

# UNIVERSITY OF LOUISVILLE

## BIOL 263 Environmental Biology Sample Course Outline Panama Program

### **Required Textbook:**

Miller, G. Tyler, Jr. and S. Spoolman. Living in the Environment, Principles, Connections, and Solutions. 17th edition. Thomson, Brooks/Cole, 2012

### **Course description and organization:**

Welcome to Environmental Biology. Our focus will be on the basic principles of environmental biology, ecology, and the relationship between humans and the natural world. This is a course in biology for non-majors, therefore our discussion will begin broadly, but by the end of the course we hope you will understand and appreciate the natural forces that generate and maintain the diversity of life we see on our planet, as well as the myriad interactions among both biotic and abiotic components of ecosystems. We also hope you will be able to objectively assess the role that humans have played in changing the natural environment, *especially* during the last few centuries.

### **Course Objectives:**

Upon successful completion of this course, the student should have a basic understanding of:

1. The scientific method (true and false hypothesis, theories, variables, controls, experiments, deduction and induction);
2. The basic description of the diversity of life on the planet (plants, bacteria, fungi, and animals);
3. This course focuses on the relationships between humans and the environment;
4. Evolution; population genetics, forces that cause micro-evolution, speciation, phylogeny. Taxonomy, and classification;
5. The interactions between organisms and their environments, population growth, community interactions, and ecology;
6. Global warming, sustainability, and other “in the news” items will be discussed.

<b>Topic</b>	<b>Chapter</b>	<b>Pages</b>
Humans & Sustainability Science, Ecological Principles	1 & 2	
Ecosystems Biodiversity & Evolution	3 & 4	54-101
Biodiversity, Species Interactions	5 & 6	104-144
Climate & Biodiversity, terrestrial and aquatic movie — End of the Line	7 & 8	147- 187
Sustaining Biodiversity visit to the Biomuseo	9	190—214
Sustaining Terrestrial and Aquatic Biodiversity	10 di 11	217-274
Food, Soil & Pest Management Movie on GMO's	12	277-314
Climate Disruption and Global Warning Movie — An Inconvenient Truth	19	492-517
Environmental Hazards and Human Health	17	436-462