

M.P.S. IN MARINE ECOSYSTEMS AND SOCIETY

Overview

The Master of Professional Science (M.P.S) in Marine Ecosystems and Society (MES) program offers six tracks: **Aquaculture, Coastal Zone Management, Exploration Science, Fisheries Management and Conservation, Marine Conservation, and Underwater Archaeology.**

Aquaculture Track

The Aquaculture (<https://mps.earth.miami.edu/degree-tracks/aquaculture/>) track focuses on the scientific, technological, environmental, social, economic, legal, political, management, and business aspects of sustainable aquaculture. The program covers all stages of planning and development, from site and species selection to feasibility studies, resource evaluation, hatchery and grow-out technology, and commercialization. The Aquaculture track is supported by an innovative and progressive research and development program in sustainable aquaculture focusing on emerging technologies. Research and development priority topics are innovative hatchery technology and environmentally responsible grow-out methods, such as offshore aquaculture and recirculating aquaculture systems.

Coastal Zone Management Track

The Coastal Zone Management (<https://mps.earth.miami.edu/degree-tracks/coastal-zone-management/>) (CZM) track introduces students to the legal and governance frameworks on topics such as coastal fisheries management, marine protected areas, coastal and environmental law, coastal culture, environmental impact assessment, and coastal development.

Exploration Science Track

The Exploration Science (<https://mps.earth.miami.edu/degree-tracks/exploration-science/>) (ESC) track is a multi-disciplinary approach for better understanding our planet and the challenges we collectively face. This track encourages field-based experiences and the application of skills within a context acknowledging the cultural and ethical implications of exploration. Exploration Science encourages creative thinking and problem-solving to find solutions across the natural sciences and humanities. This track includes curriculum in areas of citizen science, media production, and skills such as scientific diving, small boat handling, and expedition planning.

Students in this track have completed internships and been hired in areas of environmental education, surveying, the diving industry, resource management, citizen science, conservation, media production, government agencies, museums, and ecotourism companies.

Fisheries Management and Conservation Track

The Fisheries Management and Conservation (<https://mps.earth.miami.edu/degree-tracks/fisheries-management-and-conservation/>) (FMC) track allows students to develop the professional skills required to be a fisheries scientist with curriculum options in various relevant areas of interest, such as fisheries dynamics, fisheries management, fisheries surveys, and quantitative fisheries.

Marine Conservation Track

The Marine Conservation (<https://mps.earth.miami.edu/degree-tracks/marine-conservation/>)(MCO) track provides students with flexible, rigorous training in interdisciplinary marine science and conservation, from mastering theoretical and analytical techniques to learning essential skills for marine fieldwork. Students design a personalized curriculum that emphasizes their interests and professional goals while building the experience to work effectively in a variety of conservation-relevant fields.

Underwater Archaeology Track

The Underwater Archaeology (<https://mps.earth.miami.edu/degree-tracks/underwater-archaeology/>) track (UARCH) is, minimally, a **two-year program** that focuses on the theory, underwater cultural heritage management, and data collection techniques necessary to work within the field of archaeology and the broader general field of marine sciences.

Coursework integrates topics such as archaeological epistemology, site mapping and modeling, interpretation of shipwrecks and submerged sites, best management practices, marine protected areas, and marine geophysical technology and survey. UARCH students receive training as AAUS Science Divers during their first semester. Students will have opportunities to work side-by-side with professional archaeologists through internships and field projects with private, public, or non-governmental agencies, both nationally and internationally, and conduct relevant fieldwork.

Admission Requirements

General Prerequisites:

1. Bachelor of Science degree (B.S.) or Bachelor of Arts degree (B.A.)

Note to students: Deficiencies in required coursework may be considered on a case-by-case basis for otherwise highly qualified students or those demonstrating experience with these skills.

All application requirements are available here (<https://mps.earth.miami.edu/prospective-students/admissions/>).

