

SIO 30 – SYLLABUS (Fall Q 2020)

Instructors: J. Mackinnon < jmackinnon@ucsd.edu > physical oceanography, marine biology
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Discussion sessions A01 (3:00–3:50 p.m. W), A02 (4:00–4:50 p.m. W)
A03 (3:00–3:50 p.m. F), A04 (4:00–4:50 p.m. F)

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

Lectures: (M-W-F, 2:00 – 2:50 p.m.)

Marine Geology (Castillo)

Oct. 2 F Origin of the Earth and oceans
Oct. 5 M Introduction to Marine Geology
Oct. 7 W Plate Tectonics I
Oct. 9 F Plate tectonics II
Oct. 12 M Ocean basins & margins I
Oct. 14 W Ocean basins & margins II
Oct. 16 F Marine sediments I
Oct. 19 M Marine sediments II
Oct. 21 W Marine sediments III
Oct. 23 F EXAM I

Physical Oceanography (MacKinnon)

Oct. 26 M Physical properties of the ocean: temperature, salinity and density
Oct. 28 W Forces acting on the ocean
Oct. 30 F Forces in action
Nov. 2 M Forces continued
Nov. 4 W Global circulation
Nov. 6 F Waves
Nov. 9 M Tides

Marine Chemistry (Castillo)

Nov. 13 F Water & ocean chemistry I
Nov. 16 M Water & ocean chemistry II
Nov. 18 W Water & ocean chemistry III
Nov. 20 F Marine resources and environment
Nov. 23 M EXAM II

Biological Oceanography (MacKinnon)

Nov. 25 W Overview, terminology, biomes of the sea.
Nov. 30 M Who's who in the sea: small
Dec. 2 W Who's who in the sea: medium-large
Dec. 4 F Interactions: nutrient cycles and the circle of life
Dec. 7 M Interactions: ecology of the sea
Dec. 9 W Unique environments: coral reefs, hydrothermal vents, Arctic, others tbd
Dec. 11 F Climate change and the IPCC report

Dec. 16 W FINAL EXAM - 3:00-5:59 p.m.