

# SEFS 512, ESRM 490C - Spring 2023

## Biogeochemical Cycling (in the Environment)

**Instructor:** David Butman

**Details:** 3 credits, M/W 12:00-1:20,

**Location:** WFS 107

Register Here  
ESRM 490:



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SESF 512:



### Course description

This course will provide an overview of “the biotic controls on chemistry of the environment and the geochemical controls of the structure and function of ecosystems” (Howarth R. W. 1984). This will include the elemental cycling of major components of local and global biogeochemical cycles. Topics will include exploring the transfer of energy and nutrients within terrestrial and aquatic ecosystems, and the interactions among sources of nutrients to each ecosystem. The movement of the elements of carbon (C), nitrogen (N), phosphorous (P) and sulfur (S) will be evaluated, along with their incorporation into other minerals and solutes as they transfer from the atmosphere, through terrestrial ecosystem and into aquatic systems over both short and long timescales.

### Course goals

- Understand the transfer of energy in the environment
- Develop skills to quantify elemental cycles
- Identify the impact of humans and climate on ecosystem processes

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Please contact David Butman (dbutman@uw.edu) with any questions and to receive a course code