Exploration Science Track

Additional Prerequisites:

- Completed undergraduate courses in biology, ecology, and chemistry are helpful, but not required, for pursuing graduate work in this program

Underwater Archaeology Track

Additional Prerequisites:

- B.A./B.S. in Anthropology, History, or related field
- Meet minimum Rosenstiel diving standards as outlined by the Rosenstiel Dive Office:
 - Minimum open water scuba certification from a nationally accredited dive training agency
 - Certified divers with more than 50 logged dives, especially those with prior scientific diving training, may qualify for the Experienced Diver Checkout and not be required to take RSM 600

Recommended:

- Participation in an archaeological field school prior to commencing the UARCH program
- Volunteer for terrestrial archaeological projects
- Ability to write professionally

Curriculum Requirements

Aquaculture Track

Code	Title	Credit Hours
Core Courses (18 credits)		
EVR 602 or EVR 625	Economics of Natural Resources Fisheries Socioeconomics and Management	3
MBE 612	Aquaculture I	3
MBE 613	Aquaculture II Lab	3
MBE 617	Aquaculture IV: Aquaculture Business, Regulatory, and Environmental Considerations	3
MBE 619	Aquaculture III	3
MBE 628	Seafood Market and Marketing	3
Electives (6 credits)		
The remaining courses may be selected from the following list or other courses approved by the academic advisor. *		
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	
MBE 686 or EVR 629	Fish Physiology Biology, Ecology, and Management of Mangrove Ecosystems	
Internship ¹		
EVR 805	MPS Internship	2-6
Additional Requirements		
RSM 700	Research Ethics	0
Total Credit Hours		30

* Refer to the list of additional elective options.

¹ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Additional Elective Options

Students may substitute elective coursework for one or more of the above courses with the consent of their academic advisor. Below are a few examples of courses that past students in this program took as electives.

Code	Title	Credit Hours
EVR 616	Ocean Policy	3
EVR 620	Environmental Law and Policy	3
EVR 671	Marine Conservation Biology	4
EVR 710	International Ocean Law and Governance	3
EVR 720	Coastal Law and Policy	3
MBE 614	Tropical Marine Biology	3
MBE 642	Oceans and Human Health	3
MBE 676	Diseases of Marine Organisms	3
RSM 612	Statistics for Marine Scientists	3
BIL 623	Advanced Biology of Marine Invertebrates	4

Business School electives are applicable, with approval from Academic Advisor

Curriculum Requirements

Coastal Zone Management Track

The Coastal Zone Management track requires the completion of one core course. The rest of the curriculum will be decided on a case-by-case basis during academic advising. However, students select from a variety of multidisciplinary courses across many departments and schools at Rosenstiel/UM, in a holistic effort to meet their personal and professional goals. A list of suggested electives is provided below.

Code	Title	Credit Hours
Core Course (3 credits)		
Students must complete one of the following courses:		
EVR 618 or EVR 720	Coastal Zone Management Coastal Law and Policy	3
Electives (21 credits)		21
The remaining courses may be selected from the following list or other courses approved by the academic advisor. *		
Internship ¹		
EVR 805	MPS Internship	2-6
Additional Requirements		
RSM 700	Research Ethics	0
Total Credit Hours		30

* Refer to the list of additional elective options.

¹ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Additional Elective Options

Students may substitute elective coursework for one or more of the above courses with the consent of their academic advisor. Below are a few examples of courses that past students in this program took as electives.

