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**MARINE RESERVES PCB 4467-C  
ADVANCED MARINE RESERVES PCB 5418-C  
A Global Learning Course  
Fall 2017**

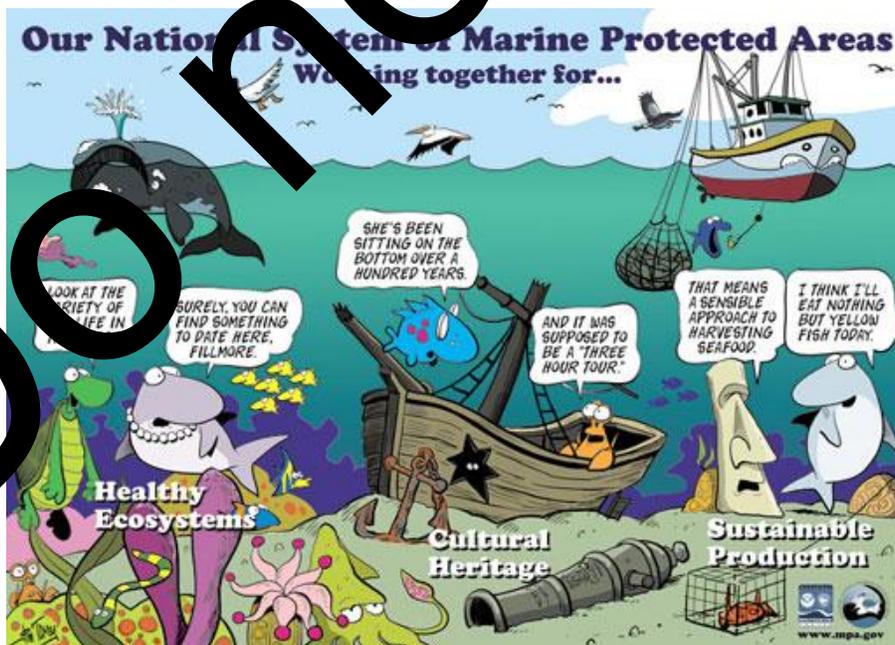
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**Schedule**

**Semester:** August 21<sup>st</sup> – December 10<sup>th</sup>, 2017  
**Lecture:** Monday and Wednesday 9:00 to 10:15 AM DM 190  
**Lab:** Monday 11:00 pm – 1:30 PM DM 190  
Wednesday 11:00 pm – 1:30 PM DM 190



## Introduction

Coastal zones and particularly the Caribbean region are well known for their beautiful beaches and complex ecosystems. Extremely rapid tourist development, accompanied by high population growth, has modified the structure of the human and biological communities, causing significant adverse environmental impacts to our marine resources. Coastal problems are also affected by local, regional and global stressors that need to be incorporated in any analysis. Therefore, the management of these resources has become a need and a challenge. The goal of establishing Marine Protected Areas (MPA) is to protect the fisheries, ecosystems, and the biodiversity of highly affected or threatened areas or species, as well as to benefit the dependent human communities and their cultural values. Knowledge of social concepts such as co-management, respect of native cultures and property rights; and biological concepts, such as connectivity, food web size and networks, demography of threatened species, and monitoring are essential for the design and management of a successful MPA. These activities are complex and only well-trained people with global awareness and perspective will be able to handle the different challenges of the design, establishment and management of an MPA.

## Course Description

The course employs active learning strategies to increase students' global awareness, global perspective and attitudes of global engagement. Global perspectives will be achieved through lectures and different learning strategies that will provide information on biological and sociological concepts as well as methods for the design and management of marine protected areas around the globe.

## Objectives

Provide students with a global knowledge of biological and social methods and problems related with the management of Marine Protected Areas.

Provide students with a global perspective by analyzing multiple marines protected areas around the globe. Special emphasis will be on South Florida and Caribbean within a global context.

## Global Learning Course Outcomes

- Through the study of Marine Protected Areas, students will be able to demonstrate knowledge of the interrelatedness of social concepts such as co-management, respect of native cultures and property rights; and biological concepts, such as diversity, fisheries, connectivity, food webs and coral reef networks at local, and global scales.
2. Students will be able to develop a deep analysis of a Marine Protected Area. Each study will provide a description of their MPA, and an evaluation of the

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status of the selected MPA, students will analyze how active the management of the selected MPA is; they will detect gaps and strengths of that their particular Marine Protected Area and if it worth the label of an MPA.

