



ENVIRONMENTAL BIOLOGY **COURSE SYLLABUS & TOPICAL OUTLINE**

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COURSE TITLE *Environmental Biology*

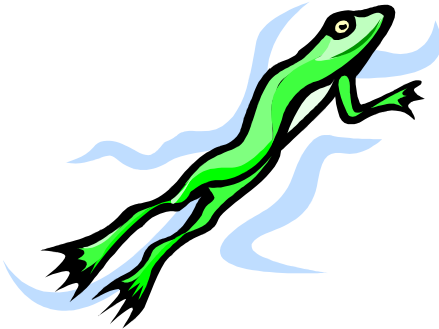
PREREQUISITES *Biology I*

CREDITS ½ credit

CATALOG DESCRIPTION

Environmental Biology examines the organization of natural ecosystems as it relates to the human community. Basic ecological principles are applied to current environmental issues. Among the topics to be examined are past and present uses and abuses of natural resources; environmental ethics and public policy; global environmental problems; human population growth; pollution; waste disposal; habitat loss; species extinction; and strategies for attaining a sustainable earth.

GENERAL COURSE OBJECTIVES

- Master the concepts necessary for understanding the living and non-living elements of the environment.
 - Develop a sustainable worldview and contrast with a throwaway worldview.
 - Gain an understanding and appreciation of the interrelationships between human and natural ecosystems.
 - Explore current environmental problems and their causes.
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- Recognize implications for business and society when solutions to environmental problems are applied or disregarded.
 - Learn various general approaches available to society in dealing with environmental problems.
 - Foster an awareness of environmental challenges by understanding the effects of human impact on local and global environments.
 - Encourage and advocate student interest/activism in community natural resources.

TOPICAL OUTLINE

Refer to attached **Topical Outline**

TEACHING STRATEGIES

1. Lecture and discussion
2. Textbook reading assignments
3. Study guides, assigned Questions
4. Laboratory exercises
5. Cooperative groups
6. Field trips
7. Reading enrichment assignments
8. Research paper (APA style) and accompanying *Powerpoint* presentation
9. Films, videos and 35 mm Slides



EVALUATION METHODS/INSTRUMENTS

1. **Study Guide Problems, Discussion Questions, Laboratory Demonstrations**
2. **Quizzes**
Generally, one announced quiz per week is administered. Laboratory practicals are among the quiz evaluations.
3. **Tests**
A topic test is administered at the conclusion of each major unit.
4. **Examinations**
One comprehensive exam will be administered at the conclusion of each grading term.
5. **Required Reading¹**
A Sand County Almanac by Aldo Leopold (1949)
6. **Team Research Paper and PowerPoint Presentation²**
One research paper, prepared according to APA style, and accompanying *PowerPoint* presentation will be assigned each quarter per two-person team.
 - First Quarter: Ecosystem profile (see Chapter 4, *Kinds of Ecosystems*, for examples)
 - Second Quarter: Environmental case study (see p. xiii, *Contents*, for examples)

The instructor will provide specific written guidelines, *Office* templates, and model examples to help with research projects. A minimum of five grades is earned per project: 1) rough draft, 2) final draft, 3) oral defense 4) *PowerPoint*, and 5) on-task behaviors.

¹ Or other assigned reading by the instructor

² Assigned at the instructor's discretion

COURSE GRADING POLICY

Weighted Percentage Grade System³

A student grade is earned from these categories: *homework assignments*, e.g. labs, study guides, assigned questions (25% of grade); *research paper* (25% of grade); *quizzes/tests* (25% grade); and *mid-term exam* (25% of grade).

Special Notice Per Late Assignments

An assignment submitted one day late results in one-third (1/3) off total points earned; two days late results in two-thirds (2/3) off total points earned; and three days late results in zero (0) points earned.

ATTENDANCE POLICY

Students are required to attend all class sessions and field trips. Students are responsible for 1) requesting makeup work upon return from absence and 2) requesting assignments and completing assignments *prior* to field trips, family vacations and other excused absences.

Prior to attending class field trips, *notify the instructor if you are allergic to insect stings!*

TEXT

Arms, Karen. 2000. *Environmental Science* (Austin TX: Holt, Rinehart and Winston). 448 pages.

Grade Scale	
A	94% >
A-	93%
B+	91-92%
B	87-90%
B-	86%
C+	84-85%
C	79-83%
C-	78%
D+	76-77%
D	71-76%
D-	70%
F	< 70%

³ Weighted percentages may be modified during the course at the instructor's discretion

About The Instructor

Mr. Eddy holds a BS degree (Biology major, Chemistry minor) from the University of Northern Iowa and a MS degree (Botany) from the University of Wisconsin-Oshkosh. He is employed by the Green Lake School District (1976) and is an adjunct faculty member for Marian College (1990) where he teaches *Ecology and The Environment*, *Teaching Toward a Sustainable Future*, *Life Systems*, and *Science and Math Curriculum Methods*. Mr. Eddy is a past recipient of the National Association of Biology Teachers' *OBTA (Outstanding Biology Teacher Award)* and the Kohl Teaching Fellowship Award. In 2001, he was presented a honorary doctorate from Ripon College for his science teaching and community service. Besides his local natural history studies and involvement with natural areas preservation, Mr. Eddy has published numerous scientific papers, articles and essays.

ENVIRONMENTAL BIOLOGY · TOPICAL OUTLINE

1st 9 Weeks	Week
Environmental Science: A Global Perspective	1
Living Things in Ecosystems	2
How Ecosystems Work	3-4
Kinds of Ecosystems	5-6
Water	7
Air	8
Atmosphere and Climate	9

2nd 9 Weeks	Week
Land	1
Food	2
Biodiversity	3-4
Energy	5
Waste	6
Population Growth	7-8
Toward a Sustainable Future	9