Code	Title	Credit Hours
EVR 601	Political Ecology of Marine Management	3
EVR 602	Economics of Natural Resources	3
EVR 604	Fieldwork in Coastal Management: Tourism, Conservation, and Development	3
EVR 610	Environmental Planning and the Environmental Impact Statement	3
EVR 616	Ocean Policy	3
EVR 620	Environmental Law and Policy	3
EVR 624	Statistics and Data Analysis for Environmental Science and Policy	3
EVR 625	Fisheries Socioeconomics and Management	3
EVR 626	Submerged Cultural Resource Management	3
EVR 630	Port Operations and Policy	3

EVR 631	Marine and Coastal Protected Area Theory, Planning, Management, and Issues	3
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	3
EVR 662	Intermediate Spatial Analysis	3
EVR 664	Citizen and Participatory Science	3
EVR 670	Conservation and Management of Marine Mammals	3
EVR 671	Marine Conservation Biology	4
EVR 673	Marine Conservation Outreach	3
EVR 677	Management and Conservation of Marine Ecosystems	3
EVR 710	International Ocean Law and Governance	3
MBE 612	Aquaculture I	3
MBE 613	Aquaculture II Lab	3
MBE 615	Tropical Marine Ecology	3
MBE 617	Aquaculture IV: Aquaculture Business, Regulatory, and Environmental Considerations	3
MBE 618	Reef Coral Biology, Ecology, and Conservation	3
MBE 619	Aquaculture III	3
MBE 621	Field Techniques and Instrumentation in Tropical Marine Ecology	3
RSM 600	Introduction to Research Diving Techniques	3
RSM 612	Statistics for Marine Scientists	3
RSM 620	Climate and Society	3
RSM 664	Scientific Small Boating	2
RSM 667	Motorboat Operator Certification Course	1

Curriculum Requirements

Exploration Science Track

Code	Title	Credit Hours
Core Courses (13 credits)		
EVR 664	Citizen and Participatory Science	3
EVR 665	Science and Natural History Media Production	3
EVR 674	Theoretical Practical Issues in Exploration Science	3
RSM 600	Introduction to Research Diving Techniques	3
RSM 667	Motorboat Operator Certification Course ¹	1
Electives (12 credits)		12
The remaining courses may be selected from the following list or other courses approved by the academic advisor. *		
EVR 627	Exploration Science Field Studies	
EVR 662	Intermediate Spatial Analysis	
EVR 671	Marine Conservation Biology ²	
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	
MBE 621	Field Techniques and Instrumentation in Tropical Marine Ecology	
Internship ³		
EVR 805	MPS Internship	2-6
Additional Requirements		
RSM 700	Research Ethics	0
Total Credit Hours		30

* Refer to the list of additional elective options.

¹ Scientific Small Boating (RSM 664) may substitute for RSM 667

² EVR 671 (and/or other Elective) is optional if the student needs to meet 30 credits for graduation.

³ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Additional Elective Options

Students may substitute elective coursework for one or more of the above courses with the consent of their academic advisor. Below are a few examples of courses that past students in this program took as electives.

Code	Title	Credit Hours
EVR 601	Political Ecology of Marine Management	3
EVR 604	Fieldwork in Coastal Management: Tourism, Conservation, and Development	3
EVR 611	The Science of Actionable Knowledge	3
EVR 614	Underwater Site Mapping and Visualization Techniques	3
EVR 618	Coastal Zone Management	3
EVR 620	Environmental Law and Policy	3
EVR 625	Fisheries Socioeconomics and Management	3
EVR 635	Oceans of Thought: Exploring Marine and Environmental Literature	3
EVR 720	Coastal Law and Policy	3
MBE 604	Biology of Marine Mammals	3
MBE 612	Aquaculture I	3
MBE 615	Tropical Marine Ecology	3
MBE 642	Oceans and Human Health	3
RSM 612	Statistics for Marine Scientists	3
RSM 620	Climate and Society	3

Curriculum Requirements

Fisheries Management and Conservation Track

Code	Title	Credit Hours
Core Courses		
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	3
EVR 677	Management and Conservation of Marine Ecosystems	3
MBE 621 or EVR 622	Field Techniques and Instrumentation in Tropical Marine Ecology Principles and Practices of Marine Social Science Research	3
MBE 713	Marine Population Dynamics	3
MBE 746	Marine Population Biology: Processes and Modeling	3
RSM 612 or EVR 624	Statistics for Marine Scientists Statistics and Data Analysis for Environmental Science and Policy	3
Electives		
The remaining courses may be selected from the following list or other courses approved by the academic advisor. *		
EVR 625	Fisheries Socioeconomics and Management	
EVR 710	International Ocean Law and Governance	
Internship ¹		
EVR 805	MPS Internship	2-6
Additional Requirements		
RSM 700	Research Ethics	0
Total Credit Hours		30

* Refer to the list of additional elective options.

