

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

Instructor: Dr. Rana El-Sabaawi (Biology)

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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.

Pre-requisites: Biology 190A, Biology 190B, Biology 215, third-year standing

Time: Mondays-Thursdays 11:30 to 12:50 HHB 116

Readings and textbook: There is no textbook for the class. Classroom Readings and lectures will be posted on Coursespaces

Evaluation:

Biology 468 (Undergraduate students):

Midterm 1 (Thursday 8th Feb in class, 25%)

Non-cumulative Midterm 2 (Monday 12th March in class, 25%)

Final 50% (date and time to be announced)

Biology 550 (graduate students): Class seminar 30%

Midterm 1 (Thursday 8th Feb in class, 10%)

Non-cumulative Midterm 2 (12th March in class, 10%)

Final paper 50%

Academic regulation:

1. **VERY IMPORTANT:** UVic's policy on academic integrity (<https://web.uvic.ca/calendar2018-01/undergrad/info/regulations/academic-integrity.html>)
2. Know your responsibilities as outlined in the calendar (<https://www.uvic.ca/registrar/students/policies/student-responsibilities/index.php>)

Important information:

1. If you have any special needs please speak to me or contact staff at The Center for Accessible Learning (<https://www.uvic.ca/services/cal/>) so that appropriate accommodations can be made to ensure your success in the course.
2. 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.
4. Grades are assigned on a percentage scale in accordance with UVic policy as outlined in the calendar (<https://web.uvic.ca/calendar2018-01/undergrad/info/regulations/grading.html>)
5. Read UVic's policy on copyright (<https://www.uvic.ca/library/featured/copyright/>)

Tentative schedule:

Weeks	Day	Number	Lecture
4-Jan	Thur	1	Welcome and Introduction
8-Jan	Mon	2	Stable isotopes: introduction and notation
11-Jan	Thur	3	Stable isotopes fractionation
15-Jan	Mon	4	Fractionation during photosynthesis
18-Jan	Thur	5	Photosynthesis continued
22-Jan	Mon	6	Nitrogen fractionation in primary producers
25-Jan	Thur	7	Stable isotopes in animals
29-Jan	Mon	8	SIA food web analysis
01-Feb	Thur	9	SIA applications: animal migration
5-Feb	Mon	9	SIA applications: Paleoecology
8-Feb	Thursday		MIDTERM 1
12-Feb	Mon		Reading break (University closed)
15-Feb	Thur		Reading break
19-Feb	Mon	10	Fatty acids 1
22-Feb	Thur	11	Fatty acids 2
26-Feb	Mon	12	Ecological stoichiometry Introduction
1-Mar	Thur	13	Ecological stoichiometry consumer-mediated nutrient recycling
5-Mar	Mon	14	Ecological stoichiometry Nutritional imbalances
8-Mar	Thur	15	Nutritional geometry
12-Mar	Mon		Midterm 2
15-Mar	Thur	16	Nutritional physiology
19-Mar	Mon	17	Special topics: Tropical armoured catfish
22-Mar	Thur	18	Special topics: Marine Coral fishes
26-Mar	Mon	19	Special topics: Detritus in stream ecosystems
29-Mar	Thur	20	Review 1
2-Apr	Mon		Easter Monday (University closed)
5-Apr	Thur	21	Review 2

