

University of California, Davis
Department of Philosophy
PHILOSOPHY OF BIOLOGY
PHI 208, Fall 2016
2275 SSH, Tues 3:10-6 PM

Contact information

Instructor: Professor Roberta Millstein

Office: 2287 Social Sciences and Humanities (aka SSH, Death Star: corner of 3rd and A)

Office Hours: Tues 12:30-1:30 PM, Thurs 3-4 PM, and by appointment

E-mail: RLMillstein@UCDavis.edu (*the best way to reach me*)

Phone: 530-554-1398 (Skype voicemail)

Philosophy Dept. Office, my mailbox: 1240 SSH **Philosophy Dept. Phone:** 530-752-0703

Required readings

Required (and optional) readings available on course website on Canvas, <https://canvas.ucdavis.edu/>

Course description

This graduate seminar will explore recent topics in *philosophy of ecology*. Our focus will be on the sciences of ecology (including ecosystem ecology and community ecology), rather than “environmentalism,” although there will be some overlap. We will consider the conceptual question of what an “ecosystem” is, including whether humans and viruses are included; what “ecosystem health” and “ecosystem resilience” are, and whether those terms are coherent; and how should “biodiversity” and “invasive species” be defined, and whether those terms are useful for policy. We will then “zoom out” a bit and consider ecology more generally: does it make predictions, does it have laws, and does it have a general theory?

Course requirements

Your grade will be based on the following:

10% - In-class participation

10% - Online participation

20% - Coordination of seminars

60% - Term paper - Sketch due by 11 PM Sun, **Nov. 27**; final version due by 11 PM on Sun, **Dec. 11**.

In-class participation - You are expected to come to all classes having done the readings and you are expected to participate in class discussions.

Online participation - Post to the SmartSite Forums **by 1 PM before every seminar** concerning the readings for the day – ask questions, raise objections, give reflections, etc.

Coordination of seminars: You will coordinate at least one (perhaps more, depending on the number of students in the class) seminar using a visual aid such as handout or PowerPoint-type slides – contact me before class for help with photocopying or projector set up. Your job as coordinator is to stimulate and lead discussion. So, you should **1)** Give enough of a summary of the readings to stimulate discussion, but don’t attempt a point-by-point summary (we can always turn to the article during discussion if necessary). Be sure to provide an overview of the overall argument. Seek out additional references if necessary. And, **2)** raise issues for discussion (not simply, “what did you think about that?”). As coordinator, it is OK if there are parts of the articles that you didn’t understand; ask those questions for group discussion.

Term paper: Your paper may analyze any of the readings discussed in class, any of the optional readings, or offshoots of those readings (follow the citations of class readings or look for papers that cite the class readings). Contact me if you wish to do something other than the above. Prepare your paper (more or less) in the style of a *Philosophy of Science* article. Your paper should be approximately 5000 words (the length of a Philosophy of Science Association conference paper).

Important note on plagiarism/cheating: It is a violation of the Code of Academic Conduct to turn in work that is not your own. This includes: turning in the work of another student with your name on it, buying/copying a paper off the Internet, using the words *or* ideas of others without proper quotation and citation. In accordance with Regulation 550 of the Davis Division of the Academic Senate, **a grade of "0" will be assigned to assignments on which cheating, plagiarism or any other form of academic dishonesty is admitted or determined to have occurred by proper adjudication.** If you have trouble with the class material or have personal issues that prevent you from doing your work, come talk to me.

Tentative Schedule - All dates and readings are subject to change.

Date	Author-year	Paper/chapter title	Coor.
Sep 27	<i>Background in ecology/history of ecology</i>		RLM
	van der Valk 2011	"Origins and Development of Ecology"	RLM
Oct 4	<i>What is an ecosystem?</i>		
	Odenbaugh 2010	"On the Very Idea of an Ecosystem"	
	Collier & Cumming 2011	"A Dynamical Approach to Ecosystem Identity"	
Oct 11	<i>What's included in ecosystems?</i>		
	O'Malley 2016	"The ecological virus"	
	Inkpen 2016	"Are humans disturbing conditions in ecology?"	
Oct 18	<i>What is ecosystem health, and does the term make sense?</i>		
	Jamieson 1995	"Ecosystem Health: Some Preventive Medicine"	
	McShane 2004	"Ecosystem health"	
Oct 25	<i>What is ecosystem resilience?</i>		
	Brand & Jax 2007	"Focusing the meaning(s) of resilience"	
	Desjardins et al 2015	"Promoting Resilience"	
Nov 1	<i>What is biodiversity, and is the term useful for policy?</i>		
	Morar et al 2015	"Biodiversity at Twenty-Five Years: Revolution Or Red Herring?"	
	Eliot 2015	"Biodiversity as a General, Scientific Concept"	
	Oksanen 2015	"Whose Biodiversity is In Trouble? A Commentary on Morar et al."	
Nov 8	<i>What are invasive species, and is the term useful for policy?</i>		
	Shrader-Frechette 2001	"Non-Indigenous Species and Ecological Explanation"	
	Larson 2011	"Embodied Realism and Invasive Species"	
Nov 15	<i>Does ecology make predictions?</i>		
	Mikkelson 2001	"Complexity and Verisimilitude: Realism for Ecology"	
	Elliott-Graves 2016	"The Problem of Prediction in Invasion Biology"	
Nov 22	<i>Does ecology have laws, or are its explanations of a different sort?</i>		
	Colyvan & Ginzburg 2003	"Laws of Nature and Laws of Ecology"	
	Raerinne 2011	"Causal and Mechanistic Explanations in Ecology"	
Nov 29	<i>Is there a general theory in community ecology?</i>		
	Roughgarden 2009	"Is there a general theory of community ecology?"	
	Vellend 2010	"Conceptual Synthesis in Community Ecology"	