¹ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Additional Elective Options

Students may substitute elective coursework for one or more of the above courses with the consent of their academic advisor. Below are a few examples of courses that past students in this program took as electives.

Code	Title	Credit Hours
EVR 601	Political Ecology of Marine Management	3
EVR 602	Economics of Natural Resources	3
EVR 616	Ocean Policy	3
EVR 618	Coastal Zone Management	3
EVR 620	Environmental Law and Policy	3
EVR 623	Applied Environmental Economics	3
EVR 710	International Ocean Law and Governance	3
EVR 714	Population Modeling, Risk Assessment and Management	3
EVR 715	Machine Learning Predictive Analytics in Marine Science	3
EVR 720	Coastal Law and Policy	3
MBE 615	Tropical Marine Ecology	3
MBE 635	Practical Computing for Biologists	3
MBE 636	Object-Oriented Programming and Agent-Based Modelling	3
MBE 676	Diseases of Marine Organisms	3
MBE 678	Evolutionary Genetics	3
MBE 716	Bayesian Statistics for Marine Scientists	3
MBE 787	Biology and Systematics of Fishes	3
RSM 600	Introduction to Research Diving Techniques	3
RSM 664	Scientific Small Boating	2
RSM 667	Motorboat Operator Certification Course	1
RSM 710	The Physical Environment of Marine Organisms	3
BIL 623	Advanced Biology of Marine Invertebrates	4
MAS 647	Computer Simulation Systems	3
POL 631	Global Environment Politics	3

Curriculum Requirements

Marine Conservation Track

Code	Title	Credit Hours
Core Courses		
Biology Requirement (4 credits) ¹		
EVR 671	Marine Conservation Biology	4
Policy Requirement (3 credits)		
EVR 616	Ocean Policy	3
or EVR 618	Coastal Zone Management	
or EVR 620	Environmental Law and Policy	
or EVR 631	Marine and Coastal Protected Area Theory, Planning, Management, and Issues	
or EVR 710	International Ocean Law and Governance	
or EVR 720	Coastal Law and Policy	
Technical Skills Requirement ²		
Choose two (2) courses from the following:		
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	
or EVR 610	Environmental Planning and the Environmental Impact Statement	

or EVR 622	Principles and Practices of Marine Social Science Research	
or EVR 624	Statistics and Data Analysis for Environmental Science and Policy	
or RSM 612	Statistics for Marine Scientists	
or RSM 600	Introduction to Research Diving Techniques	
or RSM 664	Scientific Small Boating	
or RSM 667	Motorboat Operator Certification Course	
Science Communication Requirement (1-3 Credits)		
RSM 645	Science Communication: Professional Writing	1-3
or EVR 664	Citizen and Participatory Science	
or EVR 665	Science and Natural History Media Production	
or EVR 673	Marine Conservation Outreach	
or MBE 651	Engaging the Arts in Science Communication	
or RSM 646	Presentation Boot Camp	
Electives		7-10
The remaining courses may be selected from the following list or other courses approved by the academic advisor. *		
Internship (2-6 Credits) ³		
EVR 805	MPS Internship	2-6
Additional Requirements		
RSM 700	Research Ethics	0
Total Credit Hours		30

¹ Students can place out of EVR 671 on a case-by-case basis.

² Students can take both RSM 600 and RSM 664 (or RSM 667), but only one of these courses will satisfy the Technical Skills Requirements.

