

# AQUATIC ENVIRONMENTAL SCIENCE

## ADMISSIONS POLICY

Any degree seeking student with at least a B.S. or B.A. degree in a natural or physical science, mathematics or engineering may apply to enter the Aquatic Environmental Science Masters degree program. This is a course-based, terminal masters degree culminating in a capstone experience course and an internship or project. There is no Ph.D. program option. Admission to the program is granted upon the recommendation of the admissions committee. Students pay all tuition and fees.

## MAINTENANCE OF ACTIVE STUDENT STATUS

### **Minimum Standards**

In order to remain in the Aquatic Environmental Science graduate program, a student must:

1. Be registered or be on a departmentally approved leave of absence (see below)
2. Be enrolled in an approved schedule of classes
3. Maintain a cumulative grade point average of at least 3.0
4. Make satisfactory progress in the program
5. Comply with all other University requirements as stated in the Florida State University Graduate Bulletin

Satisfactory progress in number 4 is determined by the Director of the Aquatic Environmental Science Program

### **The Director of the Aquatic Environmental Science Graduate Program**

The Director approves the student's admission to the program and provides guidance and facilities during the student's tenure. The Capstone Experience course is facilitated by the Director.

### **Leave of Absence**

A student who cannot register for any semester excluding summer should submit a written leave of absence request, approved by the Director, to the Oceanography Program Coordinator.

A student not registered for two or more successive semesters must comply with the University requirement and apply for admission through the University's Office of Admission. Such admission will not be automatic, but must be reviewed by the admissions committee and the program director.

### **Voluntary Separation**

A student may leave the program at any time by notifying the Director in writing and returning all FSU materials.

### **Dismissal**

A student may be dismissed from the AES program for not complying with any of the reasons listed above under Minimum Standards. The dismissal of a student who has fallen below any of the minimum standards (1-5) will be by the Program Director and the Oceanography Program Coordinator.

## GENERAL DEGREE REQUIREMENTS

### **Prerequisites**

An undergraduate degree in one of the natural sciences, mathematics or engineering.

### **Program of Study**

The Aquatic Environmental Science Master's degree program is course-based culminating with a capstone experience course. Thirty-six semester hour credits of 5000 level coursework are required. Three of the 36 must be Capstone Experience credits (OCE5934r). A faculty Director will guide the student's progress in the program. The university requires that at least 21 of these hours must be taken on a letter grade basis (A, B, C). Students must receive permission from the Program Director to take any course for a satisfactory/unsatisfactory grade. A research paper or internship may be substituted for 6 hours of elective coursework with the permission of the Director.

Only courses numbered 5000 or above are normally taken by graduate students, however, the program director may permit the student to take specified 4000 level courses in the degree program. For example, a 4000 level statistics course may be substituted for the analytical requirement with permission from the program director. Such 4000 level courses may be credited toward a graduate degree.

The required coursework must be taken in the Department of Earth, Ocean & Atmospheric Science or in other scientific disciplines as the individual's interest and capstone experience dictate.

Progress should be reviewed annually. Before registration for the third semester or upon the completion of 18 credit hours, the student should meet with the Director/Academic Coordinator to evaluate progress up to that point. A second evaluation should be done before registration for the fourth and final semester or before completing the final nine credit hours.

The University requires that all work for the Master's degree must be completed within seven (7) years from the time of the student's initial registration. This program is designed to be completed in 2 years when attending full time (18 credits each academic year).

### **Content and Form of the Capstone Experience Paper**

It is recognized that there is no set content and form for the written topic paper. The student and the Director must agree in advance on the topic and format of the written document and presentation. Arrangements for the presentation should be made with the Director early in the term.

### **AES courses applied toward a Masters in Oceanography**

If an AES student is admitted to the department for a research-based masters in oceanography, his or her supervisory committee will decide on a case by case basis if any courses taken for the Masters in Aquatic Environmental Science can be applied to the Oceanography degree requirements.

