

**Biol. 221**  
**Spring 2016**  
**Material covered on Exam II**

**Topics:**

Rising CO<sub>2</sub> & its ecological effects  
Global climate change & its ecological effects  
Biomes  
The global hydrologic, carbon, nitrogen, & phosphorus cycles  
Energy flow, trophic levels & trophic structure  
Biological magnification (AKA biological amplification)

**Online lecture materials:**

Lecture materials 8-20 up to and including the slide entitled "Biological amplification may ...".

**Other online materials (Miscellaneous page of web site):**

CAM Photosynthesis Information (found on miscellaneous page of web site)

**Articles:**

Articles 4-8 & associated study questions  
NOTE: Article 9 will NOT be covered

**Textbook & Chapter Guidance Information:**

Rising CO<sub>2</sub> and its Effects  
Chapter 6  
Pages 117-120  
Study Questions 1-3 on page 119 & 13 on page 121

Global Climate Change  
Chapter 27  
Sections 1-5, & 8-9  
Study Questions 1-7, 11, & 13

Terrestrial Biomes  
Chapter 4 (soils)  
Sections 3-5, 7, & 10  
Study Questions 4, 5, 7, 10, & 11

Chapter 23  
Sections 1-2, 5, & 7-9  
Study Questions 1-4, 8, 11-12, & 15-18

Ocean Biome Material  
Chapter 3  
Sections 2-4  
Study Questions 2-5

Chapter 24  
Sections 9-13  
Study Questions 7 & 8

Chapter 25  
Sections 1-3  
Study Questions 1-3

Biogeochemical Cycles  
Chapter 3  
Section 1 (Hydrologic Cycle)  
Study Question 1

Chapter 22  
Sections 1 & 4 (general)  
Sections 6-7 (C cycle)  
Fig. 22.13 (link between C & O cycles)  
Section 8 (N cycle)  
Section 9 (P cycle)  
Study Questions 1-4, 8-9

Chapter 15  
Section 11 (N-fixation mutualism)  
Study Questions *none*

Energy flow, trophic levels & trophic structure  
Chapter 20  
Sections (1-4, 8, 10 & 13)  
Study Questions 2, 3, & 11