

General Biology II (Biology 102) – Departmental Course Outline

Lecture Topics	Chapters/ Pages Campbell 8 th ed.	Suggested Hours
I. Evolution		5hrs.
A. Darwinism	Ch. 22	
B. Evolution of Populations (Population genetics. Causes of microevolution. Natural selection mechanisms.)	Ch. 23	
C. The Origin of Species (Species concept & reproductive isolation. Modes of speciation.)	Ch. 24/pgs. 487-98; 501-2	
D. History of Life on Earth	Ch. 25/pgs. 507-24	
E. Tracing Phylogeny	Ch. 26/pgs. 536-48	
II. Plant Structure & Function*		4hrs.
A. Transport in Plants (Water & mineral transport. Nutrient transport.)	Ch. 36	
B. Plant Nutrition (Soils. Nutrients. Plant adaptations for nutrition acquisition.)	Ch. 37/pgs. 785-87; 789-98	
C. Control Systems in Plants (Major plant hormones. Plant movements and flowering.)	Ch. 39/pgs. 824-34; 838-45	
* Chapter 35 : Vascular Plant Structure & Growth is covered in Biology 111.		
* Chapter 38 : Angiosperm Reproduction is covered in Biology 111.		
III. Animal Form & Function		20 hrs.
A. Introduction (Homeostatic mechanisms.)	Ch. 40/pgs. 852-62	(1 hr.)
B. Animal Nutrition (Nutrients. Mammalian digestive system.)	Ch. 41/pgs. 875-93	(2 hrs.)
C. Circulation & Gas Exchange (Hearts, Vessels, & Blood. Gas exchange surfaces.)	Ch. 42/pgs. 898-922	(4 hrs.)
D. Fluid Balance (Water & waste removal; Kidney function.)	Ch. 44/pgs. 954-57; 959-72	(2 hrs.)
E. Chemical Signals (Mechanisms. Vertebrate endocrine system.)	Ch. 45/pgs. 975-989	(2 hrs.)
F. Mammalian Reproduction & Development (Early embryonic development.)	Ch.46/pgs. 1003-1012 47/pgs.1021-1035	(3 hrs.)
G. Nervous Systems (Overview of nervous system. Action potentials. Synapse.)	Ch. 48/pgs. 1047-1059	(3 hrs.)
H. Sensory Motor Mechanisms (Hearing. Photoreceptors. Skeleton & Muscle function.)	Ch. 50/pgs. 1092-96; 1099-05;1105-12	(3 hrs.)
IV. Ecology		4 hrs.
A. An Introduction to Ecology (Emphasis on Abiotic Factors.)	Ch. 52	
B. Ecosystems (Trophic levels. Energy flow. Nutrient cycling. Human impact on ecosystems.)	Ch. 55/pgs. 1222-33; 1236-42	
Semester Totals		33 hrs.