Many of us are interested in answering questions such as:

- Where did a nutrient (or pollutant) or food source come from?
- What did your organism eat, or how much was metabolized?
- How long has an element persisted in an ecosystem or an organism?
- When did a biological or chemical process occur?

Stable isotopes provide a powerful tool to address these and many other questions with application to a broad range of disciplines spanning biology and environmental science.

This course is a seminar focused on applying stable isotopes to questions of interest to the seminar participants, and provides a complement to GEOL/ENSCI 526 ("Stable isotopes in the environment"). No background is required, as the first few weeks will consist of a primer on the basics of isotope terminology and measurements. Subsequent weeks will consist of thorough discussion of journal articles jointly chosen by the students and instructor. Each student will be tasked with leading the discussion of an article of interest to them. The last week(s) of the semester will be devoted to student presentations given by those who have chosen the 2-credit option.

*Course requirements*: For one credit, each student will participate actively in the seminar on a weekly basis and will lead the discussion of a relevant article of their choice. To receive two credits, in addition to the above, students will do one of the following activities: a short research project involving isotope measurements; prepare a meaningful literature synthesis on an isotope-related question of interest to the student; prepare an NSF-style grant proposal with a stable isotope component.