



## **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, 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 attitude 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**

1. 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 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 RED THIS IS VERY IMPORTANT**

**Class dynamics:** Preparatory assignments, clicker questions, lectures, in class activities 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 Mondays 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 instruction 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 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 Single space
- 3) Font type Arial 12
- 4) One single return between questions. No more than that. Each question should be addressed without spaces.

Questions will be provided by instructor one week ahead of the class. Can be based on a paper you will have to read, or 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 things 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 maps -3 total, 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.

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. xxi: 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

Students are expected to conduct an independent research project of a protected area of their interest (see below description of project). Students will practice case study analysis including town-hall simulation meetings; students will participate in field trips to local marine protected areas, and present their project results in lab sessions.

### 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.** 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 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 30<sup>th</sup>, 2016 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.

Class practices:

1) Interview, 2) Zonation, 3) Monitoring. Results from these practices have to be returned in a portfolio. Please see Laboratory schedule for details and grading of this section

**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 30<sup>th</sup>, 2016**

Paper Guidelines:

- Minimum **8 pages for undergraduate**, and **15 pages for graduate** of double-spaced text + 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 30<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.
- 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%

### **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, monitoring, zonation)
- Group activities outside of classroom: 5% (Interview exercise, field trips) of final grade
- MPA study case presentation and written report: 20 % 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**"

**4467C, 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.

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**