* Refer to the list of additional elective options.

³ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Additional Elective Options

Students may substitute elective coursework for one or more of the above courses with the consent of their academic advisor. Below are a few examples of courses that past students in this program took as electives.

Code	Title	Credit Hours
EVR 602	Economics of Natural Resources	3
EVR 604	Fieldwork in Coastal Management: Tourism, Conservation, and Development	3
EVR 611	The Science of Actionable Knowledge	3
EVR 625	Fisheries Socioeconomics and Management	3
EVR 626	Submerged Cultural Resource Management	3
EVR 627	Exploration Science Field Studies	3
EVR 629	Biology, Ecology, and Management of Mangrove Ecosystems	3
EVR 634	Shark Behavioral Ecology and Conservation	3
EVR 635	Oceans of Thought: Exploring Marine and Environmental Literature	3
EVR 637	Topics in Ocean Economics and Policy	3
EVR 638	Fisheries and Wildlife: Law and Policy	3
EVR 662	Intermediate Spatial Analysis	3
MBE 614	Tropical Marine Biology	3
MBE 615	Tropical Marine Ecology	3
MBE 618	Reef Coral Biology, Ecology, and Conservation	3
MBE 621	Field Techniques and Instrumentation in Tropical Marine Ecology	3
MBE 642	Oceans and Human Health	3
RSM 601	Scientific Freediving	3
RSM 616	Florida Topics in Environmental Law Policy	3

RSM 620	Climate and Society	3
RSM 630	Elasmobranch Field Research Skills	3

Curriculum Requirements

Underwater Archaeology Track

Code	Title	Credit Hours
Core Courses (28 credits)		
EVR 614	Underwater Site Mapping and Visualization Techniques	3
EVR 615	Marine Geophysical Survey and Technology	3
EVR 626	Submerged Cultural Resource Management	3
EVR 632	Theory and Method in Underwater and Maritime Archaeology	3
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	3
EVR 672	The Archaeology of Seafaring	3
EVR 691	Maritime Archaeology Field Study	3
EVR 692 or EVR 693	Archaeological Study of Submerged Pre-Contact Sites Maritime Archaeology and the Conquest of Mexico	3
RSM 600	Introduction to Research Diving Techniques	3
RSM 667	Motorboat Operator Certification Course ²	1
Internship³		
EVR 805	MPS Internship	2-6
Additional Requirements		
RSM 700	Research Ethics	0
Total Credit Hours		31

¹ EVR 693 can substitute EVR 692 based on availability.

² RSM 667 is preferred, but RSM 664 may substitute

³ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Additional Elective Options

Students may substitute elective coursework for one or more of the above courses with the consent of their academic advisor. Below are a few examples of courses that past students in this program took as electives.

Code	Title	Credit Hours
EVR 610	Environmental Planning and the Environmental Impact Statement	3
EVR 616	Ocean Policy	3
EVR 618	Coastal Zone Management	3
EVR 635	Oceans of Thought: Exploring Marine and Environmental Literature	3
EVR 664	Citizen and Participatory Science	3
EVR 665	Science and Natural History Media Production	3
EVR 674	Theoretical Practical Issues in Exploration Science	3
EVR 710	International Ocean Law and Governance	3
EVR 720	Coastal Law and Policy	3
MBE 716	Bayesian Statistics for Marine Scientists	3
OCE 606	Introduction to Ocean Remote Sensing	3
OCE 707	Advanced Ocean Remote Sensing	3
RSM 646	Presentation Boot Camp	1

