

Example Syllabus
Advanced Ecology (4 credits; BES 550)

Instructors

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Prerequisites:

Graduate standing; must have completed introductory biology and ecology or courses that included significant introduction to ecology. We will expect that you know a little basic ecology.

One-on-one meetings

Please contact us by email or phone to arrange office visits/discussions - we are happy to talk!

Class Meeting Format:

We will meet in person Tues and Thurs 11:00-12:15 in Coastal Institute room 200 (the “Sun Room”)

Course Goals:

This graduate-level course focuses on interactions between organisms and their environments, and relationships between organismal biology and the ecology and dynamics of populations and communities of plants and animals. The course includes discussion of principles, methods of study, research results, and significance and relevance to conservation.

Course Structure:

The course is organized to encourage thinking and learning about key concepts in ecology from lectures and through reading of the primary literature, discussion, analytical writing, and problem sets. One class each week will be spent in lectures or working through problem sets. The other class each week will be spent discussing several contemporary and/or classic research papers. Students are required to carefully read the assigned papers and participate in all discussions. Each student will be required to lead at least one discussion.

There are three types of writing assignment in the course: (1) a < 5 page "position" paper that evaluates conflicting information in 2-4 journal articles (McWilliams); (2) a written critique of the readings for each of Forrester's group discussions, and (3) a ~ 5-page synthesis paper and short (5 min) presentation highlighting the career, contributions, and challenges of a prominent ecologist from a historically minoritized community (McMahon).

Brightspace

We plan to use Brightspace (the content pages that includes the syllabus and schedule, and readings) to communicate with you about the course. The syllabus provides the overall view of what is happening each week, and then you will find in Brightspace a folder for each week that provides you (a) any info you need for lectures and problem sets (e.g., handouts, outlines), and, for discussions, (b) the pdf copies of the readings for that week, and (b) a 'primer' that lists the readings and a series of questions that will guide the discussion for that week.

Exams and Grading:

	<u>Percent of grade</u>	<u>Actual points</u>
Problem sets	10%	50
Position paper	20%	100
Written critiques	20%	100
Synthesis paper + presentation	20%	100
Discussion participation	20%	100
Leading of discussion	10%	50

Anti-Bias Syllabus Statement:

We respect the rights and dignity of each individual and group. We reject prejudice and intolerance, and we work to understand differences. We believe that equity and inclusion are critical components for campus community members to thrive. If you are a target or a witness of a bias incident, you are encouraged to submit a report to the URI Bias Response Team at www.uri.edu/brt. There you will also find people and resources to help.

Disability Services for Students Statement:

Your access in this course is important. Please send us your Disability Services for Students (DSS) accommodation letter early in the semester so that we have adequate time to discuss and arrange your approved academic accommodations. If you have not yet established services through DSS, please contact them to engage in a confidential conversation about the process for requesting reasonable accommodations in the classroom. DSS can be reached by calling: 401-874-2098, visiting: web.uri.edu/disability, or emailing: dss@etal.uri.edu. We are available to meet with students enrolled in Kingston as well as Providence courses.

Graduate Writing Center (for graduate courses):

The [Graduate Writing Center](#) provides writing support to all URI doctoral and master's students to foster continuing development of academic and professional writing skills necessary to succeed in graduate programs and academic or professional careers.

Class Week	Date	Activity	Instructor	Assignments due
1	10 Sep	Introduction to class	All three	
1	14 Sep	Discussion: Approaches to research	All three	
2	17 Sep	Lecture: Metabolism & energetics	SM	
2	21 Sep	Discussion: Allometry & statistics	SM	Problem set
3	24 Sep	Lecture: Too hot (or cold) to handle: thermoregulation	SM	
3	28 Sep	Discussion: Thermal ecology	SM	
4	1 Oct	Lecture: Make some more: growth and reproduction	SM	
4	5 Oct	Discussion: Reproductive energetics	SM	
5	8 Oct	Lecture: Nutritional ecology: foraging and digestion	SM	
5	12 Oct	Discussion: Nutritional ecology	SM	Position paper
6	15 Oct	Lecture: The ecology of invasions	GF	
6	19 Oct	Discussion: do native predators provide biotic resistance to invasive lionfish?	GF	critique 1
7	22 Oct	Lecture: adaptive responses	GF	
7	26 Oct	Discussion: do marine snails adapt to predation?	GF	critique 2
8	29 Oct	Lecture: ocean acidification	GF	
-	2 Nov	Discussion: are larval fish compromised by ocean acidification	GF	critique 3
8	5 Nov	Lecture: meta-analysis and synthesis	GF	
9	9 Nov	Discussion: is climate change shifting species distributions?	GF	critique 4
9	12 Nov	Lecture: Decolonizing Ecology	KWM	
10	16 Nov	Discussion: Parachute science, anti-oppression	KWM	
10	19 Nov	Lecture: Food webs and energy transfer	KWM	
11	23 Nov	Discussion: Trophic cascades and functional redundancy	KWM	
-	26 Nov	Thanksgiving (NO CLASS)		
11	30 Nov	Lecture: Ecological Niche	KWM	
12	3 Dec	Discussion: Functional Redundancy	KWM	
12	7 Dec	Breaking through Colonized Ecology - Presentations	KWM	Synthesis paper
13	10 Dec	Breaking through Colonized Ecology - Presentations	KWM	