

# MARINE SCIENCE (MS) - MARINE CONSERVATION

## Master of Science (M.S.) In Marine Conservation and Resource Management

The M.S. in Marine Conservation and Resource Management is designed to provide a formal course of training and professional development in the marine sciences that will enable students to contribute to the sustainable management of marine resources. The program does not require thesis research, but instead offers professional development through group projects and professional internships with government agencies, NGOs, and environmental consulting firms. The curriculum and other requirements can accommodate students currently in the workforce.

## Minimum Requirements for Admission

Applications for Fall admission are due by June 1 of each year. Enrollment normally begins in the fall semester; however spring and summer admissions will be considered on a case by case situation. In addition to the general admissions requirements of the Graduate School, minimal requirements for admission are:

1. A baccalaureate degree in a discipline related to marine sciences (e.g., biology, chemistry, geology, physics, and engineering) or conservation biology (economics, sociology) from an accredited four year college or university.
2. Applicants to graduate programs in Arts and Sciences typically have a minimum GPA of at least a 3.0 on all undergraduate work. In exceptional cases, applicants may be considered with at least a 2.5 GPA on all undergraduate work, or at least a 2.75 GPA on the last 60 hours of undergraduate work.
3. The GRE score is not required for admission. You may optionally submit your GRE scores if you wish for them to be considered as part of your application to any graduate program in the Stokes School of Marine and Environmental Sciences, but this is not required. Individual faculty members may consider available GRE scores as part of a holistic evaluation of the candidates.

## Degree Requirements

### Required Credit

A minimum of thirty (30) semester hours of course credit beyond the baccalaureate degree is required for students pursuing an MS degree. Details about the curriculum are given as follows.

### Transfer Credit

A maximum of twelve (12) semester hours of graduate courses taken at another accredited university in the same (or closely related) subject as that of the masters program may be considered as part of the MS degree requirements at USA. Only grades of "A" or "B" may be accepted as transfer credits. The School's Director or Associate Director will evaluate transfer credit; the transfer credit is approved by the Dean of the Graduate School only after completion of a minimum of eight (8) semester hours of graduate course work in the MS program at USA.

### Time Limit

All requirements for the MS degree must be completed within two and one half years from the date of matriculation. A student who has not

satisfactorily completed a M.S. degree in a 2.5-year period must apply for a defined extension to complete the degree. This request must be recommended by a major professor, the Chair, the Director of Graduate Studies, and approved by the Dean of the Graduate School. If the student does not complete the degree requirements in the defined extension period, the Director of Graduate Studies may recommend, and the Dean of the Graduate School may take, whatever action is necessary up to and including dismissal.

Failure to complete the work within the periods specified shall necessitate reevaluation of the student's program, and may result in a recommendation of dismissal by the Director of Graduate Studies to the Graduate Dean.

## Coursework

All students must complete the four core courses of the program. At least two statistics courses will be required for the program. For students who have not had statistics courses as an undergraduate, ST 540 must be one of those courses taken. Two seminar courses and directed studies are also required. The remaining coursework (6 cr) should be met through elective courses that are approved by the program coordinator.

## Requirements

Code	Title	Hours
<b>Core Courses</b>		
MAS 510	Oceanography and Marine Bio	3
MAS 520	Marine Resource Management	3
MAS 521	Marine Conservation Biology	3
SY 567	Environmental Sociology	3
<b>Statistics</b>		
Select two of the following:		6
MAS 560	Mar Exp Ecol	
ST 540	Stat in Research I	
ST 550	Environmental Statistics	
ST 560	Appl Desgn & Analysis of Exper	
<b>Seminars</b>		
MAS 592	Seminar	1
GIS 501	Responsible Conduct of Researc	1
<b>Directed Studies</b>		
MAS 594	Directed Studies <sup>1</sup>	4
<b>Electives</b>		
Select two courses from the following, at least one course must be outside MAS to fulfill interdisciplinary requirement of the program:		6
MAS courses that may be used as electives:		
MAS 604	Biological Oceanography	
MAS 602	Chemical Oceanography	
MAS 555	Fisheries Oceanography	
MAS 551	Quant Methods Fish and Ecology	
MAS 603	Geological Oceanography	
MAS 601	Physical Oceanography	
MAS 581	Advanced Marine Ecology	
MAS 583	Field Marine Science I	
MAS 584	Oceanographic Experience	
MAS 560	Mar Exp Ecol	
<b>Non-MAS Electives: <sup>2</sup></b>		
CE 579	Fundamentals Environmental Eng	

CH 514	Environmental Chemistry
PHA 643	Molecular-Cellular Toxicology
GIT 542	Remote Sensing II
GIT 560	Intro to GIT
GIT 561	Environmental GIS
Directed studies	
MAS 594	Directed Studies (Up to four credits of directed studies may be earned once a student completes their capstone project)
<b>Total Hours</b>	<b>30</b>

<sup>1</sup> Ideally these directed studies classes should be taken in Fall – Semester Year 2 –Directed Studies -Part 1; and Spring Year 2- Directed Studies Part II- Project completion.

<sup>2</sup> These courses represent suggested electives. Other graduate level courses offered at USA can be used to fulfill the elective requirement provided approval of the Program coordinator is received.

A key element of the program is participation in a professional internship or the completion of a capstone research project. Students will do either an internship or capstone, but not both. We recommend that students pursue the internship route in order to develop professional experience. The requirements for these options are below.

1. To fulfill the requirements of the program by performing an internship, a student must perform an internship of approximately 6-month duration working 20 hours a week (approximately 480 hours of internship) in the field of Marine Conservation and Resource Management.
2. In some cases, students may opt for a capstone research project in lieu of the internship. A capstone project provides an opportunity to go more in depth on a topic to address the complex problems facing marine and coastal systems. With the help of a faculty mentor and the program coordinator, a student pursuing the capstone project will design and perform a project to resolve a problem related to conservation and/or resource management. The project shall result in a paper of modest length (about the length of a journal article) and a formal presentation to the Stokes School of Marine and Environmental Sciences faculty and students.