Suggested Plan of Study

Aquaculture Track

Year One		Credit Hours
Fall		
EVR 602 or 625	Economics of Natural Resources or Fisheries Socioeconomics and Management	3
MBE 612	Aquaculture I	3
MBE 617	Aquaculture IV: Aquaculture Business, Regulatory, and Environmental Considerations	3
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory*	3
RSM 700	Research Ethics	0
Credit Hours		12
Spring		
MBE 613	Aquaculture II Lab	3
MBE 628	Seafood Market and Marketing	3
MBE 686 or EVR 629	Fish Physiology* or Biology, Ecology, and Management of Mangrove Ecosystems	3
Credit Hours		9
Summer		
MBE 619	Aquaculture III	3
EVR 805	MPS Internship ¹	2-6
Credit Hours		9
Total Credit Hours		30

* or other approved Elective

¹ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Coastal Zone Management Track

The Coastal Zone Management (CZM) track requires the completion of one core course. The rest of the curriculum will be decided on a case-by-case basis during academic advising. However, students select from a variety of multidisciplinary courses across many departments and schools at Rosenstiel/UM, in a holistic effort to meet their personal and professional goals.

Year One		Credit Hours
Fall		
EVR 618 or 720	Coastal Zone Management or Coastal Law and Policy	3
Approved Elective		3
Approved Elective		3
Approved Elective		3
RSM 700	Research Ethics	0
Credit Hours		12
Spring		
Approved Elective		3
Approved Elective		3
Approved Elective		3
Approved Elective		3
Credit Hours		12

Summer		
EVR 805	MPS Internship ¹	2-6
Credit Hours		6
Total Credit Hours		30

¹ Enrollment in 2 - 6 internship credits required during a student's time in MPS. Completion of less than 2 internship credits must be approved by MPS Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically 2 semesters are needed to complete all aspects of the internship phase of MPS.

Exploration Science Track

Year One		
Fall		Credit Hours
EVR 664	Citizen and Participatory Science	3
EVR 674	Theoretical Practical Issues in Exploration Science	3
RSM 600	Introduction to Research Diving Techniques	3
RSM 667 or 664	Motorboat Operator Certification Course ¹ or Scientific Small Boating	1
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory ^{*1}	3
RSM 700	Research Ethics	0
Credit Hours		13
Spring		
EVR 665	Science and Natural History Media Production	3
EVR 627	Exploration Science Field Studies [*]	3
EVR 662	Intermediate Spatial Analysis [*]	3
MBE 621	Field Techniques and Instrumentation in Tropical Marine Ecology [*]	3
Credit Hours		12
Summer		
EVR 805	MPS Internship ²	2-6
Credit Hours		5
Total Credit Hours		30

^{*} Refer to the list of additional elective options.

¹ Can be taken in Fall or Spring

² Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Fisheries Management and Conservation Track

Year One		
Fall		Credit Hours
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory ¹	3
MBE 713	Marine Population Dynamics	3
RSM 612 or EVR 624	Statistics for Marine Scientists or Statistics and Data Analysis for Environmental Science and Policy	3
EVR 625	Fisheries Socioeconomics and Management [*]	3
RSM 700	Research Ethics	0
Credit Hours		12
Spring		
EVR 677	Management and Conservation of Marine Ecosystems	3

MBE 621 or EVR 622	Field Techniques and Instrumentation in Tropical Marine Ecology or Principles and Practices of Marine Social Science Research	3
MBE 746	Marine Population Biology: Processes and Modeling	3
EVR 710	International Ocean Law and Governance *	3
	Credit Hours	12
Summer		
EVR 805	MPS Internship ²	2-6
	Credit Hours	6
	Total Credit Hours	30

* Refer to the list of additional elective options.