3. Students will be able to participate in a town hall meeting to solve real problems faced by Marine reserves. Students will be able to demonstrate their willingness to engage in local problem solving and interact with different cultural sectors.

**This course has a lecture and laboratory sections which are very close related. The laboratory is mandatory in this class.**

**Lecture section will count for 60% of your grade, the laboratory section will count for 40% of your grade.**

### Lecture section

Through lectures, guest speakers, readings and discussions in class students will get acquainted with MPAs' from different countries and cultures. Through the analysis of particular cases students will learn about the importance of stakeholders' perspectives about marine resources and the consequences on management strategies set in different MPAs'.

**Logistics: PLEASE READ THIS VERY IMPORTANT**

**Class dynamics:** Preparatory assignments, clicker questions, lectures, in class exercises and exams will be the activities that will characterize this class. All of them will have a value in your final grade.

Detailed description of each activity:

**Preparatory assignment: 5% of your final grade**

Each class you will be assigned a preparatory assignment to be returned via Turnitin on Monday before the class starts. You will have to write a short essay responding specific questions that will guide you to the topic that will be addressed that week. Your assignment will have a 1 or 0 values depending if you follow the instructions and do not copy paste materials. If your plagiarism level is above 15 % you will get a 0. Remember this is a learning activity that will increase your performance in class and exams.

To avoid excessive matching please do not quote sources – generate and demonstrate your understanding by explaining in your own words – and do not paste the original questions from the assignment into the document you submit. If pasting in the original questions helps you to organize your work, that is fine, but be sure to delete them before you turn it in. All Turnitin assignments will be set up to allow you to check your own originality report, so please do this before the assignment is due to make sure that no inadvertent plagiarism has slipped into

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your work. If you are using software designed to overcome Turnitin's ability to detect plagiarism, and our internal system detects it, you will be directed to the University authorities for cheating. PLEASE use this opportunity for learning. It is your time, your career, your future.

**Instructions for your preparatory assignment essay:** *(Read carefully, following instructions properly will result in a 1, as long as you have a good content. But if you have a good content but NOT FOLLOWING directions properly, you will get a 0).*

Your essay MUST be one full page with normal margins (1x1x1x1)

- 1) No name, no title
- 2) **Minimum 500** words, do not exceed 1.5 pages.
- 2 Single space
- 3) Font type Arial 12
- 4) One single return between questions. No more than that. Each question should be addressed without spaces. PLEASE BE SURE TO USE THE OPTION REMOVE SPACE AFTER PARAGRAPH TO AVOID GETTING AN EXTRA SPACE AFTER ENTERING A RETURN- THIS OPTION IS LOCATED IN YOUR WORD SETTINGS FOR LINE AND PARAGRAPH (SPACING TAB)

Questions will be provided by instructor one week ahead of the class. Can be based on a paper you will have to read, a video, or just a series of questions that you will need to find information to answer them.

**Clicker questions: 5 % of your final grade**

The first thing we will do each class is a series of clicker questions that will be based on your preparatory assignment. Questions based on your preparatory assignment will be graded. Two questions per class will be graded. The rest of the class clicker questions will count as one extra point per class if you participate in at least 75% of all questions (not graded). A maximum of 3 points per class will be awarded if you get two correct answers and participate in more than 75% of clicker questions.

**Group participation in class: 5% of your final grade** (3% mid-semester concept map, 2% to 1 per section-, 2% final concept map).

At the end of each section we will devote a class to build up a concept map that integrates all the parts learned for that particular section. This will be a guided activity during the class that has to be conducted in groups. The course is designed to cover three major sections (See detailed schedule). You will get a grade for each concept map, and the group that will win the best concept map will earn 3 extra credit points for that section. A final concept map will be conducted in the very last class; the winning group will earn 5 extra credit points for their final exam.

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Exams: **45% of your final grade** (Two mid-term exams 10% each, Final Exam 25%).

Exams will be a mix of multiple choice, true and false, and short answers.

### Textbook

#### Required textbook:

Marine Protected Areas: tools for sustaining ocean ecosystems. National Academy Press. Washington D.C. 2001. 272 p. ISBN: 0-309-07286-7. Provided by instructor.

