

**Marine Ecology**  
**BIOL 529, 529L, 592I**  
**Spring 2015**

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*Lecture:* Tuesday & Thursday 1:00-1:50 pm Chaparral Hall 5335  
*Lab/Field:* Tuesday & Thursday 2:00-4:50 pm Chaparral Hall 5335 & Field Sites

*Instructor:* **Dr. Mark Steele** Office Hours: Tue 11-12 & Thur 10-11  
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phone: 818-677-4270

*Graduate Assistant:* **Sam Ginther** Office Hours: Thur 11:00-12:00  
<sginther12@gmail.com> Office: MG 4103

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**Required Books:**

*The beachcomber's guide to seashore life of California.* J.D. Sept. 2009. Harbour Publishing.  
*A student handbook for writing in biology.* Fourth Edition. K. Knisely 2013. Sinauer Associates.  
*The elements of style.* W. Strunk and E.B. White.

**Other Required Reading:** Electronic files of *research papers* will be provided on the course website

**Supplemental Texts (optional, but very helpful):**

*Marine Community Ecology and Conservation*, by Bertness, Bruno, et al. 2014.  
*Ecology: the experimental analysis of distribution and abundance.* C.J Krebs 2008.

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**Course Objectives:** This course is intended to provide you with a general understanding of the ecological processes that determine the structure and dynamics of populations and communities in marine ecosystems; and to teach you how to conduct ecological research to reveal such processes. When you leave this course, you should (1) have a broad understanding of marine ecology; and you should know how to (2) look for, identify, and describe patterns in nature; (3) develop testable hypotheses of the causes of observed patterns; and (4) design and carry out empirical tests of the predictions of hypotheses to explain observed patterns.

**Course Overview:** This course will combine a series of lectures with extensive hands-on fieldwork to teach you about marine ecology. My intention is to involve you as an active participant – in lectures and field and lab studies – because doing something is the best way to learn it. The three portions of the course (lecture, lab, and field) are integrated and you must take them all this semester. Your grade for the lecture portion of the class (BIOL 529) will be based entirely on written assignments and exams; whereas 20% of your grades in the lab and field portions of the class (BIOL 529L and 592I) will be based solely on attendance and participation in field trips and lab activities (see Grading Policy, below).

In lectures you will learn fundamental concepts in marine ecology. *You are encouraged and expected to ask questions during lecture.* There is no class textbook,

but you are expected to read assigned papers from the scientific literature before lecture. You will learn how to do research on marine ecology with a series of field research projects. At the start of the semester, we will do these together as a class. In the second half of the course you will conduct an independent research project on a topic of your choice. You will learn methods for studying marine ecology in the field; you will learn how to analyze and present the data you have collected; and you will learn how to write clear, effective, scientific research reports.

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**Grading:**

Component	Percent of Grade
Midterm Exam 1	15
Midterm Exam 2	15
Final Exam	20
Lecture Pop Quizzes	5
Research Paper 1	10
Independent Research Proposal	2
Independent Research Presentation	8
Independent Research Paper	15
Field/Lab Study Question Sets	10
<i>Participation in Field &amp; Lab Studies</i>	<i>(20% of grade for 592L &amp; 592I)</i>
<b>TOTAL</b>	<b>100</b>

Your grade will be based on the components listed above. There will be 3 exams: 2 midterms and a final. The final will be cumulative. The **exams** will consist of short answer (one word to one short paragraph), true/false, multiple choice, and graphs or other figures. These exams will be designed to test your factual knowledge, your ability to synthesize information from lecture, and your ability think logically about the implications of this information. Answers will be graded on factual content, logic, and clarity. The exams will be based entirely on material covered during lecture. I expect you to read the assigned research papers to help you understand the material presented during lecture. **There are no make-up exams.** In *exceptional cases*, and if arrangements have been made *in advance*, exams (but not pop quizzes) may be taken at a mutually agreed upon time (usually before the rest of the class).

You will be required to write 2 **research reports** in the form of a published scientific paper (following the style of the journal *Ecology*). One of these papers will be based on a field study that we do together as a class, and the other will be based on the data that you gather for your independent research project. We will discuss the format and expectations for these papers in more detail later in the semester.

For your independent research project you will also be graded on a **research proposal** (given in both written and oral form to the class); and when you have completed your research, you will give a 10-minute **oral presentation** of your findings (as one would at a scientific meeting).

In addition, there will be 5 **pop quizzes** at the end of certain lectures, on material presented in that lecture and the assigned readings. These will have a short-answer

format and should take no more than 10 minutes to complete. **No make-up quizzes will be offered.**

Also, for each field or lab study that we conduct, there will be a **question set** to answer based on our findings. These are not meant to be difficult. They are designed to help you extract and remember the main findings of the activity.