¹ Can be taken in Fall or Spring

² Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Marine Conservation Track

Year One		
Fall		Credit Hours
EVR 671	Marine Conservation Biology	4
RSM 612, EVR 622, or EVR 624	Statistics for Marine Scientists ¹ or Principles and Practices of Marine Social Science Research or Statistics and Data Analysis for Environmental Science and Policy	3
MBE 615	Tropical Marine Ecology *	3
EVR 620, 616, or 720	Environmental Law and Policy ² or Ocean Policy or Coastal Law and Policy	3
RSM 700	Research Ethics	0
	Credit Hours	13
Spring		
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory ¹	3
RSM 645	Science Communication: Professional Writing ³	1
Approved Elective		3
Approved Elective		3
Approved Elective		1
	Credit Hours	11
Summer		
EVR 805	MPS Internship ⁴	2-6
	Credit Hours	6
	Total Credit Hours	30

* or other approved Elective

¹ Or other approved course listed under **Technical Skills Requirement** (see track curriculum)

² Or other approved course listed under **Policy Requirement** (see track curriculum)

³ Or other approved course listed under **Science Communication Requirement** (see track curriculum)

⁴ Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Underwater Archaeology Track

Year One		Credit Hours
Fall		
EVR 626	Submerged Cultural Resource Management	3
EVR 632	Theory and Method in Underwater and Maritime Archaeology	3
EVR 660 & EVR 661	Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory	3
RSM 600	Introduction to Research Diving Techniques	3
RSM 700	Research Ethics	0
Credit Hours		12
Spring		
EVR 614	Underwater Site Mapping and Visualization Techniques	3
EVR 615	Marine Geophysical Survey and Technology	3
EVR 672	The Archaeology of Seafaring	3
RSM 667	Motorboat Operator Certification Course	1
Approved Elective (optional)		
Credit Hours		10
Summer		
EVR 691	Maritime Archaeology Field Study	3
EVR 693	Maritime Archaeology and the Conquest of Mexico ¹	
EVR 805	MPS Internship ²	1
Credit Hours		4
Year Two		
Fall		
EVR 692	Archaeological Study of Submerged Pre-Contact Sites	3
EVR 805	MPS Internship ²	1
Approved Elective (Optional)		
Credit Hours		4
Spring		
EVR 805	MPS Internship ²	1
Approved Elective (Optional)		
Credit Hours		1
Total Credit Hours		31

¹ Based upon availability

² Enrollment in 2 - 6 internship credits is required during a student's time in the M.P.S. degree program. Completion of less than 2 internship credits must be approved by M.P.S. Director. Students may enroll in more than 6 internship credits with the approval of the Program Director. Typically, two semesters are needed to complete all aspects of the internship phase of M.P.S.

Mission

Aquaculture Track

The mission of the Aquaculture (AQU) track is to provide students with an interdisciplinary study of sustainable aquaculture and related industries, as well as advanced training on environmental, technological, social, economic, legal, and political aspects of marine aquaculture. Emphasis is placed on the environmental sustainability of commercially important marine fish species, as well as shrimp and mollusks. The program combines classroom lessons with experiential learning at the University of Miami Experimental Hatchery (<https://www.earth.miami.edu/research/projects/hatchery/>) (UMEH) to prepare students for careers in marine aquaculture.

Coastal Zone Management Track

The mission of the Coastal Zone Management (CZM) track is to provide students with interdisciplinary training in the theoretical aspects of marine science and conservation, as well as advanced knowledge of the legal and governance frameworks for careers in environmental consulting, marine spatial planning, and assessment and management of the coastal ecosystem, resources, and related industries.

Exploration Science Track

The mission of the Exploration Science (ESC) track is to prepare the next generation of explorers to address problems and questions related to the environment and society.

The ESC track fosters scientific inquiry and the application of skills within a context that acknowledges the cultural and ethical implications of exploration. This track exposes students to citizen science project design, exploration technology applications, and field-based skills training while receiving essential background information on the history, ethics, and risks related to exploration. This program offers a flexible curriculum allowing students to focus on courses and subjects that best fit their interests and goals for careers in environmental education, surveying, resource management, citizen science, conservation, media production, government agencies, museums, and ecotourism companies, among others. This curriculum provides a foundation for building a career focused on exploration, inquiry, and problem-solving to make a positive difference in the world.

