

# Marine and Environmental Sciences, PhD—Advanced Entry

The PhD in Marine and Environmental Sciences (MES) program provides students with advanced course work and training in the concentration areas of Marine Science, Geoscience, Sustainability, and Ecology and Evolution. Students admitted with a master's degree must take a statistics course and two semesters of seminar: one in the student's concentration and another of their choice. Transcripts detailing their previous course work will be submitted upon arrival to their dissertation committee and the marine and environmental sciences graduate committee to determine whether additional course work is required. The dissertation committee may require the student to pursue additional course work as needed to provide the necessary background for their program of study. Additional course work may also be required depending on the student's performance on written qualifying and oral examinations.

Students must pass three examinations during the course of their graduate studies:

1. An oral examination by the student's dissertation committee consisting of an oral presentation.
2. A proposal defense presented to the student's dissertation committee that explains the research areas that the student proposes to work in.
3. A defense of the student's written dissertation consisting of a public seminar, public question-and-answer period, and private defense of their work to their dissertation committee. Dissertation committees consist of at least four Northeastern faculty and one external faculty member.

A cumulative GPA of 3.000 is required for graduation. All PhD students are required to have at least one first-authored publication submitted to or accepted in a peer-reviewed journal prior to their defense. The PhD will be awarded following submission of a dissertation, approved by the candidate's dissertation committee, to the College of Science.

## Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

## Milestones

- Annual review
- Dissertation committee
- Qualifying examination
- Dissertation proposal
- Candidacy
- First-author publication
- Dissertation defense

## Core Requirements

Code	Title	Hours
Complete one of the following:		4
ENVR 6500 and ENVR 6501	Biostatistics and Lab for ENVR 6500	
EEMB 5522 and EEMB 5523	Experimental Design Marine Ecology and Lab for EEMB 5522	

Alternative statistics course as approved by graduate committee

## Readings

Complete the following (repeatable) course twice:	2
EEMB 8982	Readings

## Concentration

Complete one of the following concentrations:

- Ecology and Evolutionary Biology (p. 1)
- Sustainability Sciences (p. 1)
- Geosciences (p. 1)
- Marine Sciences (p. 1)

## ECOLOGY AND EVOLUTIONARY BIOLOGY

Code	Title	Hours
<b>Seminars</b>		
EEMB 7102	Seminar in Ecology and Evolutionary Biology	2
Complete one of the following:		2
EEMB 7103	Seminar in Sustainability Sciences	
EEMB Seminar in Marine Sciences		
EEMB 7104	Seminar in Geosciences	

## SUSTAINABILITY SCIENCES

Code	Title	Hours
<b>Seminars</b>		
EEMB 7103	Seminar in Sustainability Sciences	2
Complete one of the following:		2
EEMB Seminar in M(TBA)		
EEMB 7102	Seminar in Ecology and Evolutionary Biology	
EEMB 7104	Seminar in Geosciences	

## GEOSCIENCES

Code	Title	Hours
<b>Seminars</b>		
EEMB 7104	Seminar in Geosciences	2
Complete one of the following:		2
EEMB Seminar in M(TBA)		
EEMB 7102	Seminar in Ecology and Evolutionary Biology	
EEMB 7103	Seminar in Sustainability Sciences	

## MARINE SCIENCES

Code	Title	Hours
<b>Seminars</b>		
EEMB Seminar in Mar (TBA)		2
Complete one of the following:		2
EEMB 7102	Seminar in Ecology and Evolutionary Biology	
EEMB 7103	Seminar in Sustainability Sciences	
EEMB 7104	Seminar in Geosciences	

## Dissertation

Code	Title	Hours
Complete the following (repeatable) course twice:		
EEMB 9990	Dissertation	

## Program Credit/GPA Requirements

10 total semester hours required

Minimum 3.000 GPA required