Biology 468 A01 (13921)
Food Web Ecology
Fall 2025

We acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

Instructor: Dr. Lauren Dykman (she/her/hers)

Class Time: TWF 13:30 – 14:20

Class location: Clearihue Building A224

Office hours: W 14:30 – 15:30? PCH 041f
I am happy to set up appointments for individual zoom or in-person meetings as needed. Please email me to set up an appointment (ldykman@uvic.ca)

Course description and learning outcomes:
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: building quantitative food webs, consumer strategies, network analysis, isotopic ecology, ecological stoichiometry, nutritional geometry, lipid tracers, and molecular tracers.

Learning outcomes:

- To understand and be able to explain the foundations of food web methods studied in the course and their relevant ecological theories.
- To use the foundational knowledge described above to make predictions and hypotheses about how food webs will behave in a given scenario (e.g., climate change, urbanization, etc.)
- The ability to critically evaluate food web data, presented either visually or in numbers.
- Calculating various food web metrics such as trophic position, contributions of dietary sources to consumer biomass, etc.
- Improved quantitative and statistical acumen by interpreting outputs of multivariate statistical methods such as PCA or NMDs.
- Practice in foundational skills of ecology, including observation, record-keeping, peer evaluation, critical writing, and research design.

Readings and textbook: There is no textbook for the class. Short readings may be assigned throughout the semester.

Course code of conduct:

1. Be curious and ask questions.
2. Show up ready to participate and interact.
3. Be respectful: we are all learning.
4. Please let me know if there is anything I can do to better help or accommodate you.
5. The use of AI is prohibited in this course.

Course delivery:

This is an in-person class. All course information including lectures PDFs will be posted on Brightspace. Please ensure that the email that use for Brightspace is the one you check most frequently. Video of lectures will not be recorded.

Evaluation:

Biology 468

Food Web Journals	10% (Pass/Fail)
Quizzes	20% (Administered on Brightspace)
Research Proposals	20% (Group Project)
Midterm	20% (Closed book*, in-person, **Tuesday 14th October during class time**. Must be completed to be eligible to pass the course.)
Final exam	30% (Closed book* cumulative but focused on second half of material, will be schedule by UVic during final exam period. Must be completed to be eligible to pass the course.)

*All examinations in this course are closed book, but students will be allowed "cheat sheets" for formulas, important notes, etc. Details TBA.

Grading scheme: A+ (90-100%), A (85-89.5%), A- (80-84.5%), B+ (77-79.5%), B (73-76.5%), B- (70-72.5%), C+ (65-69.5%), C (60-64.5%), D (50-59.5%), F (<50%, after final)

N grades: Students must complete the midterm and final exam to complete the course. Failure to compete one or more of these elements will result in a grade of "N" regardless of the cumulative percentage on other elements of the course. An N is a failing grade, and it factors into a student's GPA as 0. The maximum percentage that can accompany an N on a student's transcript is 49.

Late Policy: If for any reason your assignment will be late, please let the instructor know **in writing**. There will be a 48-hour lenience policy for late assignments, after which 30% of the grade will be subtracted per day late. Late pass/fail assignments will be given the same 48-hour lenience policy, after which a fail grade will be assigned.

Quizzes will be administered using Brightspace. They will include multiple choice practice problems or comprehension questions on assigned reading. Quizzes will become available on Mondays (starting on 8 Sept) and will be due on Friday (midnight) of the same week. The goal of the assignments is to demonstrate students understand the reading material and mathematical analyses. The assignments will be automatically marked in Brightspace, and a marking scheme will be available on the following Monday. It is the student's responsibility to check their answer against the marking scheme.

Medical absences and missed exams:

Medical documentation for short-term absences is not required (as approved by UVic Senate). However, attendance is important and is expected. If a student misses a midterm, a deferred midterm will be scheduled in the following week. The deferred midterm might happen on an evening or on a Saturday to accommodate student schedules. Note that the marks from the midterm cannot be redistributed to the final exam or the assignments. Completing the midterm and final exam are required to be eligible to pass the course.

If illness, accident, or family affliction causes a student to miss the final exam students are required to submit a request for academic concession, with associated documentation, as outlined in the UVic Calendar (https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php).

