

COASTS IN CRISIS – A GLOBAL CHALLENGE

Spring 2019

Monday/Wednesday/Friday 10:40-11:45 Phy. Sci. 110

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Office Hours MW 9-10:30 or MW 11:45-12:30

Text: *Coasts in Crisis: A Global Challenge*

DATE	TOPIC	READING
Apr. 1	Introduction/Course Outline/Requirements	
Apr. 3	Environmental History of the Santa Cruz coast	
Apr. 5	Human migration & settlement of the coastal zone	Chap. 1
Apr. 8	Natural hazards and coasts - Plate tectonics	Chap. 2
Apr. 10	Earthquakes, tsunamis and volcanoes	Chap. 2
Apr. 12	Tropical cyclones & hurricanes	Chap. 3
Apr. 15	Storms, waves and tides at the shoreline	Chap. 4
Apr. 17	PDO and ENSO	Chap. 4/5
Apr. 19	Coastal erosion/shoreline retreat	Chap. 4
Apr. 22	Responses to shoreline retreat	Chap. 4/5
Apr. 24	Climate change and sea-level rise	Chap. 5
Apr. 26	Future sea-level rise and responding/adapting	Chap. 5
Apr. 29	Waste water discharge and marine pollution	Chap. 6
May 1	Marine pollution	Chap. 6
May 3	Plastic and marine debris	Chap. 7
May 6	Petroleum and the coastal zone	Chap. 8

May 8	Oil in the sea	Chap. 8
May 10	Coastal power plants & their impacts	Chap. 9
May 13	Renewable energy and the coastal zone	Chap. 10
May 15	Fluid withdrawal: subsidence and seawater intrusion	Chap. 11
May 17	Desalination- Fresh water from the sea	Chap. 12
May 20	Carbon dioxide and climate change	Chap. 13
May 22	Carbon dioxide and ocean acidification	Chap. 13
May 24	Coral reefs and threats to reef health & survival	Chap. 14
May 27	Fishing and Overfishing/Marine Protected Areas	Chap. 15
May 29	Aquaculture	Chap. 15
May 31	Coastal/Aquatic Invasive Species	Chap. 16
June 3	Sand, dams and beaches	Chap. 17
June 5	Video: <i>Sand Wars</i>	
June 7	Everything else we missed	
June 12	Final Exam 4-7:00 pm	