Your grade in the *field study* and *lab* portions of the course (592L & 592I) will be based 80% on the components just discussed and *20% on your participation in the field and lab studies*. If you attend every field trip and lab activity and actively participate, you will get the full 20%.

Your grade will be based on your percentage of the total possible points. You can use the following cutoffs as a guideline. I reserve the right to lower the grade cutoffs, but don't count on that happening.

Percent	Letter Grade
93-100	A
90-92	A-
88-89	B+
83-87	B
80-82	B-
75-79	C+
70-74	C
65-69	C-
60-64	D+
55-59	D
<55	F

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Exam Dates: Midterm 1: February 24, 1:00 – 1:50 pm  
Midterm 2: March 26, 1:00 – 1:50 pm  
Final: May 12, 12:45 – 2:45 pm

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**Field Trips:** There will be several field trips during the semester and they are all mandatory. One of these trips will fall on a weekend. Most of the weekday field trips will extend beyond listed class hours (i.e., usually you will *not* be back at CSUN by 5 pm). You will not be able to make up missed field trips. If you have conflicts that will prevent you from participating in any of these field trips, please talk to me as soon as possible.

The field trips are designed to introduce you to marine organisms and ecosystems, reveal ecological patterns in nature, and teach you methods for identifying and quantifying such patterns. Attendance of the field trips is mandatory because classroom study is insufficient for learning and understanding these topics.

Come prepared for field trips. You are being trained as field ecologists and as such, you must be prepared to get cold, wet, or muddy, depending on what we are doing. Bring suitable footwear (e.g., dive or surf booties, or old tennis shoes) and clothing (e.g., wetsuits for some activities); and bring a pencil and notebook for data collection. If it rains you must still be able to collect data. If you are unsure what items

you need before going out in the field, contact me or the GA. Field outings will normally be 3+ hours, so bring water, snacks, and sunscreen.

A note about field activities: The field activities that are part of this class can be physically taxing, and may place you some distance from help if you have a medical problem. If you have serious concerns about your ability to participate in the field activities, please talk to me as soon as possible.

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**Attendance:** This is an intellectually challenging and time-demanding course. Students with other time-consuming responsibilities (heavy course loads, jobs > 20 hr/wk, athletics, music groups, etc.) should seriously consider their ability to meet these demands. You are expected to attend and actively participate in every lecture, lab, and field experience. You will not be able to make up missed lab or field activities.

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**Communication:** Outside of class time, I will communicate with you via your CSUN email account. If you do not normally use this account, please configure your CSUN account to forward your messages to your preferred account. You can expect me to respond to your email within 24 hours (except on weekends).

**Your best source of course information is the course website.** Check the schedule on the website regularly because occasionally we may have to change the schedule due to bad weather or other unforeseen complications. Also, pdf files of required readings for lecture (scientific papers), pdf's of the PowerPoint lectures, class assignments, directions to field sites, and data from our field studies are downloadable from the website.

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**Expectations:** You can expect me to be punctual, treat you fairly, return your graded assignments in a timely fashion, and most importantly, treat you with respect. In return, I expect you to treat other students, the GA, and me with respect and do everything you can to ensure a comfortable learning environment. For example, jokes or comments made in poor taste that make any member of the class uncomfortable will not be tolerated. Use of cell phones or computers during class for any purpose other than those directly related to the class (e.g., note taking) is not allowed.

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#### **Policies:**

- **Cheating** on an exam will result in failure of the course and may result in further University discipline. The CSU policy states: *“Cheating or plagiarism in connection with an academic program at a campus is listed as an offense for which a student may be expelled, suspended, or given a less severe disciplinary action.”*
- **Plagiarism** will result in you failing the assignment. Plagiarism is *“intentionally or knowingly representing the words, ideas, or works of another as one’s own in any academic exercise”*. Don’t do it. Remember to give full credit to authors and cite them in your research reports. If you are uncertain about what constitutes plagiarism talk to me.
- **Late assignments lose 10% per day**, i.e., the most you can receive for an assignment that is one day late is 90% of its point value, 2 days late 80%, etc.

- **Punctuality:** expect to start on time.
  - Students with **disabilities** must register with the Center on Disabilities and complete a service agreement each semester. Staff within the Center will verify the existence of a disability based on the documentation provided and approved accommodations. Students who are approved for test taking accommodations must provide an Alternative Testing Form to their faculty member signed by a counselor in the Center on Disabilities prior to making testing arrangements. The Center on Disabilities is located in Bayramian Hall, room 110. Staff can be reached at 818-677-2684.
  - The Biology Department **withdrawal policy** states: *"Unrestricted withdrawals are permitted only until the end of the third week. Thereafter, requests to drop a class will be honored only when a verifiable serious and compelling reason exists and when there is no viable alternative to withdrawal. Poor performance is NOT an acceptable reason for withdrawal. During the last three weeks of the semester withdrawals will not be approved except when a student is withdrawing from ALL classes for verifiable medical reasons."*
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