Introduction to Oceanography
MASC 401/BIOL350/ENVR417/GEOL403
New Venable/Murray Hall G201
Tuesday & Thursday 3:30 to 4:45 pm

Textbook: Introduction to Ocean Sciences, 2nd edition (Douglas A. Segar), plus supplementary reading

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Office hours: Wednesday 1:00-3:30 pm
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Jan 10 Introduction
Jan 15 Plate tectonics – Ocean Basin and Plate Margin Evolution (Chapter 4)
Jan 17 Plate tectonics – Evidence from Geology (Chapter 5)
Jan 22 Deep Sea sediments (Chapter 8)
Jan 24 Integrated Deep Sea Drilling Program (supplementary materials)
Jan 29 Coastal geomorphology (Chapter 13, and suppl. material)
Jan 31 --- Exam I ---
Feb 5 Earth’s heat budget and properties of water (Chapter 9)
Feb 7 Atmospheric circulation and Coriolis effect (Chapter 9)
Feb 12 Wind-driven Circulation (Chapter 9) Essay topics due
Feb 14 Thermohaline circulation (Chapter 10)
Feb 19 Coastal and equatorial upwelling (Ch. 11, suppl. reading)
Feb 21 Waves, tides, Hurricanes I (Chapter 12) Submit Essay draft to review
Feb 26 Hurricanes II, Tsunamis (Chapters 9, p. 227-9; 11, p. 301-4; suppl. Rd) Reviews due! Return the essay plus your review to its author
Feb 28 --- Exam II ---
Mar 5 Sea salts (Chapter 6, p. 131-139, Chapter 7, pp. 149-159)
Mar 7 Chemical cycles of the sea: Carbon (suppl. reading) Essay due
Mar 12 & 14 Spring break
Mar 19 Chemical cycles of the sea: N, S, P, metals (Suppl. Reading)
Mar 21 Hydrothermal vent chemistry (Chapter 17, p. 517-522; suppl. reading)
Mar 26 Greenhouse gasses and global warming (Suppl. Reading)
Mar 28 --- Exam III ---
Apr 2 Bacterioplankton and the microbial loop (Suppl. Reading)
Apr 4 Primary production, light and nutrients
Apr 9 Estuaries (Chapter 15, pp. 431-442)
Apr 11 Fisheries (suppl. Reading)
Apr 16 Arctic Oceanography (suppl. Reading)
Apr 18 Marginal Seas
Apr 23 Marine Biodiversity and extreme creatures (Suppl. Reading)
May 3 --- Exam IV --- (4 p.m.)

Each exam and the research paper account for 20% of the final grade.