

SIO 240 Marine Geology
Tu-Th (2:00-3:20), Hubbs Hall 4500

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The purpose of this class is to give an overview of marine geology from the perspective of geochemistry, paleoceanography and plate tectonics. A tentative class outline is given below. Grades will be based on a mid-term exam (30%), a final exam (40%) and homework assignments (30%). SIO graduate students must enroll for a letter grade. Lecture notes, reading materials will be available <https://canvas.ucsd.edu/>.

Date	Topic	Instructor
Oct 1	Marine observational tools (GeoMapApp intro)	JG/CC
Seafloor Morphology, Processes and Sediment Cover		
Oct 6	Mid-ocean ridges - spreading rate variations, age vs. depth	JG
Oct 8	Mid-ocean ridges and transforms	JG
Oct 13	Marine magnetic anomalies - determining the age of the seafloor	JG
Oct 15	Hotspots and intraplate features	JG
Oct 20	Seamounts, atolls and carbonate banks	CC
Oct 22	Sea level	CC
Oct 27	Sea level	CC
Oct 29	Sediment blanket	CC
Nov 3	Sediments at margins	CC
Dynamics of the Seafloor/Ocean Basins		
Nov 5	Midterm Exam	
Nov 10	Plate motions and reconstructions	JG
Nov 12	Plate motions and changing geometries of ocean basins	JG
Nov 17	Gateways and ocean circulation	CC
Nov 19	Time scale development	CC
Nov 24	Cenozoic sedimentary trends - basic evidence	CC
Nov 26	THANKSGIVING	
Dec 1	Cenozoic sedimentary trends - biogenic production	CC
California Margin - Carbon/Climate/Tectonic Interactions		
Dec 3	Convergent margin processes and CA tectonics	JG
Dec 8	California - tectonics and coastal sedimentation	CC
Dec 10	Review	CC/JG
Dec 17	Final Exam (3-6 p.m.)	