**Marine Ecology MASC 440/BIOL 462 Spring 2019**

Th/Th 12:30-1:45 in 210 Stone Center

Dr. [John F Bruno](http://johnfbruno.com/) Professor, Department of Biology 340 (office) and 342 (lab) Wilson Hall

jbruno@unc.edu

Office hours: Tuesday 10:00AM-12:00PM in Wilson 340\*

*\*I am also happy to meet with you after class or by appointment, but please coordinate this by talking to me before or after class, not via email. You are also welcome to come by my office anytime -  I will usually be in Mondays and Wednesdays.*

The final exam is May 3 from 12-3 PM laugh

**Course Readings**

There is no textbook for this class.  All course readings will be available via links to the UNC library or as PDFs files that can be printed or saved  on your laptop (i.e., read the digital version instead of printing the paper, which I recommend you get used to doing). Course readings will include review chapters and papers on general topics and more detailed cases studies from the primary scientific literature.  I will go over some of the material from course readings during lectures.  Other readings will serve as supporting material that may cover a topic in more detail or may even address new related topics and concepts.  I'll let you know which is which during lectures and review sessions and all readings will be labeled as “supporting” or “required”. I strongly urge you to read the required papers for a given lecture *before* you come to that lecture.  You will have to read, comprehend, and absorb the reading assignments to really get the most out of this class. To ensure you are doing this, you will take a short quiz on Sakai before most class meetings (more on this below).

**Sakai**

I will use the [course Sakai site](https://sakai.unc.edu/portal/site/b48a1226-1bd7-4639-8439-70a96aaa4ce1/page/ed233b7c-f1b9-4174-8ebe-e027787bb290) for pre-lecture quizzes, some in class assignments, homework (out of class assignments), and to record your grades (so you can track them).

**Course content**

The class will cover the evolution, ecology, and conservation of marine plants, invertebrates, and vertebrates and a wide variety of marine habitats and ecosystems.

**Learning objectives**

1)  Marine ecology: goals, history, state, progress 2)  How the science of ecology is done: evidence, experiments, etc. 3)  Factors that control populations and community structure 4)  Natural history of marine communities 5)  Threats to and conservation of marine ecosystems (changes: patterns, causes, remedies)

**Goals for the class**

1)  Sharpen critical thinking skills 2)  Students will develop ecology literacy: ability to discuss ecological topics 3)  Students will be able to explain the role of science in marine conservation

**Assessment**

The degree to which students have met the course learning objectives will be assessed via weekly quizzes, in-class activities and mini-quizzes, the mid-term, and the final exam.

**Homework**

There will be 3-5 homework assignments.

**Exams**

There will be two exams: a mid-term and a final.  *The final will be cumulative*.  Exams will be mixture of short answer, multiple choice, and short essay format and will focus on both facts and concepts. I will give you a fairly detailed study guide and will be very clear about what is and isn't on the exams.

**Quizes**

There will typically be two or three quizzes each week, taken via Sakai. Often, you will take one before each class meeting. On it will be questions about the content from previous lectures and on the required reading(s) for the upcoming lecture.

**In-class activities**

We will often do a small projects in class, e.g., concept mapping, designing an experiment, creating or interpreting graphics, etc.

**Grading**

The final score upon which your grade will be based is determined by the following formula: mid-term 20%, final exam 30%, homework 10%, pre-class quizzes 30%, in-class activities 10%. In general, I will use the criteria below (*Grading, grade inflation, and the meaning of grades at Carolina*) by the faculty council to assign final grades.  I will also use the scale below *as a guide*.  You should use it to *gage* your performance against my expectations.  Attendance is strongly recommended. The final average score is usually in the 84-87% range.

**Final score *generally* needed to achieve a given grade:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Score | 60 | 64 | 68 | 72 | 76 | 80 | 84 | 88 | 92 | 96 |
| Letter grade | D | D+ | C- | C | C+ | B- | B | B+ | A- | A |

**Grading, grade inflation, and the meaning of grades at Carolina**

In February of 2000, the educational policy committee released a report on grade inflation at UNC Chapel Hill.  They documented the striking increase in the average undergraduate GPA from 2.4 in 1967 to 3.0 in 1997.  This is a national trend that has many causes and is the source a variety of problems.

