

**Syllabus
Zoology 411
Environmental Risk Assessment**

Professor: Michael Lydy
Office: LSII, Room 179
Office phone: 453-4091, EMAIL: mlydy@siu.edu
Office Hours: By Appointment
Text: Framework for Ecological Risk Assessments, EPA/630/R-92/001

The major objectives of this course are: to introduce the students to the framework for conducting Ecological Risk Assessments (ERA); to provide students with hand-on experience working through a variety of actual case studies; and to challenge the students to work in small groups to develop their own ERA's and paradigms using simulated scenarios.

Lecture #	Lecture Topics
1-3	Background and overview
4-7	Specifics on Problem Formulation Phase: Stressor characteristics, Ecosystem potentially at risk, Ecological effects, Endpoint selection and Conceptual model formulation
8-10	Specifics on Analysis Phase: Characterization of Exposure, Exposure analyses, Exposure profile, Ecosystem characterization
11	Midterm Exam
12-15	Specifics on Analysis Phase: Evaluation of relevant data, Ecological response analyses and Stressor-Response profile
16-17	Risk Characterization and Risk Management: Risk estimation including integration and uncertainty analyses, Risk description including Ecological Risk Summary and Interpretation of Ecological Significance and Remedial Action Goals
18	Case Study 1 Carbofuran (LYDY) Selection of case studies
19	In Class Preparation for Case Studies
20-23	STUDENT PRESENTATIONS Case Studies
25-30	Consulting Projects due
31	Final Exam

COURSE METHODOLOGY

Each graduate student is required to present a formal case study in class. Undergraduates are also required to present a case study, however undergraduates may work in groups of 2 or 3 for the in class presentations. Both graduate and undergraduate students are required to write a risk assessment outline for EACH of the case studies presented. In addition to the above mentioned requirements, a consulting project will be assigned to groups of 2-3 students (graduate and undergraduate students work together) and will be due at the end of the semester. The format for the outlines and specific guidelines for the presentations and case studies are provided on the next few pages of this handout. A midterm and a final exam will be given and will consist of questions taken from lecture material and assigned readings. The exams will be a combination of definitions, problems and short essay questions.

Grades for the class will be determined from the following components:

Case Study Presentation	=	25%
Outlines	=	10%
Class Participation	=	10%
Consulting Project	=	25%
Midterm exam	=	15%
Final Exam	=	15%
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Total	=	100%

The following grading scale will be used:

A = 90-100 %
B = 80-90 %
C = 70-80 %
D = 60-70 %
F = Below 60 %