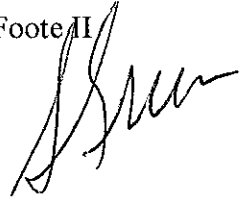


MEMORANDUM

TO: President Edward T. Foote II  
FROM: Steven Green  
Chair, Faculty Senate  
DATE: February 15, 1999  
SUBJECT: Faculty Senate Legislation # 98005(B) – Master of Science  
Degree in Marine Affairs and Policy



The Faculty Senate, at its meeting on January 25, 1999, voted to approve the Master of Science Degree in Marine Affairs and Policy (FS #98005(B)). The text of the proposal is attached.

This legislation is now forwarded to you for your action.

SG/b

Attachment

cc: Provost Luis Glaser  
Interim Dean Steven Ullmann, Graduate School  
Dean Otis Brown, RSMAS  
Professor Fernando Moreno, MAP

CAPSULE: Faculty Senate Legislation #98005(B) – Master of Science in Marine Affairs and Policy

RESPONSE BY THE PRESIDENT: Approve DATE: 2/25/99

OFFICE OR INDIVIDUAL TO IMPLEMENT: Provost

APPROVED: Yes [Signature]

EFFECTIVE DATE OF LEGISLATION: \_\_\_\_\_

NOT APPROVED AND REFERRED TO: \_\_\_\_\_

REMARKS (IF NOT APPROVED): \_\_\_\_\_



MEMORANDUM

September 10, 1998

TO: Dr. Steven Green, Chair  
Faculty Senate and Government

FROM: Steven G. Ullmann, Interim Dean *SGU*  
The Graduate School

SUBJECT: Master of Science Degree  
in Marine Affairs & Policy Proposal

I am enclosing a copy of a Proposal for a Master of Science Degree in Marine Affairs and Policy. This proposal was presented by Dr. Fernando Moreno at the Graduate Council meeting on September 9. Council members unanimously approved a motion to

Approve the Proposal for a Master of Science Degree in Marine Affairs and Policy. They recommended that the proposal should be submitted to Faculty Senate for approval.

SGU:nb

Enclosure

Copy to:

Dr. Sarah K. Meltzoff, Chair  
Dr. Fernando Moreno  
Marine Affairs & Policy Division  
Dr. Otis Brown, Dean  
Dr. Frank Millero, Associate Dean  
Rosenstiel School of Marine Science

Graduate School  
P.O. Box 248125  
Coral Gables, Florida 33124-2220  
305-284-4154  
Fax 305-284-5441

# Proposal

## Master of Science Degree in Marine Affairs and Policy

### I. Rationale

The Division of Marine Affairs and Policy of the Rosenstiel School of Marine and Atmospheric Science proposes to offer a Master of Science Degree program in marine affairs and policy. Upon completion of this program, a student earns an M.S. degree in Marine Affairs and Policy from Rosenstiel School. A student may complete the requirements of the degree within two and one-half years in an intensive program of five semesters. This program is an integrated track in marine science and policy and will give students with strong science background opportunities to build careers in marine resource management.

In the past decade, the field of marine science has broadened its focus on multi- and interdisciplinary research and studies. More and more marine science programs are geared towards the intersection of natural and social sciences with public policy. Demands for stronger links are created with resources and personnel in areas of natural sciences, applied mathematics, anthropology, economics, political science, law and ecology. This new focus has been instrumental in better understanding and resolution of issues pertaining to marine conservation and management, i.e. ocean and coastal management, marine tourism, and policies on global climate changes.

The proposed M.S. in Marine Affairs and Policy will offer an academic curriculum for students in natural sciences who are interested in the application of science and technology in resolving issues in marine resource management. The curriculum will include courses and training which will address current marine policy issues. Students will learn techniques on policy analysis needed in the resolution of these issues. With the Division's strong academic ties with other marine and atmospheric divisions in Rosenstiel School and its exposure to coastal and regional marine policy issues, students will be exposed to multi- and interdisciplinary approach in understanding and resolving policy problems in marine management.

Upon completion of the degree, students will have the opportunity to work in the field of marine policy in governmental, non-governmental and private sectors. Students will also have the education and training to pursue Ph.D. degrees in pure sciences.

### II Physical Resources

The introduction of the MS in Marine Affairs and Policy program would not require additional physical resources such as library acquisitions, laboratory space and equipment, faculty, and staff. The existing resources of the Rosenstiel School would be sufficient for the needs of the proposed program.

