

Bio 10: PLANTS AND HUMANITY

Jan	20	Introduction
	24	Plants and green economics: environmental services
	25	Essentials of plant architecture
	27	Hierarchy of classification; leaves
	31	Leaves
Feb	1	Carnivorous bog species
	3	Epiphytes; out on a limb
	7	Root organization
	8	Mangroves: coastal fortresses
	10	Stem variations
	14	Wood; tissue for the ages
		Feb 15 EXAM I (100 points)
	17	Cell organization; the wall
	21	Cell protoplasm
	22	Products of the cell; carbon offsets
	24	DNA; GATTACA
	28	Genetic engineering and biotechnology
	29	Soil structure, acid rain, marketable permits
March	2	Mineral nutrition N-P-K
	6	Transpirational fate of rainwater
	7	Hormones and flowering
	9	Fruit development and ripening
	13	Environmental repair strategies
		March 14 EXAM II (100 points)
	27	Evolutionary relationships
	28	Bacteria and probiotics
	30	Viruses as vectors
April	3	Green algae and water quality
	4	Seaweeds
	6	Seaweeds; it's a wrap
	10	Molds
	11	Yeasts; pigs in heaven
	13	Mushrooms
	17	Lichens
	18	Mosses
	20	Ferns; with fronds like these...
	24	Conifers; the efficiency of seeds
	25	International forestry: traditional vs. sustainable
	27	Can plants save the world? Environmental worth

FINAL EXAM (C Block) : Tuesday May 8 at Noon (150 points)

LEARNING OBJECTIVES, 2012

Biology 10: Plants and Humanity at Tufts University

Students successfully completing this course are able to:

- 1) Demonstrate ways to measure environmental services accomplished by plants.
- 2) Explain and provide examples of the principle of compensatory growth (trade-offs and growth economics) shown by plants growing in the world's extreme environments.
- 3) Evaluate and demonstrate scientific (measurable) evidence, including interpretation of images. Compose their own images, in constructing scientific argument.
- 4) Demonstrate the basis for genetically modified organisms (GMOs) in medicine and agriculture.
- 5) Invoke 10 major groups of organisms upon which human enterprise and future development depend.
- 6) Avoid accidental poisoning from wild mushrooms.
- 7) Promote food autonomy by installing and managing a productive food garden in countries ranging from USA to Vietnam to Namibia (temperate, tropical, and arid zones).