

 FLORIDA ATLANTIC UNIVERSITY	NEW/CHANGE PROGRAM REQUEST Graduate Programs		UGPC Approval _____ UFS Approval _____ Banner _____ Catalog _____
	Department _____ College _____		
Program Name _____		New Program* Change Program*	Effective Date (TERM & YEAR)
Please explain the requested change(s) and offer rationale below or on an attachment.			
*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.			
Faculty Contact/Email/Phone _____		Consult and list departments that may be affected by the change(s) and attach documentation	
Approved by Department Chair _____ College Curriculum Chair _____ College Dean _____ UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____		Date 11/15/2024 11/18/2024 11/18/2024 _____ _____ _____ _____ _____	

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

MARINE SCIENCE AND OCEANOGRAPHY
MASTER OF SCIENCE (M.S.)

(Minimum of 37 credits required)

This is an interdisciplinary program designed to provide students with specialized training in Marine Science and Oceanography. It is jointly administered by the Charles E. Schmidt College of Science (CESCS) and the Harbor Branch Oceanographic Institute (HBOI). Participating faculty have appointments at CESCS and HBOI.

Students are required to take most of the coursework spread across the core subject areas listed below. The exact courses taken are to be determined by students and their advisory committees. Application deadline is January 15 for the fall semester and October 15 for the spring semester.

Admission Requirements

In addition to meeting all of the University and College admission requirements for graduate study, each applicant for the M.S. with Major in Marine Science and Oceanography must:

1. Have a minimum 3.0 GPA for the last 60 credits of undergraduate work.
2. Provide two letters of recommendation.
3. Obtain a "sponsor" from within the faculty of this master's program who will then act as the student's advisor until a thesis topic has been chosen.

For sponsor selection suggestions, students should go to the departmental webpages to examine the fields and interests of individual faculty members. Once students find a faculty member in their field of interest, they should contact the faculty member directly. The student's application package must contain a signed sponsor form from the selected faculty member.

Degree Requirements

Students may graduate with a thesis or non-thesis master's degree; both require the successful completion of 37 credits as described below.

Thesis Option

A student curriculum consists of a minimum of 37 graduate credits taken in the following three categories:

Required Courses: Six courses (12 credits) are required for all students in the master's degree program in Marine Science and Oceanography.

Required Courses		
Physical and Geological Oceanography	OCE 6097	3
Biological Oceanography	OCB 6066	3
Chemical Oceanography	OCC 6050	3 <i>or</i>
Chemistry for Environmental Scientists	CHS 6611	3
Marine Science and Oceanography Colloquium	OCE 6922	1 <i>or</i>
Marine Science Seminar	BSC 6938	1
Marine Science and Oceanography Thesis Proposal	OCE 6970	1
Marine Science and Oceanography Thesis Defense	OCE 6975	1
Total Research Core		12

Electives: 15 to 21 credits from the approved course list. Up to 6 credits designated as "Special Topics" courses may be taken with the approval of the thesis advisor. No more than 6 credits of electives taken outside the approved course list will be counted toward the degree. No courses under the 5000 level may be taken. No more than 3 credits of Marine Science and Oceanography Directed Independent Research (OCE 6908) may be counted toward this degree.

Thesis: 6 to 12 credits (OCE 6972).

- For Master's Thesis Proposal Seminar requirements, see [MSO regulations](#).
- For Master's Thesis Defense Requirements, see [MSO regulations](#) and the Graduate College for current [University thesis requirements](#).

Proposal and Defense: OCE 6970 will be taken for 1 credit during the semester in which students intend to propose their research plan. Upon successful completion of their proposal and approval from their committee, students will earn a satisfactory grade. OCE 6975 will be taken for 1 credit during the semester in which students intend to defend their research. Upon successful defense of the student's research via a public presentation and thesis document, the student will earn a satisfactory grade.

Non-Thesis Option

A student curriculum consists of a minimum of 37 credits taken in the following three categories:

Required Courses: Five courses (11 credits) are required for all students in the master's degree program in Marine Science and Oceanography.

Required Courses

Physical and Geological Oceanography	OCE 6097	3
Biological Oceanography	OCB 6066	3
Chemical Oceanography	OCC 6050	3 <u>or</u>
<u>Chemistry for Environmental Scientists</u>	<u>CHS 6611</u>	<u>3</u>
Marine Science and Oceanography Comprehensive Exam	OCE 6964	1
Marine Science and Oceanography Colloquium	OCE 6922	1 or
Marine Science Seminar	BSC 6938	1
Total Research Core		11

Electives: A minimum of 26 credits from the approved course list. Up to 6 credits designated as "Special Topics" courses may be taken with the approval of the student's advisor.

No more than 6 credits of electives taken outside the approved course list will be counted toward the degree. No courses under the 5000 level may be taken. No more than 3 credits of Marine Science and Oceanography Directed Independent Research (OCE 6908) may be counted toward this degree.

Students taking the non-thesis option must take and pass a minimum of three written comprehensive exams given by a committee in designated areas within Marine Science and Oceanography specialties during the semester they are signed up for 1 credit of OCE 6964 (Marine Science and Oceanography Comprehensive Exam). Questions require written essay responses. See the [MSO regulations](#) for complete requirements to complete the master's comprehensive exams.

Integrative Biology PH.D. students choosing MSO for a Master's Along the Way degree will be verified for completion of degree requirements by the Biology Department during the

Graduation Audit Check. Consult with the IB Ph.D. advisor early in matriculation to ensure the curriculum followed would satisfy the requirements for the MSO master of science non-thesis option.