Currently, Rosenstiel School's resources includes state of the art computer visualization and networking facilities, laboratories, and precision instruments including mass spectrometers, X-ray spectrographs, gas chromatographs and a scanning electron microscope. The Rosenstiel

School also has a near-real time satellite downlink, and extensive aquaria facilities.

The Rosenstiel Library houses an extensive marine affairs and marine science collection including over 55,000 volumes, 1,100 current journals, 2,000 nautical charts, 25,000 indexed reprints.

### III Curriculum

A. MAF will offer the M.S. in Marine Affairs and Policy degree with joint advising responsibility with other faculty members in other Rosenstiel academic divisions. It is anticipated that there will be no additions, deletions, or changes in any course offerings and course descriptions for the curriculum within the Rosenstiel School. Currently, MAF is already involved in joint research with other academic divisions in Rosenstiel. It is expected that the M.S. in Marine Affairs and Policy will hasten more cooperative research with other divisions and research centers within the School.

B. Classroom (60%), research (25%), and field studies (15%) will be the primary method of teaching the M.S. program. MAF and the appropriate science division advisors will advise the students on their graduate curriculum.

#### C. Faculty Vita

The faculty of the Division of Marine Affairs and Policy who teach the required and recommended MAF courses and interested faculty from other marine and atmospheric divisions within Rosenstiel School will participate in this program.

#### D. Students

If approved, the program will be one of three universities and colleges in the United States that will offer the curriculum. Based on the number of enquiries to Rosenstiel School, and enrollment history of MAF, it is anticipated that the program will have 4 full time students in the first year, 6 in the second year and 9 in the third year. The pool of potential students will come from the Undergraduate Marine Science Program and prospective applicants to Rosenstiel School. ( See Appendix A for student enrollment of the Undergraduate Marine Science Program and Appendix B for Rosenstiel enquiries for different academic divisions).

#### E. Description of the Program

Students interested in M.S. in Marine Affairs and Policy must apply to the Division of Marine Affairs and Policy. Rosenstiel faculty interested in co-advising MS students will be involved from initial application stage. The applicant must notify the division as to which science discipline within Rosenstiel School he or she is interested in. Applicants must have strong science backgrounds. They must obtain qualifying scores on the General Graduate Record Examination (GRE) and GRE Subject Test in the science discipline they are applying for. MAF will send the complete application to the appropriate marine and atmospheric science divisions. Once MAF and the other division agree to accept a particular student, that student will be assigned two

advisors, one from MAF and one from other division in Rosenstiel. Both divisions have joint academic authority over the student.

MS students in MAF will be accepted without a guarantee of external funding. Through work with both co-advisors from MAF and the other marine and atmospheric division, the student is expected to develop support. The student will develop a thesis plan and seek his/her own independent funding if necessary. If possible, the student's advisors will try to obtain a waiver for the cost of the 6 research credits and cover the research costs, and will attempt to pay the student a stipend for thesis research.

In order to remain in the program, students must meet the minimum standards of the Rosenstiel School.

The Master of Science in Marine Affairs and Policy degree program is a 2 ½ year graduate program which requires the completion of 30 course credits and 6 master's thesis credits. Courses will deal with understanding natural science, social science, economic, and political theories and events in the context of marine affairs and policy. Students will also attend seminars and conduct independent research for better understanding of application of natural science in marine affairs issues. The program will place strong emphasis on research after completion of course requirements and oral comprehensive examination. Thesis development will be supervised by a faculty committee composed of 3 members - the two co-advisors and one other faculty member from MAF. Upon completion of the thesis, the student summarizes and defends the thesis at an oral presentation open to graduate students, the faculty, and the academic committee. Foreign language is not required. However, since marine affairs and policy is an international field, students are encouraged to be proficient in one or more languages.

### ***Master of Science in Marine Affairs and Policy (MAF) Degree Track Components***

The 30 course credits will be as follows

- ▶ 12 course credits in marine and atmospheric sciences including 3 marine and atmospheric science core courses
- ▶ 12 course credits in Marine Affairs and Policy
- ▶ 6 course credits of electives approved by the advisors

The 6 thesis credits must result in a substantial research project of publishable original study in marine affairs and policy and related marine scientific issues.

