

BSCI105 topics	BSCI106 topics
Introduction to Basic Cell Structure: Tour of the Cell	Darwin, Wallace, and Natural Selection
Chemistry is the Basis of Life	Mendel/Meiosis
Water in the Context of Biology	Particulate Inheritance: Mendel/Meiosis cont.
Carbon is the Backbone of Organic Molecular Diversity	Types of variation: Genotypes, Phenotypes and Evolution
Biological Macromolecules I: Carbohydrates, Lipids , Nucleic Acids	Natural Selection Revisited
Biological Macromolecules II: Proteins	Hardy-Weinberg
Thermodynamics and Chemical Reactions: Free Energy	Disease as an Evolutionary Process Darwinian Medicine
Most Reactions in a Cell Require a Catalyst: Enzyme Structure and Function	Sex and Sexual Selection
Biomembrane Structure and Function	On the origin of species- How does the tree of life branch?
Membrane Transport I: Passive and Active Transport of Small Molecules	The tree of Life: Phylogenetic Reconstruction
Membrane Transport II: Bulk Transport; Endocytosis and Exocytosis	Macroevolution
Introduction to Metabolism and the Importance of ATP	Origin of Life
Cellular Metabolism: Glycolysis and Fermentation	Evolution of Prokaryotes
Aerobic Respiration and Oxidative Phosphorylation	Eukaryotes and the rise of multicellularity
Photosynthesis I: Introduction and Light-Dependent Reactions	Evolution of plants: Land Ho! (Part 1)
Photosynthesis II: Light-Independent Reactions and Alternative Pathways	Fungi
The Molecular Basis of Inheritance and The Central Dogma	The shape of life on the move- Animals I
DNA Replication	Animals II: Land Ho! (part 2)
Transcription of DNA into RNA	Hominid evolution
Translation of RNA into Protein and Protein Targeting	Introduction to Ecology-
Regulation of Gene Expression in Prokaryotes	Population Ecology
Regulation of Gene Expression in Eukaryotes	Community Ecology
Biotechnology	Species Interactions: Competition
Cell Communication: Signaling and Transduction	Predation Ecology
Structural and Functional Aspects of the Cell Division Cycle	Symbiosis/ Mimicry
Structural and Functional Aspects of the Cell Division Cycle	Parasite Ecology-
	Ecosystems
	Coevolution
	Conservation Biology/ Extinctions
	Invasive Species: Examples & implications