

SIO 282 Phytoplankton Diversity
MW 9-10:20am online and in 3300 Hubbs Hall
Lectures ONLINE
Lab days in 3300 Hubbs Hall
Discussion days TBD

Monday March 29 Course Overview/Introduction. ONLINE
Wednesday March 31 Light Harvesting. ONLINE
Monday April 5 **Lab day**/ Culturing phytoplankton/ Microscopy/Start enrichments
Wednesday April 7 Light Reactions of Photosynthesis. ONLINE
Monday April 12 / Dark Reactions of Photosynthesis
Tuesday April 13 SHORT QUIZ on week 1-2.
Wednesday April 14 Alternate Phototrophy
Monday April 19 Cyanobacteria
Tuesday April 20 SHORT QUIZ on week3
Wednesday April 21 Green Algal Lineages/ Lab day
Monday April 26 Cryptophytes/Chlorachniophytes/Euglenophytes/
Wednesday April 28 Diatoms/Bolidophytes
Monday May 3 Dinoflagellates
Tuesday May 4 SHORT QUIZ on phytoplankton taxa I
Wednesday May 5 Haptophytes/ Lab day
Monday May 10 / **MISC taxa**/ Lab day
Wednesday May 12 **SHORT QUIZ** on phytoplankton taxa II. Phytoplankton
physiology I: Vitamins
Monday May 17 Phytoplankton physiology II
Wednesday May 19 **Posters due**, poster viewing in lab if possible
Current literature: student presentation/discussion in lab if possible
Monday May 24 Current literature: student presentation/discussion in lab if possible
Tuesday May 25 9am Current literature.
Wednesday May 26 Current literature: student presentation/discussion in lab if possible
Monday May 31 Holiday
Wednesday June 2 Current literature: student presentation/discussion in lab if
possible(moved to May 25 9am)
Last day of class **Proposal Due**
Class requirements/grading:
1) Student presentation (25pts): Pick a paper on a phytoplankton group/topic. Paper must
be from 2018 or later. Send this paper to classmates a week in advance. Prepare an introduction
to the paper using other literature (eg 2 or so slides on background). Then walk through the paper
figures. Answer questions, lead discussion.
Other students must read and prepare a least one question in advance based on the paper.
2) 4 quizzes, 5pts each (20 pts). These will likely be online and are taken the day
assigned.
3) Poster on an algal group that is different from the one in your presentation (20 pts)
4) Research Proposal (35 pts)
Poster

The goal is to produce a poster dedicated to a specific phytoplankton group. Some of these will be put up in the undergrad lab room for the rest of the year.

The poster should reflect the characteristics of the group, some interesting current research and provide references.

Research Proposal (similar to NSF “preproposal”)

Project Description. Maximum 5 pages total not including refs., containing the following:

The use of the sub-sections listed below is recommended, organized as appropriate.)

1. "Conceptual Framework" or "Objectives" or "Specific Aims"
2. "Rationale and Significance" or "Background"
3. "Hypotheses" or "Research Question (s)"
4. "Research Approach" or "Experimental Plan" or "Research Design"
5. “Broader impacts”, how will your ideas transform marine biology/ecology
6. References Cited (maximum 3 pages) See GPG for format guidelines.

Aquatic Photosynthesis by Falkowski and Raven is helpful for review and background.