

M.P.S. IN NATURAL HAZARDS AND CATASTROPHES

Natural Hazards and Catastrophes (NHC)

The University of Miami’s Rosenstiel School of Marine and Atmospheric Science conducts world-class research on the earth systems responsible for these disasters, including the atmosphere, the ocean and solid earth. To meet society’s need for a skilled workforce, the Natural Hazards and Catastrophes program (<http://mps.rsmas.miami.edu/degree-program/natural-hazards-catastrophe>) offers an educational opportunity for students seeking to fill positions offered by the private and civil sectors to assess risks and exposures associated with natural hazards. The goal is to provide students with the skills and knowledge necessary to understand earth system natural hazards (atmospheric, oceanic, geological and hydrological) and the data analytics tools required to assess the associated risks (e.g. statistics, data management, programming, GIS, and remote sensing).

Course	Title	Credit Hours
Year One		
Fall		
RSM 612 or MES 608	Statistics for Environmental Management or Biometrics in Marine Science	3
MES 620	Environmental Law (or ELECTIVE)	3
MES 679	Special Topics (Decision Analysis: Natural Hazards and Catastrophes)	3
MGS 686	Special Topics (Natural Hazards: Solid Earth and Oceans)	3
Credit Hours		12
Spring		
OCE 637	Natural Hazards: Atmosphere and Ocean	3
MGS 634	Hydrological Hazards	3
MES 660 & MES 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory (Can be taken in Fall or Spring)	3
OCE 624	Applied Data Analysis	3
Credit Hours		12
Summer		
OCE 805	MPS Internship	6
Credit Hours		6
Total Credit Hours		30

Code	Title	Credit Hours
OCE 676	Wave Propagation in the Ocean Environment	3
ATM 765	General Circulation of the Atmosphere	3
OCE 661	Tropical Atmosphere and Ocean	3
ATM 731	Air-Sea Interaction	3
MES 720	Coastal Law and Policy	3
MES 618	Coastal Zone Management	3
MES 620	Environmental Law	3
MES 610	Environmental Planning and the Environmental Impact Statement	3
MGS 614	Geophysics	3
EPH 612	Global Health	3
EPH 600	Introduction to Public Health	3
ATM 651	Introduction to Atmospheric Science	3
MES 630	Port Operations and Policy	3
OCE 642	Physics of Remote Sensing I - Passive Systems	3
OCE 643	Physics of Remote Sensing II - Active Systems	3
MGS 679	Plate Tectonics	3
RSM 645	Scientific Communication	3
MSC 321	Scientific Programming in the Atmospheric Sciences	3
CAE 660	Sustainable Construction	3
EPH 640	Urban Environment and Public Health	3
CAE 630	Water Resources Engineering II	3
OCE 721	Waves and Tides I	3

Elective Options

Students may take any elective on the RSMAS campus with the consent of their faculty advisor. Below are a few examples of courses past students in this program used as electives.