## COURSE POLICY

Each semester, before registering for any courses, the student should confer with the AES Program Director.

### **Course Requirements**

Aquatic Environmental Science Master's students are required to **complete four (4)** courses from the list below. All are 3 credit hours unless indicated otherwise.

OCB 5636 Marine Microbial Ecology

OCE 5009L Coastal Oceanography and Marine Field Methods (4)

OCB5050 Basic Biological Oceanography or OCC 5050 Basic Chemical Oceanography

OCB 5635 Coastal Ecology

OCB 5930 Marine Pollution

GLY 5885 Geologic Hazards Assessment

## AQES MS Program

OCP 5930 Physics & Flow of Water Bodies or OCP 5050 Basic Physical Oceanography  
GLY 5595 Soil Science or GLY5265 Nuclear Geology  
OCE 5930 Wetlands

**And Select two (2)** of the following eight (8) analytical courses:

STA 5126 Introduction to Applied Statistics  
STA 5206 Analysis of Variance and Design of Experiments  
STA 5207 Applied Regressions Methods  
STA 5507 Applied Non-parametric Statistics  
GIS 5100 Advanced Geographic Info Systems  
GIS 5101 Geographic Information Processing and Systems  
GIS 5106 Advanced Geographic Information Science  
GIS 5305 Geographical Information Systems for Environmental Analysis and Modeling  
GLY 5595 Geostatistics (Advanced Topics in Sedimentation and Stratigraphy)

**And Select five (5)** of the following elective courses based on the student's primary interest and capstone paper topic:

OCB5050 Basic Biological Oceanography	GLY 5265 Nuclear Geology
OCC5050 Basic Chemical Oceanography	OCP5050 Basic Physical Oceanography
OCE5635 Coastal Ocean Ecology	OCP5930 Physics & Flow of Water Bodies
OCB 5639 Marine Benthic Ecology	CHM 5086 Environmental Chemistry I
OCB5930 Marine Pollution	CHM 5087 Environmental Chemistry II
OCC 5052 Aquatic Chemistry	GLY5265 Nuclear Geology
OCC 5062 Marine Isotopic Chemistry	GEO 5377 Natural Resource Assessment Analysis
OCC 5415 Marine Geochemistry	GLY 5575 Coastal Geology
OCC 5554 Atmospheric Chemistry	GLY 5827 Principles of Hydrology
OCE5009 Advanced General Oceanography	GLY5885 Geologic Hazards Assessment
OCE5009L Coastal Oceanography & Marine Field Methods	GLY 5887 Environmental Geology I
OCE 5018 Current Issues in Environmental Science	PCB 5345C Advanced Field Biology
OCG5106 The Earth System	PCB 5447 Community Ecology
XXXX Marine Conservation Biology	ZOO 4204 Biology of Higher Marine
	LAW 6470 Environmental Law

### **OCE5934r Capstone Experience**

This course is required in the final semester, 3 credits.

### **Capstone Experience Course**

The Capstone Experience course is a forum to discuss issues, policies and problems in environmental science. Students, guided by the Director, select topics to research and evaluate in a 20-25 page synthesis paper (double-spaced, 12-point, Times font). Alternately, students may do an internship and summarize their activities in a 20-25 page report. Successful students will demonstrate adequate knowledge of the environmental science field and the ability to synthesize information from several sources (including a variety of publications) into a cohesive and meaningful paper. The course culminates in a seminar at which participants make an oral presentation based on the content of their paper reflecting their analysis of a particular problem or issue.

### **Completion of Degree Requirements**

In the final semester the student must enroll in the Capstone Experience course. In the course the student must satisfactorily complete the paper and presentation. Early in that final semester (see Registration Guide calendar for deadline), the student must apply for graduation on Blackboard/Secure Apps/Apply for Graduation and make arrangements with the Program Director for the presentation.



