

Biology 5024, CRN 96633

Time: MWF 1115-1205 PM plus a discussion section Thursday (900-1015am OR 1045-12pm)**Location:** MWF, McBryde 328
Thurs, Derring 3004**Professor:** Dr. Lisa Belden**Office:** 4092C Derring Hall**Phone:** 231-2505**Office hours:** Monday 130-330 pm, or by appointment**Email:** belden@vt.edu [please type "Ecology" in the subject so I know the message is class related]**Course prerequisites:** Graduate standing or consent of instructor**Course materials:** There is no textbook for this course. Readings and other class materials will be posted on Blackboard (learn.vt.edu). You will be responsible for checking Blackboard and downloading required materials as they are made available. If you have any problems with this, please contact me.**What you should learn in this class:**

You should have a firm grasp of the main concepts/theories in the fields of population and community ecology by the time you have finished this course. You should be comfortable reading scientific articles in these fields (and should understand what you read), be capable of forming educated opinions about the research presented in the articles and be able to articulately express those opinions to the group.

Student evaluation:

Half of your grade will be based on completing an annotated bibliography and half of your grade will come from in-class participation and presentations. Please note that you can not earn participation points if you are not in class. Any absences should be scheduled with me in advance and will be dealt with on an individual basis.

Annotated Bibliography of additional readings	30 points
Sub-set of 5 "best" recent (2003 or later) articles identified	20 points
In-class participation in discussion section	20 points
Friday "wrap-up" contributions	20 points
In-class presentation – 3 top articles/ remaining questions	10 points

Grade distribution:

A range = >90 points	D range = >60 points
B range = >80 points	F = ≤ 60 points
C range = >70 points	

Other information:

Plagiarism will not be tolerated. All writing must be in your own words- do not "borrow" words from the authors of the papers or from your classmates. If you need more clarification on this, please see me.

Thursdays

Each Thursday will be discussion/lab day. Papers will be assigned weekly for Thursday discussions and will be coordinated with lecture topics.

Friday wrap-ups

Most Fridays will be used to wrap-up loose ends from the week, including finishing/clarifying any lecture material, discussing the key points we covered that week and also having a few students give overviews of the additional papers they read that week (see the annotated bibliography assignment for more info on the additional readings).

If you need any special assistance or allowances in this course, please see me as soon as possible.

TENTATIVE LECTURE SYLLABUS (and I do mean tentative)

DATE	TOPIC	Other info
25 August	Introductions	
27	Field of ecology, experimental ecology	
29	FRIDAY WRAP-UP	
1 Sept	Defining/describing populations	
3	Population ecology	
5	FRIDAY WRAP-UP	
8	Population ecology	
10	Pop. Ecology- recruitment, open/closed systems	
12	FRIDAY WRAP-UP	
15	Defining communities, history of community ecology	
17	Niche theory	
19	FRIDAY WRAP-UP	
22	Competition	
24	Predation	
26	FRIDAY WRAP-UP	
29	Mutualisms	
1 October	Food web theory	
3	FRIDAY WRAP-UP	
6	Trophic cascades, indirect effects	
8	Path Analysis	Eric Sokol
10	NO CLASS-FALL BREAK	
13	Ordination analyses	Bob Jones
15	Bayesian statistics	Scotland Leman
17	FRIDAY WRAP-UP	
20	Building communities, assembly rules	
22	Succession and stability	
24	FRIDAY WRAP-UP	
27	Island biogeography	
29	Equilibrium/Non-equilibrium theory	
31	FRIDAY WRAP-UP	
3 Nov	Role of diversity in ecosystems	
5	Diversity discussion- student paper selection	
7	Invasion biology, I	
10	Invasion biology, II	
12	Invasion Biology discussion-student paper selection	
14	Disease ecology I	
17	Disease ecology II	
19	Disease ecology discussion-student paper selection	
21	FRIDAY WRAP-UP and Student presentations	BIBLIOGRAPHY DUE 21 NOVEMBER
24-28	THANKSGIVING BREAK	
1 Dec	Student presentations	
3	Student presentations	
5	Student presentations	
8	Course review, part I	
10	Course review, part II	
11-18 Dec	EXAM week	