Approved Course List

Advances in Finfish Aquaculture	BSC 6342	3
Scientific Communication	BSC 6846	3
Special Topics (such as Marine Conservation)	BSC 6936	1-4
Seminar	BSC 6938	1
Chemistry for Environmental Scientists	CHS 6611	3
Ocean Optics and Remote Sensing	EOC 6267	3
Restoration Implementation and Management	EVR 6358	3
Biogeography	GEO 5305	3
Digital Image Analysis	GIS 5033C	3
Remote Sensing of the Environment	GIS 5038C	3
Principles of Geographic Information Systems	GIS 5051C	3
Applications in Geographic Information Systems	GIS 5100C	3
Programming in Geographic Information Systems	GIS 5103C	3
Topics in Geoinformation Science	GIS 6120	3
Hyperspectral Remote Sensing	GIS 6127	3
Environmental Geochemistry	GLY 5243	3
Shore Erosion and Protection	GLY 5575C	3
Marine Geology	GLY 5736C	3
Comparative Carbonate Sedimentology	GLY 6352	3
Beach Morphodynamics of Southeast Florida	GLY 6708C	3
Coastal Environments	GLY 6737	3

Global Environmental Change	GLY 6746	3
Methods in Hydrogeology	GLY 6838	3
Coastal Hazards	GLY 6888	3
Special Topics in Applied Geology	GLY 6934	3
Coral Reef Ecosystems	OCB 6266	3
Coral Reef Ecosystems Lab	OCB 6266L	1
Data Processing and Modeling of Marine Systems	OCB 6673	3
Marine Fisheries Ecology and Management	OCB 6715C	4
Natural History of the Indian River Lagoon	OCB 6810	3
Image and Video Processing and Vision in Marine Environment	OCE 5266	3
Marine Global Change	OCE 6019	3
Dynamics of Marine Biogeochemical Processes	OCE 6096	3
Underwater Optical Imaging for Marine Scientists	OCE 6267	3
Ocean Monitoring Systems	OCE 6268	3
Marine Optics	OCE 6269	3
Conservation Biology	PCB 6045	3
Advanced Ecology	PCB 6046	3
Marine Ecology	PCB 6317	3
Marine Ecology Lab and Field Studies	PCB 6317L	2
Ecological Theory	PCB 6406	3
Experimental Design and Biometry	PCB 6456	3
Aquatic Animal Health	PCB 6772	3
Physiology of Marine Animals	PCB 6775	3
Sensory Biology and Behavior of Fishes	PCB 6871	3

Marine Invertebrate Zoology	ZOO 6256	3
Marine Invertebrate Zoology Lab	ZOO 6256L	2
The Biology of Sea Turtles	ZOO 6406	3
Biology of Sharks and Their Relatives	ZOO 6409	3
Natural History of Fishes	ZOO 6456	3
Natural History of Fishes Lab	ZOO 6456L	2
Seminar in Ichthyology	ZOO 6459	3

From: Andrew Terentis <terentis@fau.edu>
Subject: RE: Chemistry for environmental sciences
Date: September 11, 2024 at 3:51 PM
To: Marianne Porter <mporte26@fau.edu>

AT

Hi Marianne,

The response was positive. One comment was made that you should take into consideration: "One thing to consider with this upper-level class is the chemistry background of MSO students and the typical attendees of this course. If the course is designed for chemistry majors, it can be challenging for those with limited chemistry knowledge." You have our support, but let me know if you need to discuss it further.

Best,
Andrew

From: Marianne Porter <mporte26@fau.edu>
Sent: Monday, September 9, 2024 8:26 AM
To: Andrew Terentis <terentis@fau.edu>
Subject: Chemistry for environmental sciences

Hi Andrew.

The MSO program is hoping to change our required courses to say Chemical Oceanography OR Chemistry for Environmental Sciences. We have had several students want to take that class because it aligns more closely with their interests in biology / marine environment.

I know Bill is retired, but you hired a new environmental chemist. Are they going to start teaching that graduate course? I checked the course caps have not been met the last several times it was taught. We admit about 5-7 students an academic year, so I do not think the MSO students would overrun the course.

Please let me know what you think or if you want to chat about this in more detail.

Thank you for considering this.

Marianne

Marianne Porter, PhD
Florida Atlantic Biomechanics Lab
(The FAB Lab)
www.mepbiomechanics.com
Associate Professor
Department of Biological Sciences
Co-Director, Marine Science and Oceanography Master's Program
Florida Atlantic University
Boca Raton, FL 33431
www.fau.edu

From: Marianne Porter mporte26@fau.edu
Subject: Re: Chemistry for environmental sciences
Date: September 24, 2024 at 9:41 AM
To: Andrew Terentis terentis@fau.edu

MP

Hi Andrew,

Awesome, thank you for the good news. We will work on getting our program paperwork through.

In terms of course rigor, several MSO students had taken it in the past and all did fine, and there are several taking it now. They all report that it is going well. These are all graduate students who have usually graduated with a STEM BS and have some chem background.

We will definitely keep an eye on that though.

Thank you again.

Marianne

Marianne Porter, PhD
Florida Atlantic Biomechanics Lab
(The FAB Lab)
www.mepbiomechanics.com
Associate Professor
Department of Biological Sciences
Co-Director, Marine Science and Oceanography Master's Program
Florida Atlantic University
Boca Raton, FL 33431
www.fau.edu

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