Fisheries Management and Conservation Track

The Fisheries Management and Conservation (FMC) track supports the management of marine resources by providing society with knowledge and assessments of the natural and anthropogenic processes that regulate the dynamics and functioning of fishery ecosystems and by providing predictions on the future state of such systems. The FMC track is a unique, academic program that allows students to develop the professional skills required to be a fishery scientist. This program fosters critical thinking and quantitative skills and provides a comprehensive study of the science and skills needed for employment in government agencies such as the National Marine Fisheries Service, state agencies, Fishery Councils, regional NOAA laboratories, as well as Non-Governmental Organizations (NGO).

Marine Conservation Track

The mission of the Marine Conservation (MCO) track is to provide students with interdisciplinary training in marine science and conservation, offering opportunities to learn scientific techniques, develop and implement science communication, outreach and community engagement projects, and better understand the policy and management process. A flexible curriculum allows students to concentrate on subjects and skill sets most relevant to their future careers in marine conservation.

Underwater Archaeology Track

Underwater archaeology is the study of the remains of past human activity through the exploration, documentation, and study of a variety of submerged sites, from shipwrecks to caves and springs to lakes and rivers. The Underwater Archaeology (UARCH) track helps students understand how archaeological sites and artifacts can play a large role in education, community cohesion, national identity, economic development, sustainable tourism, conservation, and, of course, entertainment, among others. This program focuses on the theory, field techniques, and management practices necessary to work within the field of archaeology and the broader general field of marine sciences. This program provides training in the areas of mapping and documentation, interpretation of shipwrecks and submerged sites, best management practices, marine protected areas, and marine survey technology.

Student Learning Outcomes

Aquaculture Track

- Students will be able to effectively plan and execute an aquaculture operation, including all related aspects of rearing, harvest, storage, shipping, and marketing.
- Students will demonstrate professionalism in all aspects of field and lab work during their internships.
- Students will submit a written final report and deliver a final presentation based on the work completed in their internship.

Coastal Zone Management Track

- Students will be able to understand the legal and governance frameworks related to coastal fisheries and other marine resource management, coastal tourism development, environmental impact assessment, and marine spatial planning for the development and application of comprehensive marine conservation strategies and policies.
- Students will demonstrate professionalism in all aspects of field and lab work during their internships.
- Students will submit a written final report and deliver a final presentation based on the work completed in their internship.

Exploration Science Track

- Students will develop a working understanding of expeditions, risk management, and planning.
- Students will become familiar with major aspects of citizen science, media production, and fieldwork as it relates to exploration.
- Students will develop a professional approach to exploration incorporating ethical and inclusive practices.
- Students will demonstrate professionalism in all aspects of field and lab work during their internships.
- Students will submit a written final report and deliver a final presentation based on the work completed in their internship.

Fisheries Management and Conservation Track

- Students will be able to understand the processes influencing fisheries management and the development of fisheries policy alternatives, develop knowledge about the statistical design and implementation of fishery surveys and monitoring programs, and apply advanced statistical and mathematical modeling tools in support of assessments of fishery stocks and protected species.

- Students will demonstrate professionalism in all aspects of field and lab work during their internships.
- Students will submit a written final report and deliver a final presentation based on the work completed in their internship.

Marine Conservation Track

- Students will be able to formulate and understand the complexity of conservation plans for marine organisms and ecosystems, including planning, implementation, assessment, and incorporation of outreach and stakeholder engagement.
- Students will demonstrate professionalism and build relevant conservation career skills during their internships.
- Students will submit a written final report and deliver a final presentation based on the work completed in their internship.

Underwater Archaeology Track

- Students will learn site mapping and documentation, interpretation of shipwrecks and submerged sites, best management practices, marine protected areas, and marine survey technology to effectively apply these skills and knowledge to submerged fresh and saltwater sites.
- Students will demonstrate professionalism in all aspects of field and lab work during their internships.
- Students will submit a final, written study (between 65 – 120 pages) and deliver a final presentation based on the work completed in their internship.