

**SYLLABUS**  
**BIOLOGY 116: ECOLOGY AND CONSERVATION BIOLOGY, ONLINE**

**Instructor:** TBD (Kurt Anderson Fall 2020, Helen Regan Winter 2021)

**TAs:** TBD

TEXTBOOK: None

OFFICE HOURS: TBD (Kurt Anderson Fall 2020 likely Mondays 2-4pm and by appt.)

**COURSE DESCRIPTION**

This course will introduce the principles of ecology with emphasis on implications for the conservation of biodiversity. Topics we will cover include physiological ecology, organismal adaptations to the environment, life histories, the niche concept, population growth, interspecific interactions, and the structure and functioning of communities and ecosystems. We will also covers topics in applied ecology and conservation biology.

By successfully completing this course, students will be able to:

1. Compare the different levels of ecological organization used by ecologists.
2. Distinguish between abiotic and biotic factors and how these influence processes at different levels of ecological organization.
3. Understand and apply life tables, survivorship curves, and basic models of population growth and dynamic data.
4. Compare different types of interaction between species and the consequences of these interactions for each species and ecosystem functioning.
5. Discuss different ways ecological communities are delineated, represented, and quantified.
6. Summarize how communities and ecosystems change in time and space.
7. Discuss global patterns of biodiversity and how these are determined by climatic and biogeochemical patterns, including the consequences of human activities.
8. Synthesize and interpret ecological data quantitatively and visually.

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**LECTURE**

Biology 116 has a course website hosted on Canvas. You can access it via an internet connection at the following address: <https://ilearn.ucr.edu/>. To access course material, you will need to login with your **UCR USERNAME** and **PASSWORD**. Course materials, including online lectures, readings, and discussion assignments, will be updated regularly on the course website.

Course material will be broken down into weekly video lecture modules, discussions, assignments and supplementary materials. Lectures are recorded and delivered asynchronously. Videos and assignments must be completed in the order they are presented before advancing to the following week's material. Participation credit for

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completing assigned material will be rewarded automatically by signing in using UCR login information and submitting answers in the format requested. Unless noted, supplementary materials can be viewed as needed.

#### **DISCUSSION**

Weekly discussion sections will be hosted via the ZOOM video conferencing software. The link to your discussion section can be found in the iLearn course page. Discussion assignments will be posted one week before they are discussed on the course website. Discussion grades will depend on attendance, participation, and satisfactory completion of all assignments. Attendance will be taken at discussion, which again requires signing in using UCR login information. Two unexcused absences from discussion sections will lead to an automatic “F” for the course. Beyond attendance, you must participate, which means 1) turning the assignment BEFORE discussion with questions answered EVERY WEEK, and 2) contributing to the in-class conversation. Your assignments will be graded for content and for completeness.

#### **EXAMS**

Exams will be based on both readings and lectures, but will focus on material covered in the lectures. Exams will be a mixture of open and closed book questions. This means that you may only consult books and notes specifically allowed and may not access unauthorized sites on the internet, or other students’ papers during the exam. A student who is observed copying or receiving information from any unauthorized source will receive a score of “0” for that exam. The final exam will be cumulative. You will be required to use proctoring through the UCR YUJA video app when taking your exams. Absences from exams will only be excused in the case of extreme emergencies. If you can provide documentation for your absence and it is considered legitimate, your grade will be prorated to exclude the missed exam.

#### **OFFICE HOURS**

While lectures will be asynchronous, faculty instructors and TA will be available for live consultation during scheduled office hours. Office hours will be held via the ZOOM video conferencing software with a link on the course webpage. Live consultation outside of regular office may also be requested by appointment by emailing the instructor, although times are not guaranteed to be available.

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TECHNICAL ASSISTANCE

Technical assistance can be obtained by calling UCR Information and Technology Solutions at (951) 827-4848 or visiting <https://its.ucr.edu/>.

GRADING

Grades will be tentatively calculated as follows:

Discussion (Discussion Total = 30% of your grade)	
Discussion Login	3%
Discussion Participation	7%
Assignments	20%
Quizzes (Total = 15%)	
Online lecture quizzes	15%
Exams (Exams Total = 55%)	
Midterm Exams (2)	30%
Final Exam	25%

ACADEMIC DISHONESTY

Cheating is a big no-no; it is a pain for everyone involved. I will maintain ZERO-TOLERANCE for cheating. This includes all aspects of the class: exams, quizzes, worksheets, unauthorized collaboration, manufacturing data, plagiarism, etc. What this means is don't even try or think about cheating. The T.A.'s assigned to this course and I have become very good at detecting it and we actively seek it out. During tests a proctoring service (ProctorU) will record you as you take the exam and will flag any suspicious activity, which will be forwarded to me. Unless otherwise indicated, you are to work on discussion worksheets individually. People suspected of cheating will immediately be given an "F" on the item in question. I will notify the department chair of the matter, and then refer the case to the Campus Student Conduct Committee for violation of University Conduct Code 102.01 (dishonesty, cheating, plagiarism, etc.). I will request that the Student Conduct Committee immediately suspend students found guilty of cheating in this course. So, please don't cheat. Ignorance of campus rules on student conduct is NOT an excuse for prohibited behavior. Therefore, you should review the campus-wide policies and procedures on academic dishonesty at

[http://senate.ucr.edu/agenda/041116/CEP\\_STUDENT\\_INTEGRITY\\_PROPOSAL\\_2.pdf](http://senate.ucr.edu/agenda/041116/CEP_STUDENT_INTEGRITY_PROPOSAL_2.pdf)

and review the Student Conduct policies at <http://www.conduct.ucr.edu/>

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LECTURE AND EXAMINATION SCHEDULE (lecture days and topics are subject to modification)

Time	On the Ground Course	Online Learning Course
Week 0	Course introduction	Live webcast
Week 1	The Web of Life	3 Video lectures
	The Physical Environment & The Biosphere	3 Video lectures
	Discussion	Zoom discussion & break out session
Week 2	Coping with Environmental Variation	3 Video lectures
	Evolution and Ecology	3 Video lectures
	Discussion	Zoom discussion & break out session
Week 3	Life Histories	3 Video lectures
	Population Distribution and Abundance	3 Video lectures
	Discussion	Zoom discussion & break out session
	<b><u>Mid-Term Exam I</u></b>	
Week 4	Population Growth and Regulation	3 Video lectures

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	Population Dynamics	5 Video lectures
	Discussion	Zoom discussion & break out session
Week 5	Competition	5 Video lectures
	Predation and Herbivory	3 Video lectures
	Discussion	Zoom discussion & break out session
Week 6	Parasitism & Disease	4 Video lectures
	Mutualism & Commensalism	3 Video lectures
	Discussion	Zoom discussion & break out session
Week 7	The Nature of Communities	3 Video lectures
	Change in Communities	3 Video lectures
	Discussion	Zoom discussion & break out session
Week 8	<b>Mid-Term Exam II</b>	
	Species Diversity in Communities	5 Video lectures
	Discussion	Zoom discussion & break out session
Week 9	Nutrient Cycling	3 Video lectures

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	Conservation Biology	3 Video lectures
	Discussion	Zoom discussion & break out session
Week 10	Climate Change	5 Video lectures
	Ecosystem Management	3 Video lectures
	Discussion	Zoom discussion & break out session
	<b><u>Final Exam</u></b>	