data for Environmental Studies	
EESC 6376	Advanced Climate and Big Data	
EESC 6700	Advanced Remote Sensing	
Or another data analytics course with approval from the department		
Foundation Courses		4
ENVS 5000-9999		
EESC 5000-9999		
Professional Concentration Courses		5
Environmental Biology: Attribute BMEB ( <a href="http://catalog.upenn.edu/attributes/bmeb/">http://catalog.upenn.edu/attributes/bmeb/</a> )		
Environmental Policy: Attribute BMEP ( <a href="http://catalog.upenn.edu/attributes/bmep/">http://catalog.upenn.edu/attributes/bmep/</a> )		
Environmental Resilience and Adaptation: Attribute BMER ( <a href="http://catalog.upenn.edu/attributes/bmer/">http://catalog.upenn.edu/attributes/bmer/</a> )		
Environmental Sustainability: Attribute BMES ( <a href="http://catalog.upenn.edu/attributes/bmes/">http://catalog.upenn.edu/attributes/bmes/</a> )		
Resource Management: Attribute BMEM ( <a href="http://catalog.upenn.edu/attributes/bmem/">http://catalog.upenn.edu/attributes/bmem/</a> )		

Urban Environment: Attribute BMEU (<http://catalog.upenn.edu/attributes/bmeu/>)

**Total Course Units**

**12**

## Data Analytics Course (1 CU)

Effective data analysis and the ability to make data-driven decisions are integral to professional careers in the environmental sector. The data analytics course provides students with an opportunity to gain expertise in an area of data analytics relevant to their professional goals. The requirement can be fulfilled by taking one of the data analytics courses offered in the MES program or an approved data analytics course from other programs.

## Foundation Courses (4 CU)

Foundation courses help broaden students' knowledge in areas of environmental studies outside of their chosen concentration, and complement their chosen field. For example, if they are studying sustainability, their foundation course credits are an opportunity to learn about environmental law and policy, or build understanding of climate adaptation approaches, which will be necessary while working in the sustainability sector. Foundation courses allow students to make connections between different sectors and offer the opportunity to discover unexpected synergies and resonances in fields beyond their own. Foundation courses must be ENVS or EESC courses.

## Professional Concentration Courses (5 CU)

While foundation courses give students a broad understanding of environmental issues, the professional concentration courses help develop the expertise needed to pursue a career in a sub field of environmental studies.

Concentration courses may be taken in any of the 12 graduate Schools at the University (School of Engineering and Applied Science, Graduate School of Education, School of Design, School of Social Policy & Practice, The Wharton School of Business, Penn Law, etc.). Students work with an assigned academic adviser to select courses that best fit individual goals and skills gaps. Students choose from the following concentrations:

- Environmental Biology (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/environmental-biology/>)
- Environmental Policy (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/advocacy/environmental-policy/>)
- Environmental Resilience and Adaptation (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/advocacy/environmental-resilience-adaptation/>)
- Environmental Sustainability (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/environmental-sustainability/>)
- Resource Management (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/resource-management/>)
- Urban Environment (<https://www.sas.upenn.edu/lps/graduate/mes/curriculum/urban-environment/>)

If the student's professional aspirations are not reflected in one of the above concentrations, they can develop an Individualized concentration in conjunction with their academic adviser and with the approval of the Faculty Advisory Committee.

## Capstone Seminar (1 CU)

The capstone project is the culmination of the Master of Environmental Studies program, blending academic and professional experiences and

serving to emphasize the skills and knowledge developed in the program. The Capstone Seminar course takes students through the process of designing a project and developing their research methods, drawing from their learning in and outside the classroom to demonstrate mastery of their concentration area.

### **Time Frame**

Master of Environmental Studies students may enroll on either a part-time or full-time basis. Time to graduation will vary depending on how many classes are taken each semester and whether summer classes are taken. Full-time students can complete the program in two years, taking three or four classes per semester. Part-time students typically complete their work in three to four years, taking one or two classes per semester. Individuals working full time are advised to take no more than two courses per term.

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The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2025 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.

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