Two of the recommendations of the committee are: (1) that the University reduce the overall GPA to 2.7, and (2) we make students aware of the meaning of letter grades, in part to ensure that their expectations correspond to their commitment, effort and performance. The faculty educational policy committee stated that the purpose of grading is to identify the degree of mastery of subject matter.  Grades measure performance, not innate ability or individual worth.  Furthermore, they defined the meaning of letter grades with respect to the mastery of the material:

*"A":*Outstanding mastery of course material. Students earning an "A" have exhibited performance far above that required for credit in the course and far above that usually seen in the course. The "A" grade should be awarded sparingly and should identify student performance that is relatively unusual in the course. "The A grade states clearly that the student has shown such outstanding promise in the aspect of the discipline under study that he/she may be strongly encouraged to continue."

*"B":*Superior mastery of course material. Students earning a "B" have exhibited mastery clearly above that required for credit in the course. The "B" grade should represent student performance that is strong and very clearly above performance that is generally held to be satisfactory. "The "B" grade states that the student has shown solid promise in the aspect of the discipline under study."

*"C":*Satisfactory mastery of course material. Students earning a "C" have exhibited satisfactory mastery of course material. The "C" grade should reflect performance that is satisfactory on all counts and that clearly deserves full credit for the course. "The "C" grade states that, while not yet showing any unusual promise, the student may continue to study in the discipline with reasonable hope of intellectual development."

*"D":*Mastery of course material that is unsatisfactory or poor along one or more dimensions. Students achieving a "D" have exhibited incomplete mastery of course material but have achieved enough to earn credit for the course. "The "D" grade states that the student has given no evidence of prospective growth in the discipline; an accumulation of "D" grades should be taken to mean that the student would be well advised not to continue in the academic field." *"*

*F":*Unsatisfactory mastery of course material. Students earning an "F" have not demonstrated sufficient mastery of course material to earn credit for the course. The "F" grade indicates that the student's performance in the required exercises has revealed almost no understanding of the course content. A grade of "F" should warrant an adviser's questioning whether the student may suitably register for further study in the discipline before remedial work is undertaken.

**Some studying and learning tips**

Read assignments and look over the lecture/notes *before* coming to lecture. Take notes, but be sure to *listen* and *actively* *think* during lectures. Be an active participant in your education. I always encourage students to ask questions in class. After lectures, recopy your notes. Be skeptical, think critically, and try to synthesize seemingly disparate concepts and facts. Question the things you read and the things I tell you. Embrace the use of general principles while recognizing their limitations.  Use the many caveats in ecology to predict when and where a principle or theory will and will not hold true.  In other words, be aware of the context-specific nature of many ecological processes and general principles. Keep separate lists of key facts, citations, terms, and concepts and cross-reference them to lectures. Come to office hours. If you’ve come to lecture and did the readings and you still don’t understand a concept, please come to either my office hours with your questions. Please bring a list of questions/topics you want clarified. Note: I won’t tell you what questions will be on the exams, but I can help you prepare for the exams by reviewing key ideas and details you find confusing.

**Things not to do.  Please don't:**

Allow your cell phone to ring, beep, or buzz during lecture leave lecture early start packing up before the lecture is finished email, text message or surf the internet during class, ask me about extra credit, make up exams, do-overs, turning in late assignments, re-taking quizzes, etc. And never, ever e-mail me to ask what we did in class.

**UNC Honor Code**

As a condition of joining the Carolina community, Carolina students pledge “not to lie, cheat, or steal” and to hold themselves, as members of the Carolina community, to a high standard of academic and non-academic conduct while both on and off Carolina’s campus. This commitment to academic integrity, ethical behavior, personal responsibility and civil discourse exemplifies the “Carolina Way”, and this commitment is codified in both the [University's Honor Code](https://studentconduct.unc.edu/honor-system) and in other University student conduct-related policies.