Human Behavior and Sustainability Sciences, PhD (Boston)

Overview

The persistent failure to integrate the social, behavioral, and cognitive sciences with ecological and geophysical sciences is a critical friction point reducing the viability and effectiveness of sustainability solutions. Therefore, a degree program that combines training in psychology with the ecological and geophysical sciences will produce boundary-breaking scholars who can accelerate sustainability solutions that are robustly informed by the results of scientific research. The proposed curriculum integrates degree requirements from existing PhD programs in psychology and marine and environmental sciences (sustainability sciences concentration), with the addition of a set of specialized core courses and integrated cross-disciplinary research training. It also allows students broad latitude in designing their specialty within the parameters of the program.

The PhD in Human Behavior and Sustainability Sciences program provides students with the following advanced coursework and training. Students must pass two examinations during the course of their graduate studies to achieve candidacy:

1. A qualifying paper that the student will write and present to their dissertation committee.
2. A proposal defense presented to the student's dissertation committee that explains the research areas that the student proposes to work in.

At the end of the program, students will defend their written dissertation, which consists 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 University faculty and one external faculty member.

A cumulative grade-point average of 3.000 is required for graduation. The PhD will be awarded following submission of a dissertation, approved by the candidate's dissertation committee, to the College of Science.

Students who do not qualify for the doctoral degree, but who have completed required coursework with a cumulative GPA of 3.000 or better, may be eligible to receive a terminal MS Cross-Disciplinary Science *(*https://catalog.northeastern.edu/graduate/science/interdisciplinary/cross-disciplinary-science-ms-bos/*) degree. Note that no students will be admitted directly into the Cross-Disciplinary Science program to pursue a master's degree.*

Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

Milestones

Annual review
Dissertation committee
Qualifying paper and presentation
Dissertation proposal and presentation
Candidacy
Dissertation/dissertation defense
Teaching experience

Core Requirements

Code	Title	Hours
EEMB 7103	Seminar in Sustainability Sciences	2
EEMB 8103	Readings in Sustainability Sciences	2
ENVR 5450	Applied Social-Ecological Systems Modeling	4
PSYC 5180	Quantitative Methods 1	3
PSYC 5181	Quantitative Methods 2	3
PSYC 5410	Human Behavior and Sustainability	3
or ENVR 5410	Human Behavior and Sustainability	

Research

Code	Title	Hours
Complete two semesters from the following:		6
PSYC 8401	Research Project	
or EEMB 8984	Research	

Electives

Code	Title	Hours
Complete 8 semester hours from the following:		8
Psychology Breadth Courses		
PSYC 5110	Cognitive Science	
PSYC 5120	Proseminar in Sensation	
PSYC 5130	Proseminar in Perception	
PSYC 5140	Proseminar in Biology of Behavior	
PSYC 5150	Proseminar in Clinical Neuroscience	
PSYC 5170	Social and Affective Science	
Sustainability Breadth Courses		
EEMB 5130	Population Dynamics	
EEMB 5506	Biology and Ecology of Fishes	
EEMB 5518	Ocean and Coastal Processes	
EEMB 5522	Experimental Design Marine Ecology	
ENVR 5115	Advanced Topics in Environmental Geology	
ENVR 5150	Climate and Atmospheric Change	
ENVR 5260	Geographical Information Systems	
ENVR 5350	Sustainable Energy and Climate Solutions	
ENVR 5600	Coastal Processes, Adaptation, and Resilience	
ENVR 5700	Streams and Watershed Ecology	
ENVR 5750	Urban Ecology	
ENVR 5800	Climate Adaptation and Nature-Based Solutions	
ENVR 6150	Food Security and Sustainability	
ENVR 6500 and ENVR 6501	Biostatistics and Lab for ENVR 6500	
INSH 5301	Introduction to Computational Statistics	
INSH 5302	Information Design and Visual Analytics	
INSH 6300	Research Methods in the Social Sciences	
INSH 6406	Analyzing Complex Digitized Data	
INTL 5100	Climate and Development	
PHTH 5214	Environmental Health	
PPUA 5246	Participatory Modeling for Collaborative Decision Making	
PPUA 5249	Sustainable Urban Coastal Policy	
PPUA 5261	Dynamic Modeling for Environmental Decision Making	
PPUA 5267	Climate Policy and Justice	
PPUA 5268	International Environmental Policy	
Psychology Depth Courses		
PSYC 7250	Seminar in Clinical Neuroscience	
PSYC 7300	Advanced Quantitative Analysis	
Sustainability Depth Courses		
EEMB 7101	Seminar in Marine Sciences	
EEMB 7102	Seminar in Ecology and Evolutionary Biology	
EEMB 7103	Seminar in Sustainability Sciences	
EEMB 7104	Seminar in Geosciences	
ENVR 6102	Environmental Science and Policy Seminar 2	
LPSC 7312	Cities, Sustainability, and Climate Change	
POLS 7334	Social Networks	
PPUA 6101	Environmental Science and Policy Seminar 1	
PPUA 7346	Resilient Cities	
SOCL 7267	Environment, Health, and Society	

Dissertation

Code	Title	Hours

Please enroll in either EEMB 9990 or PSYC 9990 for one semester after achieving candidacy. In the following semester, please enroll in either EEMB 9991 or PSYC 9991.

Code	Title	Hours
EEMB 9990	Dissertation Term 1	
or PSYC 9990	Dissertation Term 1	
EEMB 9991	Dissertation Term 2	
or PSYC 9991	Dissertation Term 2	

Program Credit/GPA Requirements

31 total semester hours required

Minimum 3.000 GPA required