

READING ASSIGNMENTS FOR BIOLOGY 345

Readings are from the required text: Madigan, Martinko and Parker. 2002. *Brock: Biology of Microorganisms*, 10th Edition. Prentice Hall Publishers.

LECTURE TOPIC

Overview and Historical Perspective

READINGS

Chapter 1; Ch 2 (2.3);

Microbes as Cellular Systems

The Prokaryotic Cell

Chapter 2 (2.1-2.2); Ch 7 (7.3);

Chapter 7 (p. 201, Table 7.4);

Chapter 4 (4.4-4.6, 4.8-4.15);

Chapter 11 (11.9-11.12)

Microbial Taxonomy and Classification

Chapter 11 (11.4-11.8)

Phylogeny of Microorganisms

Chapter 2 (2.5); Ch 12 (12.1);

Microbial Diversity

Chapter 13 (13.1)

Microbes as Energy Transducers

Metabolic Strategies

Overview

Chapter 2 (2.4); Ch 5 (5.14);

Chapter 5 (5.6, review 5.7-5.8)

Respiration & Fermentation

Chapter 5 (5.9-5.13);

Chapter 17 (17.13 & 17.20)

Chemolithotrophy

Chapter 17 (17.8-17.11, 17.15, 17.17)

Photoautotrophy

Chapter 17 (17.1-17.7)

Biogeochemical Cycles

Chapter 19 (19.9-19.10, 19.13-19.14);

Chapter 12 (12.4-12.5)

Metabolism in Primitive Organisms

Chapter 11 (11.1-11.3)

Microbial Growth

Chapter 5 (Intro, 5.1-5.2); (Fig. 19.14)

Chapter 6 (Intro, 6.1-6.13)

Microbial Genomes & Molecular Processes

Bacterial Chromosomes

Chapter 7 (7.4); Ch 10 (10.19)

Comparative Prokaryotic Genomics

Chapter 15 (15.3)

Plasmids & Pathogenicity Islands

Chapter 10 (10.6-10.8)

Attenuation, Quorum Sensing &

Chapter 8 (8.8-8.10, scan 8.4-8.7)

Signal Transduction

Microbes as Agents of Infectious Disease

Normal Flora

Chapter 21 (Intro, 21.1-21.5)

Virulence and Pathogenicity

Chapter 21 (21.6-21.12)

Antibiotics

Chapter 20 (20.6-20.9);

Chapter 30 (30.5-30.6)

Antibiotic resistance

Chapter 20 (20.12-20.13)

Viruses, Viroids, and Prions

Chapter 9 (Intro, 9.1-9.2, 9.5-9.6,

9.12-9.13)

Emergent Diseases

Chapter 25 (25.10-25.11)