#### Complementary books:

Salm, R. V., J. R. Clark and E. Siirila. 2000. Marine and coastal protected areas. A guide for planners and managers. Third Edition. IUCN. Washington D.C. xxii + 371 p.

Castro, P. and M. Huber. (7<sup>th</sup>-9<sup>th</sup> editions). Marine Biology. McGraw-Hill Publishing Company. ISBN 978-0073524207.

Speight, M. and P. Henderson. 2010. Marine Ecology: Concepts and applications. Wiley-Blackwell. 276 p. ISBN 978-1-4051-2699-1 (hardcover) or ISBN 978-1-4443-3545-3 (pbk).

### Laboratory section

The laboratory section is a hands-on application of concepts that are learned from the lecture. Expect to participate in field, zonation/monitoring simulation implementing processes and at the end, conduct an independent project researching a marine protected area of your choice.

**Interview Assignment** (August 21/23 – September 11/13): 4 weeks **(In-class and Outside-of-class)** – Students will establish objectives for collecting survey data, create a questionnaire that will be distributed to members of a community (at FIU or a surrounding community), and will collect data based on the questionnaires. The questionnaire will ask questions pertaining to general knowledge of marine protected areas, and knowledge and pre-conceptions of the Biscayne Bay National Park. Students will collect and analyze survey data, which will then be presented to the class. **Deadline for interview exercise: September 10-12** for Monday and Wednesday class respectively.

**Townhall meetings** (September 18/20 - 25/27 and October 30/Nov 1 – November 6/8): **(in-class)** There will be two separate simulated townhall meeting assignments that will allow students to act out a stakeholder group's position on a case-study related to marine protected areas. The week before the townhall meeting will be devoted to researching the student group's assigned role and

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position pertaining to that issue. Grading will be based on a small abstract of their role, as well as actual acting of the role, based on how knowledgeable each role's perspective was). **Date of townhall meetings: September 25/27 and November 6/8)**

**Zonation Exercise (October 2/4): (In-class)** Students will be given a map of a marine region in which they must draw out zonations within the marine region that corresponds to the allowed usage of marine resources and ecosystems. Criteria for zonation will be based on the IUCN categories of classified protected areas. Students will be familiarized with the IUCN categories to be used in the implementation of an MPA, the challenges with assigning zones within a marine region, and the proposal of their zonation plan through a group presentation. **Date of zonation exercise: October 2/4**, with prior IUCN familiarity as homework

**Monitoring Exercise (October 16/18 – 23/25): (in-class)** Complementary to the zonation exercise, students will be implementing a monitoring plan that will outline the monitoring of marine resources within the marine protected area of their selected MPA for the semester project. Students may find it helpful to look at other resources, such as other MPA management plans that are relevant to their final project. Students will have time to develop a solid monitoring plan for their MPA, which will then be presented in the following class period. **(Deadline of monitoring plan: October 23/25)**

### **Detailed description of the lab projects:**

#### **Marine Protected Area Evaluation and Improvement**

You are to select one Marine Protected Area of your choice, write an essay and create a power-point presentation on the MPA. The objective of the presentation is to introduce the audience to the MPA of your choice (already established), to provide us with all the necessary background information (names, location, size, objective of the reserve, legal status, category) and to provide an analysis of the status of the MPA (i.e., is there a management plan in place? Is there a monitoring program in place? Is there evidence that the MPA is working? What are the main challenges to its management?, etc.). **Remember you need to have a global, regional, and local perspective.** Also, **MPAs in Florida cannot be used for this final project** (we want you to look at other, out-of-state or international perspectives on MPAs as part of the global learning initiative). You will need to analyze what is working and what is not working in your selected MPA and need to propose strategies that can improve its management. You will both return an essay and will prepare a PPT presentation for the class. Your project has to be submitted using the Turnitin tool in your Blackboard web site. **Deadline to submit your essay is November 29<sup>th</sup>, 2017 by 5:00 PM.** Be sure to submit it before that time. Avoid problems with the system. **NO EXCUSES WILL BE ACCEPTED.** If you procrastinate and wait until last minute to submit and the system crashes you will not be able to submit it again.

