

ENVIRONMENTAL AND ECOLOGICAL RISK ASSESSMENT

BENG 5933
Biological and Agricultural Engineering
University of Arkansas
COURSE SYLLABUS

Instructor: Dr. Marty Matlock
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Hours: MWF 10:00-11:00 AM or by appointment

COURSE DESCRIPTION

BENG 5933 – Environmental and Ecological Risk Assessment (3 SCH). This course will examine the process and methodologies associated with human environmental and ecological risk assessments. The participants will apply the methods learned in the course to a project to gain experience in defining and quantifying uncertainty associated with human perturbation, management and restoration of environmental and ecological processes.

Course Objective: Develop a comprehensive understanding of risk assessment processes within an ecosystem context using @Risk and other tools.

Prerequisites: None

Textbook: Science and Decisions: Advancing Risk Assessment (2009) National Academies Press, ISBN-10: 0-309-12046-2 (electronic version is free)

Course Evaluation:

Quizzes	15 %	1,500 points (15 @ 100 pts each)
Exams	15 %	1,500 Points (3 at 500 points each)
Annotated Reviews	20 %	2,000 Points (20 ARs, 100 points each)
<u>Assignments</u>	<u>50 %</u>	<u>5,000 Points (10 assignments, 500 points each)</u>
TOTAL	100 %	10,000 Points possible, grade based on %.

Grading Philosophy: The procedures and policies of the University of Arkansas regarding academic dishonesty will be strictly enforced.

Course Grades: Final course grades will be assigned as follows:

- A - Student earns 90 - 100 percent of possible points, reflecting outstanding competence in the skills delivered in the course, and an exceptional understanding of the applicability and limits of those skills.
- B - Student earns 80 - 90 percent of possible points, reflecting competence in the skills delivered in the course, and an understanding of the applicability and limits of those skills.
- C - Student earns 70 - 80 percent of possible points.
- D - Student earns 60 - 70 percent of possible points.
- F - Student earns less than 60 percent of possible points.

Assignments: The exams and class assignments make up 55 percent of the course grade. The exams will be developed and performed by each student, and will be formatted as reports addressing the assigned problem set. Class assignments will include daily annotated bibliographies of journal articles, computer projects, and complex design problems. These assignments will be graded based on the student's adherence to the procedures described in class, as well as the student's ability to arrive at a mathematically correct answer.

Annotated Reviews: A set of assigned annotated reviews of assigned professional journal articles must be completed each week. The themes for these articles will be assigned in the lecture. An annotated review is typically a one page summary and analysis of an article. There are many acceptable formats; however, each format must be consistent, organized so the reader can identify critical information quickly, and must contain the following information: Title, Authors, Summary, and Analysis.

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the department of Student Life, Services for Students with Disabilities.