

TOPIC OUTLINE

<i>Topic</i>	<i>Percentage of Course</i>
I. Molecules and Cells	25%
A. Chemistry of Life	7%
Water	
Organic molecules in organisms	
Free energy changes	
Enzymes	
B. Cells	10%
Prokaryotic and eukaryotic cells	
Membranes	
Subcellular organization	
Cell cycle and its regulation	
C. Cellular Energetics	8%
Coupled reactions	
Fermentation and cellular respiration	
Photosynthesis	
II. Heredity and Evolution	25%
A. Heredity	8%
Meiosis and gametogenesis	
Eukaryotic chromosomes	
Inheritance patterns	
B. Molecular Genetics	9%
RNA and DNA structure and function	
Gene regulation	
Mutation	
Viral structure and replication	
Nucleic acid technology and applications	
C. Evolutionary Biology	8%
Early evolution of life	
Evidence for evolution	
Mechanisms of evolution	
III. Organisms and Populations	50%
A. Diversity of Organisms	8%
Evolutionary patterns	
Survey of the diversity of life	
Phylogenetic classification	
Evolutionary relationships	
B. Structure and Function of Plants and Animals	32%
Reproduction, growth, and development	
Structural, physiological, and behavioral adaptations	
Response to the environment	
C. Ecology	10%
Population dynamics	
Communities and ecosystems	
Global issues	