

Biology 468: Food web ecology (Split with Bio550: Directed studies in Ecology)

Instructor: Dr. Rana El-Sabaawi (Biology)

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Because we are dealing with many unknowns this year, and with many new online technologies, please note that details of the syllabus might change as the course progresses. Please be patient as we adjust to the new normal.

Characterizing food web interactions is fundamental to Ecology. This course provides a comprehensive introduction to the most important methods used to characterize food web interactions in terrestrial and aquatic ecosystems. Topics will include: isotopic ecology, ecological stoichiometry, nutritional geometry, lipid tracers, and molecular tracers.

Time: Mondays-Thursdays 1:00 PM – 2:20 PM

Readings and textbook: There is no textbook for the class.

Course delivery:

Zoom: Lectures will be delivered synchronously on Zoom. The lectures will be recorded, and recordings posted on Brightspace for future reference.

Brightspace: All course information including slides, lecture videos, and assignment guidelines will be communicated via Brightspace.

Quizzes, midterm and final exam will be delivered via Brightspace. Details to follow

Evaluation:

Biology 468

Quizzes 20% (Best 10 out of 11. In class Thursday from Sept 17th until Nov 26th. See the schedule below)

Midterm 25% (**MONDAY 19 OCT during class time**)

Paper critique assignment 15% (Due last day of class)

Final 40% (date and time to be announced)

Biology 550 (graduate students):

Quizzes 10% (Best 10 out of 11. In class Thursday from Sept 17th until Nov 26th. See the schedule below)

Midterm 20% (**MONDAY 19 OCT during class time**)

Class seminar 20%

Final paper 50%

Quizzes will be administered using Brightspace. They are meant to take up only 5-10 minutes, and will usually comprise 2-3 short questions (multiple choice, fill in the blank, or short answers).

The *midterm* will be administered during class time using Brightspace. More information to come.

The *final* will be administered on Brightspace during the final examination period. Time TBD by UVic at some point this term.

A note on academic integrity and cheating:

The quizzes, midterm and final will all be open book. However, working with each other or collaborating during the exam is considered cheating, and is absolutely forbidden. The quizzes and exams will be randomized across the class, and will vary slightly among students. Currently UVic is evaluating the use of proctoring software, which might be used for the midterm and final pending the evaluation. More information on this will become available as the term progresses.

Communications and questions:

I am happy to set up appointments for individual zoom meetings as needed. Please email me to set up an appointment (rana@uvic.ca)

Paper critique assignment:

One of the course objectives is to give you the ability to critically evaluate food web papers. You will choose a paper to critique from a list of 10. The list of papers and assignment guidelines will be posted on Brightspace on Monday Sept 16th. The assignment will be due Dec 4th.

Academic regulation:

1. **VERY IMPORTANT:** UVic's policy on academic integrity (<https://tinyurl.com/ycjeyumu>)
2. Know your responsibilities as outlined in the calendar (<https://tinyurl.com/y3o8q586>)
3. The Center for Accessible Learning is here to help (<https://www.uvic.ca/services/cal/>)
4. If you miss the midterm due to a medical reason (with valid documentation) then your final exam grade will be used in place of your midterm mark in the final grade assignment.
5. Grades are assigned on a percentage scale in accordance with UVic policy as outlined in the calendar (<https://tinyurl.com/y7qydfyy>)
6. Please read UVic's policy on copyright (<https://www.uvic.ca/library/featured/copyright/>)
7. Important UVic dates including dates for adding and dropping course, holidays, etc. (<https://www.uvic.ca/calendar/dates/>)
8. Please read UVic's policy on plagiarism (<https://www.uvic.ca/library/research/citation/plagiarism/index.php>)

Course topics (note this a preliminary schedule that we will modify depending on how things go, student interest, etc):

Week	Date	Date	Lecture	Potential topics
1	10-Sep	Thur	1	Introduction to the course
2	14-Sep	Mon	2	Stable isotopes introduction
	17-Sep	Thur	3	Fractionation introduction (Quiz 1)
3	21-Sep	Mon	4	Fractionation during photosynthesis (terrestrial)(List of papers published on Brightspace)
	24-Sep	Thur	5	Fractionation during photosynthesis (aquatic)(Quiz 2)
4	28-Sep	Mon	6	Nitrogen fractionation during photosynthesis
	1-Oct	Thur	7	Animal fractionation (Quiz 3)
5	5-Oct	Mon	8	Food web calculations
	8-Oct	Thur	9	Applications of stable isotopes (migration) (Quiz 4)
6	12-Oct	Mon		Thanksgiving (no class)
	15-Oct	Thur	10	Applications of stable isotopes (paleoecology)(Quiz 5)
7	19-Oct	Mon	11	Midterm
	22-Oct	Thur	12	Fatty acids
8	26-Oct	Mon	13	Fatty acid applications (fisheries and tropical fish ecology)
	29-Oct	Thur	14	Fatty acid applications (Detritus) (Quiz 6)
9	2-Nov	Mon	15	Stoichiometry 1
	5-Nov	Thur	16	Stoichiometry 2 (Quiz 7)
10	9-Nov	Mon		Reading break (no class)
	12-Nov	Thur	17	Metabolic ecology (Quiz 8)
11	16-Nov	Mon	18	Nutritional geometry
	19-Nov	Thur	19	Nutritional geometry (Quiz 9)
12	23-Nov	Mon	20	Nutritional geometry
13	26-Nov	Thur	21	case studies (Quiz 10)
12	30-Nov	Mon	22	Review and case studies
13	3-Dec	Thur	23	Review and case studies (Quiz 11)