COURSE INFORMATION FORM

DISCIPLINE  
Biology

COURSE TITLE  
Ecology

CR.HR  5  LECT HR.  3  LAB HR.  4  CLIN/INTERN HR.  CLOCK HR.  

CATALOG DESCRIPTION
Study of the interrelationships between organisms and their environment. Site visits to primary and secondary forests, grasslands, and aquatic ecosystems.

PREREQUISITES
BIOL 101 or BIOL 104 or BIOL 106, or BIOL 123, or BIOL 124

EXPECTED STUDENT OUTCOMES IN THE COURSE
Upon completion of this course, the student will be able to:
1. Describe ecological processes at work in grasslands, forests, and aquatic ecosystems.
2. Describe nutrient cycling and energy flow in grazing and detrital food webs.
3. Describe relationships within and between populations of organisms.
4. Explain the role played by human beings in the degradation, conservation, and restoration of ecosystems.
5. Explain the relationship between ecosystem quality and biodiversity.
6. Demonstrate the techniques necessary to write a paper in correct scientific style.
CLASS-LEVEL ASSESSMENT MEASURES

Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

1. Written examinations (1, 2, 3, 4, and 5)
2. Field studies (1, 2, 3, 4, and 5)
3. Written paper using correct format and style for biological literature (6)

PROGRAM-LEVEL OUTCOMES ADDRESSED

General Education Outcomes
Specify which general education outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes and assessment measures.

Occupational Program Outcomes
Specify which occupational program outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes to assessment measures.
Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Introduction
   A. Nature of ecology
   B. Scientific methodology

II. Abiotic considerations
   A. Climatic issues
   B. Edaphic issues

III. Evolution
   A. Natural selection
   B. Plant adaptations
   C. Animal adaptations
   D. Coevolution

IV. Population ecology
   A. Population genetics
   B. Population growth and regulation
   C. Intraspecific competition
   D. Life history patterns

V. Community ecology
   A. Interspecific competition
   B. Predation
   C. Parasitism
   D. Mutualism
   E. Commensalism

VI. Ecosystem ecology
   A. Trophic levels
   B. Landscape ecology
   C. Biogeochemical cycling
   D. Biogeography and biomes

VII. Comparative ecosystem ecology
   A. Tundra
   B. Deserts
   C. Grasslands
D. Chaparral
E. Savannahs
F. Forests
G. Aquatic ecosystems

VIII. Human impacts
   A. Local and regional impacts
   B. Global impacts