

SIO 280 Fall 2015 Peter Franks

MWF 10:00 - 10:50 am

Grading: L

Sept. 25	Introduction	Description of BO, intro to food-web model
Sept. 28	Phytoplankton I	Description of organisms, sampling, counting, measuring
Sept. 30	Phytoplankton II	Photosynthesis, PI curves
Oct. 2	Phytoplankton III	Underwater light field, pigments, vertical distribution
Oct. 5	Phytoplankton IV	Remote sensing - pigments
Oct. 7	Phytoplankton V	Remote sensing - primary productivity
Oct. 9	Nutrients	Description of macro nutrient, nutrient distributions, basic dynamics, distributions, Redfield ratios
Oct.12	Nitrogen	Uptake kinetics, growth rate, competition, nutrient pulsing/community structure
Oct. 14	Bacteria	Description, bacterial carbon demand, role in ecosystem
Oct. 16	Biological Pump	New, recycled production, <i>f</i> ratios, <i>e</i> ratios, OUR
Oct. 17 or 18	Research Cruise	
Oct. 19	Microzooplankton I	Description, measurements, size fractions, dynamics
Oct. 21	Microzooplankton II	Microbial loop, recycling, planktonic ecosystem structure
Oct. 23	Metazoan Zooplankton	Description of organisms, sampling
Oct. 26	Copepods	Description, life cycle, grazing
Oct. 28	Midterm Exam	

Oct. 30	AR-1 Models	Acclimation, adaptation, response to climate change
Nov. 2	Red Tides	Organisms, toxins, dynamics
Nov. 4	Environmental Control I	Spring bloom, vertical mixing, seasonal cycles in Atlantic, Pacific
Nov. 6	Environmental Control II	Iron Limitation
Nov. 9	Wetlands, Seagrasses	Zonation, adaptations to physical stressors of an ecotone
Nov. 11	Holiday	
Nov. 13	Rocky Intertidal	Competition, facilitation, niche space, diversity maintenance
Nov. 14	Rocky Intertidal Field Trip	Cabrillo National Monument
Nov. 16	Kelp Forests	Stability vs Disturbance / Intermediate Disturbance Hypothesis, biogeography, influence of oceanography
Nov. 18	Coral Reefs	Functional redundancy, diversity, phase shift, pelagic input, inverted trophic biomass pyramid
Nov. 20	Conservation	Paul Dayton
Nov. 23	Climate change	Causes, consequences
Nov. 25	Fisheries	Cisco Werner, Director NOAA SWFSC
Nov. 27	Thanksgiving Holiday	
Nov. 30	Deep Sea I	History of exploration, physical environment
Dec. 2	Deep Sea II	Adaptations to pressure, pulses of resources, connectivity of habitats
Dec. 4	Class Project Due	Project Discussion
Dec. 13	Final Exam	Date will probably change based on class input.