Students will have the flexibility of scheduling their courses tailored to their needs. Students can complete the requirements in 2 ½ years or 5 semesters of intensive study. An ideal time line for the MS program is as follows:

**Fall Semester: (1<sup>st</sup> Semester)**

- ▶ Core Course MPO (Meteorology and Physical Oceanography) 501 (2 cr)
- ▶ MAF course (3 cr)
- ▶ Marine and atmospheric science course (3 cr)
- ▶ Elective (3 cr)

**Spring Semester: ( 2<sup>nd</sup> Semester)**

- ▶ Core Course MBF (Marine Biology and Fisheries)503 (2 cr)
- ▶ MAF course (3 cr)
- ▶ Marine and atmospheric science course (3 cr)
- ▶ Elective (3 cr)

**Fall Semester: ( 3<sup>rd</sup> Semester)**

- ▶ Core Course Marine Geology and Geophysics 504 (2 cr)
- ▶ MAF course (3 cr)
- ▶ MAF course (3 cr)
- ▶ Comprehensive Examination

**Spring Semester (4<sup>th</sup> Semester)**

- ▶ Research Credits (3 cr)

**Fall Semester (5<sup>th</sup> Semester)**

- ▶ Research Credits ( 3 cr)
- ▶ Thesis Defense

## Appendix A

### New Student Enrollment Undergraduate Marine Science Program

Year	Number
1993	127
1994	126
1995	127
1996	97
1997	104

## Appendix B

### Enquiries for Graduate Degree Programs Rosenstiel School 1993-1997

	1993	1994	1995	1996	1997
AMP	160	97	97	52	32
MAC	114	78	96	104	62
MAF	114	96	77	87	99
MBF	1143	969	942	871	618
MGG	183	155	154	122	79
MPO	229	252	269	226	161
GEN	343	291	288	279	217
Total	2,286	1,938	1,923	1,741	1,275



**ADDENDUM TO MASTER OF SCIENCE DEGREE IN  
MARINE AFFAIRS AND POLICY (MAF) PROPOSAL  
Comparative Analysis of M.S. in MAF and M.A. in MAF**

**Master of Arts**

Student is admitted with a BA or BS degree.

Student is accepted by the MAF division only.

Student is assigned one advisor.

Thirty (30) credits are required for the degree as follows:

- 15 credits* from MAF core courses
- 9 credits* from 500 or 600 level course electives from Rosenstiel School, School of Business, School of International Studies, and College of Arts and Sciences. These courses should be approved by the advisor.
- 6 credits* internship

Student graduate committee is comprised of three members that will include two members from the faculty of MAF and one member from outside MAF.

Students must pass an oral comprehensive examination to be given by his committee members before he/she can be admitted to candidacy.

Students must submit an internship report approved by all his/her committee members to complete the requirements of his/her M.A. degree.

The internship consists of supervised work experience or field research with a sponsoring agency and should last for four to six months. The student should submit an internship proposal for the approval of his/her committee prior to the commencement of the internship.

**Master of Science**

Student is admitted with a BS degree.

Student is accepted by two of Rosenstiel Schools divisions, namely MAF and one of the five science divisions.

Student is assigned two advisors, one from each of the two divisions..

Thirty (36) credits are required for the degree as follows:

- 12 credits* from MAF core courses
- 12 credits* from courses of the Science division that granted admission
- 6 credits* from 500 or 600 level course electives from Rosenstiel School, These courses should be approved by the advisor.
- 6 credits* thesis

Student graduate committee is comprised of three members that will include two co-chairs, one from the Science division and one from MAF. The remaining member is from MAF.

Students must pass a comprehensive examination to be given by his committee members before he/she can be admitted to candidacy.

Students must submit a thesis approved by all his/her committee members to complete the requirements of his/her M.S. degree.

The thesis consists of laboratory work or field research conducted under the supervision of his/her committee.



## **Credit Requirements for the Master of Science Degree in Marine Affairs and Policy**

Thirty six (36) credits are required for the MS in Marine Affairs and Policy degree as follows:

### **12 credits of Core Requirements in the Marine Affairs and Policy Division**

Natural Resource Economics (MAF 502 or MAF 525)	3 cr
Political Ecology (MAF 501, 505, or 506)	3
Marine Cultural Resources (MAF 515, 526, 560, 561 or 516)	3
Marine Policy (MAF 510, 516, 518 or 520)	3
Total	12 credits

### **12 credits of Core Requirements in the Marine and Atmospheric Sciences**

The 12 credits may include among others:

Physical Oceanography (MPO 501)	2 cr
Marine Biology and Fisheries (MBF 503)	2
Marine Geology and Geophysics (MGG 502)	2
Marine Chemistry (MAC 502)	2

The student, in consultation with the co-advisor from the science division, will take the remaining credits from those offered in the science program where he/she is jointly accepted.

**6 credits of Electives** approved by both the Marine Affairs and Policy and Science Division Co-advisors.

**6 credits Thesis**