

SIO 30 – SYLLABUS (Fall Q 2021)

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Discussion sessions A01 (2:00–2:50 p.m. M), A02 (3:00-3:50 p.m. M)
A03 (2:00-2:50 p.m. W), A04 (3:00-3:50 p.m. W)

Suggested reading: Garrison & Ellis, Oceanography, 9th (or older) Edition

This is an introduction to Oceanography course intended for both science and non-science students; students taking the course must be enrolled in both lecture and discussion sections. The general topics that will be covered during lectures are listed below, and will be discussed further during discussion sessions. Grades will be based on 3 exams: 2 midterms and a final, with the highest exam scores weighted more than the lower(est) scores (actual weights will be discussed in class). The final exam is comprehensive, and will cover all the topics discussed during the quarter. Exam questions will be taken primarily from lecture materials and less so from the suggested reading.

Lectures: (M-W-F, 1:00 – 1:50 p.m.)

Marine Geology (Castillo)

Sept 24 F Origin of the Earth and oceans
Sept 27 M Introduction to Marine Geology
Sept 29 W Plate Tectonics I
Oct. 1 F Plate tectonics II
Oct. 4 M Ocean basins & margins I
Oct. 6 W Ocean basins & margins II
Oct. 8 F Marine sediments I
Oct. 11 M Marine sediments II
Oct. 13 W Marine sediments III
Oct. 15 F EXAM I

Marine Chemistry (Castillo)

Oct. 18 M Water & ocean chemistry I
Oct. 20 W Water & ocean chemistry II
Oct. 22 F Water & ocean chemistry III
Oct. 25 M Marine resources and environment

Physical Oceanography (MacKinnon)

Oct. 27 W Physical properties of the ocean: temperature, salinity and density
Oct. 29 F Forces acting on the ocean
Nov. 1 M Forces in action
Nov. 3 W Forces continued
Nov. 5 F Global circulation
Nov. 8 M Waves
Nov. 10 W Tides
Nov. 12 F EXAM II

Biological Oceanography (MacKinnon)

Nov. 15 M Overview, terminology, biomes of the sea.
Nov. 17 W Who's who in the sea: small
Nov. 19 F Who's who in the sea: medium-large
Nov. 22 M Interactions: nutrient cycles and the circle of life
Nov. 24 W Interactions: ecology of the sea
Nov. 29 M Unique environments: coral reefs, hydrothermal vents, Arctic, others (tbd)
Dec. 1 W Climate change and the IPCC report
Dec. 3 F Review
Dec. 06 M FINAL EXAM - 11:30-2:29 p.m.