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. Grades are assigned on a percentage scale in accordance with UVic policy as outlined in the calendar (https://tinyurl.com/y7qydfyy)
5. All course content and materials are made available by instructors for educational purposes and for the exclusive use of students registered in their class. The material is protected under copyright law, even if not marked with a ©. Any further use or distribution of materials to others requires the written permission of the instructor, except under fair dealing or another exception in the Copyright Act. Violations may result in disciplinary action under the Resolution of Non-Academic Misconduct Allegations policy (AC1300). Students may not distribute lecture notes or any exams or quizzes from the course without permission of the instructor, and to do so, through note-sharing sites or other means, violates the Policy on Academic Integrity
Please read UVic's policy on copyright (https://www.uvic.ca/library/featured/copyright/)
6. Important UVic dates including dates for adding and dropping course, holidays, etc. (https://www.uvic.ca/calendar/dates/)

7. Please read UVic's policy on plagiarism (https://www.uvic.ca/library/research/citation/plagiarism/index.php)
8. Important academic dates including add and drop dates can be found on the UVic website (https://www.uvic.ca/calendar/dates/)

Tentative schedule
***Note that assignment dates and lecture topics might deviate from the schedule.**

Day	Date	Session	Potential topic	Due Date
Wednesday	3-Sep-25	1	Course introduction	
Friday	5-Sep-25	2	Food web fundamentals	
Tuesday	9-Sep-25	3	Gut content analysis	
Wednesday	10-Sep-25	4	Building quantitative food webs	
Friday	12-Sep-25	5	NO CLASS	Quiz 1: Reading Assignment
Tuesday	16-Sep-25	6	Guest speaker	
Wednesday	17-Sep-25	7	In-class activity	
Friday	19-Sep-25	8	NO CLASS	Food Web Journal 1
Tuesday	23-Sep-25	9	Life stages and consumer strategies	
Wednesday	24-Sep-25	10	The era of DNA	
Friday	26-Sep-25	11	Analyzing food webs - network analysis	Quiz 2: Reading Assignment
Tuesday	30-Sep-25	12	NO CLASS	
Wednesday	1-Oct-25	13	Trophic cascades across ecosystems	
Friday	3-Oct-25	14	Conservation applications	Research Proposals
Tuesday	7-Oct-25	15	Group Projects	
Wednesday	8-Oct-25	16	Group Projects	
Friday	10-Oct-25	17	Group Projects	
Tuesday	14-Oct-25	18	MIDTERM	
Wednesday	15-Oct-25	19	Introduction to isotopes	
Friday	17-Oct-25	20	Fractionation	Food Web Journal 2
Tuesday	21-Oct-25	21	Photosynthesis	
Wednesday	22-Oct-25	22	Fractionation during photosynthesis	
Friday	24-Oct-25	23	Nitrogen fractionation in plants	Quiz 3: Practice Problems
Tuesday	28-Oct-25	24	Fractionation in animals	
Wednesday	29-Oct-25	25	Food web isotopes	
Friday	31-Oct-25	26	Isotopes and migration	Quiz 4: Practice Problems

Tuesday	4-Nov-25	27	Isotopes and paleoecology	
Wednesday	5-Nov-25	28	Fatty acids	
Friday	7-Nov-25	29	Amino acids and fatty acids: Guest Lecture	Quiz 5: Practice Problems
Tuesday	11-Nov-25	30	NO CLASS	
Wednesday	12-Nov-25	31	NO CLASS	
Friday	14-Nov-25	32	Stoichiometry	
Tuesday	18-Nov-25	33	Consumer mediated nutrient recycling	
Wednesday	19-Nov-25	34	Stoichiometry and dietary imbalances	
Friday	21-Nov-25	35	Metabolic ecology	Research Proposals
Tuesday	25-Nov-25	36	Nutritional geometry	
Wednesday	26-Nov-25	37	Group Projects	
Friday	28-Nov-25	38	Group Projects	
Tuesday	2-Dec-25	39	Group Projects	Submit review questions!
Wednesday	3-Dec-25	40	Last day of class - Review day!	
TBD	Dec 6-20	41	FINAL	