BIOL 462 | Spring 2020

Community & Ecosystem Ecology

Lectures: Tu, W, Fr 10:30-11:20
Location: Hickman 116

Instructor: Dr. Brad Anholt
Email: banholt@uvic.ca
Cunningham 224
O ce hours: W 1-3:30 pm
or by appointment

Course Rationale and Format | The goals of this course are twofold: 1) to broaden and deepen your understanding of the eld of ecology, 2) to develop skills you need in order to become an independent scientist. Among these skills are:

Understanding the process of scienti c research and discovery. This involves developing your abilities in critical thinking and hypothesis testing;

Learning to read and critically evaluate scienti c papers;

Communicating your ideas about science clearly, both orally and in writing

Topics

to be adjusted with your input

Counting species

describing communities

niches and nuhtches

competition

predation

mutualism

indirect e ects

top down and bottom up control

The role of behaviour

evolutionary considerations

species extinctions

species invasions

community e ects on ecosystems

global change e ects

Each week we will focus on a di erent community/ecosystem ecology theme. The course will consist of lectures and Discussion. From time to time there will be additional optional lectures on professional development lectures (professional societies, applying for grad school, scholarships, and topics suggested by you).

Lectures will provide an overview of the theme, including its conception, theoretical underpinnings, and development within the eld of ecology.

Discussions of the primary literature will require reading, critiquing, and discussing classic and contemporary papers in the eld of ecology. We can do these in a written or oral form depending on class size and preferences.

Review Papers Each student will write both a short and a long review paper (3 pages and 10 pages double spaced maximum, not including references) on an ecological topic of interest. Examples might include:

What is the history of the diversity/stability debate and where does it stand now?

What is the evidence for top-down control versus bottom-up control in ecosystems

How do we incorporate evolutionary dynamics into a community ecology framework

Topics must be approved by me by Friday January 31 at the latest. Each paper will have an annotated bibliography of at least 40 papers due by the end of February. Each of you will also review a draft of one of your classmates papers and provide critical feedback to your classmate with the aim of helping them to improve their nal product. Drafts will be due to each other on Friday, March 16 and feedback will be due on Friday, March 23. Final versions of your review paper are due by 4pm on Friday, March 31.

Course Evaluation

as agreed to in class

paper critiques (5 with best 4 applied to grade) 25%
minor paper (3 pages excluding refs) topic by 31.Jan due 14.Feb 20%
Annotated bibliography of at least 40 papers due 10.Mar 20%
First draft due 24.Mar 10%
Peer editing due 31.Mar 5%
Final paper due 14.Apr 25%

Grading Scale: Final grades will be assigned on the basis of the o cial UVic grading scale:
https://web.uvic.ca/calendar2020-01/undergrad/info/regulations/grading.html

Academic integrity

I draw your attention to the UVic Academic Integrity Policy
https://web.uvic.ca/calendar2019-09/undergrad/info/regulations/academic-integrity.html
While I encourage collaboration, all submitted work must be your own.