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**ALL STUDENTS GRAD AND UNDERGRAD WILL PRESENT THEIR WH PROJECT AS A PPT during lab session.**

**Lab section Essay (Final semester group research project)**

**Due DATE : Wednesday, November 29<sup>th</sup>, 2017 by 5:00 PM**

Paper Guidelines:

- Minimum **8 pages for undergraduate**, and **15 pages for graduate** of double-spaced text. In addition, figures, maps & tables as needed
- Must include a minimum reference list of 10 citations, all 10 must be scientific papers. You may use websites but they do not count for the MINIMUM of 10 peer review papers.
- Please number pages & use 12-point font, Times New Roman
- Your paper must be submitted to turnitin.com for an authenticity check before it will be graded. If any of the paper is **plagiarized**, you will get a 0 for the assignment and you will fail the class. **REMEMBER:** You must cite and paraphrase all work appropriately, otherwise its plagiarism (= *the wrongful appropriation and publication as one's own, of the ideas or the expression of the ideas of another*).
  - You will submit your paper via Blackboard using the Turnitin tool.
  - Your paper must be posted by the due date, **Wednesday November 29<sup>th</sup> by 5 PM**. Within 30 minutes of submission you will be able to see the same originality report that the instructors will see. You are encouraged to submit your paper early and ensure you are not paraphrasing, use your own ideas. Analyze your essay before you submit your final version. You must ask the instructor to delete earlier versions before you submit your final version. **Use Turnitin as a tool that will help you improve your manuscript.**
- The course will be evaluated based on lecture and lab activities.
- Grade scale: A: 90-100%, B: 80-89%, C: 70-79 D: 60-69%, F:<60%.

**Undergraduate Grading 100 %**

**Lecture (60 %)**

- Preparatory assignment: 5%
- Clicker participation: 5%
- Concept map (in-class activities): 5%
- Exams: 45%

**Lab (40 %)**

- Reading summaries and quizzes: 5%
- Group activities in-class: 10 % (Town hall meetings, monitoring, zonation)
- Group activities outside of classroom: 10% (Interview exercise, field trips)
- Group MPA study case presentation and written report: 15%

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## **Graduate Grading 100 %**

### **Lecture (60 %)**

- Preparatory assignment: 5%
- Clicker participation: 5%
- Concept map (in-class activities): 5%
- Exams: 40%

### **Laboratory (40 %)**

Modifications for Graduate Grading: Graduate students are expected to return an essay and prepare a presentation on a particular Marine Protected Area (described below)

- Reading summaries and quizzes: 5%
- Group activities in-class: 10 % (Town hall meetings, modeling, simulation)
- Group activities outside of classroom: 5% (Interview exercise, field trips) of final grade
- MPA study case presentation and written report: 19 % of final grade

**There will be absolutely no make up exams or any other extra credits! Exams will not be curved.**

**Successful completion of General Biology I and II is a prerequisite.**

**Course expectations:** Regular class attendance is mandatory as is appearance on time.

**PLEASE BE RESPECTFUL WITH YOURSELF, PROFESSOR AND PEERS: No cell phones or beepers, chatting, surfing internet are tolerated during class.**

**Instructors Communication:** All instructor communication and announcements will be done by email and through the blackboard section of the course web site. Only students FIU email address will be used. If students do not use their FIU email account, use the easy-to-set-up automatic mail forwarding option to the email account you are using regularly.

**Students are required to maintain a functional FIU email account and to observe the "News" web page.** Emails that are returned due to "over quota" email accounts will not be re-sent. All email from students must contain "**PCB 447C**" or "**PCB 5418C**" or "MPA course", or "Marine Reserves course" in the subject line; student emails without proper subject line and without the student's name will not be answered!

**Sexual harassment policy:** FIU is committed to eliminating sexual harassment. In accordance with the FIU Faculty Senate guidelines, this syllabus includes a warning that any misconduct will be reported.

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Academic misconduct: FIU is committed to not tolerating any academic misconduct by students. In accordance with the FIU Faculty Senate guidelines, this syllabus includes a warning that any academic misconduct, particularly cheating in exams, will be reported and penalized.

**ALWAYS STAY INFORMED!  
FOR MORE INFORMATION AND UPDATES CHECK OUT THE COURSE  
BLACKBOARD SITE**

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