

EVSP560

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Course Summary

Course : EVSP560 **Title :** Environmental Risk Assessment

Length of Course : 8

Prerequisites : N/A **Credit Hours :** 3

Description

Course Description: An overview of the concepts of risk assessment. Topics include the four core parts of a risk assessment, as denoted by the National Academy of Sciences: hazard assessment, dose-response assessment, exposure assessment and risk characterization. Methods of measurement and modeling are discussed, along with key questions concerning uncertainty. Differences in the risk characterizations of substances under different use conditions and legal requirements are studied. Case studies will serve to illustrate the risk assessment and site remediation processes.

Course Scope:

This course seeks to introduce students to basics of environmental risk assessment and issues in risk assessment. There are no science prerequisites; however, an understanding of basic principles of environmental science, chemistry, physics, and/or statistics will be helpful in facilitating understanding of environmental risk assessment concepts.

Objectives

After successfully completing this course, you will be able to

- LO-1 Evaluate the role of causality, uncertainty and probability in environmental risk analysis
 - LO-2 Analyze conceptual models in risk assessment
 - LO-3 Examine the scientific, technical, and political processes for risk assessment
 - LO-4 Assess the interdependence of the ecological and human health risk assessment processes
 - LO-5 Analyze case studies in risk assessment to inform risk-based decision making
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Outline

Week 1: What is Risk Assessment?

Learning Objectives

LO-1 Evaluate the role of causality, uncertainty and probability in environmental risk analysis.

Required Readings and Resources
Assignments

Forum 1

Week 2: Risk Assessment Design

Learning Objectives

LO-1 Evaluate the role of causality, uncertainty and probability in environmental risk analysis.

Required Readings and Resources
Assignments

Forum 2

Research Journal - Lead

Week 3: Uncertainty and Variability in Risk

Learning Objectives

LO-1 Evaluate the role of causality, uncertainty and probability in environmental risk analysis

LO-2 Analyze conceptual models in risk assessment

Required Readings and Resources
Assignments

Forum 3

Exercise 1 SADA

Week 4: Dose-Response

Learning Objectives

LO-2 Analyze conceptual models in risk assessment

LO-3 Examine the scientific, technical, and political processes for risk assessment

Required Readings and Resources
Assignments

Forum 4

Exercise 2 SADA

Week 5: Defaults

Learning Objectives

LO-3 Examine the scientific, technical, and political processes for risk assessment

Required Readings and Resources Assignments

Forum 5

Research Journal - Project Topic

Week 6: Cumulative Risk

Learning Objectives

LO-4 Assess the interdependence of the ecological and human health risk assessment processes

Required Readings and Resources
Assignments

Forum 6

Exercise 3 SADA

Week 7: Applications of Risk Assessment

Learning Objectives

LO-4 Assess the interdependence of the ecological and human health risk assessment processes

LO-5 Analyze case studies in risk assessment to inform risk-based decision making

Required Readings and Resources
Assignments

Forum 7

Analysis Table

Project Presentation

Week 8: Risk-Based Decision Making

Learning Objectives

LO-5 Analyze case studies in risk assessment to inform risk-based decision making

Required Readings and Resources
Assignments

Forum 8

Evaluation

Grading:

Name	Grade %
Forums	24.00 %
Forum 1	3.00 %

Forum 2	3.00 %
Forum 3	3.00 %
Forum 4	3.00 %
Forum 5	3.00 %
Forum 6	3.00 %
Forum 7	3.00 %
Forum 8	3.00 %
Exercises	30.00 %
Exercise 1 - Build a basic SADA file	10.00 %
Exercise 2 - Ecological Risk Assessment using SADA	10.00 %
Exercise 3 - Human Health Risk Assessment using SADA	10.00 %
Research Journals	10.00 %
Research Journal - Lead	5.00 %
Research Journal - Project Topic	5.00 %
Presentation	16.00 %
Project Presentation	16.00 %
Project	20.00 %
Analysis Table	20.00 %

Materials

Book Title: Science and Decisions: Advancing Risk Assessment (2009) (Available for download or free online reading at: <https://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment>)

Author: National Research Council

Publication Info: National Academies Press

ISBN: 9780309120463

Book Title: Various resources from the APUS Library & the Open Web are used. Links provided inside the classroom in the Lessons section.

Author:

Publication Info:

ISBN: N/A

Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- [Tutor.com](https://www.tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful

and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

University Policies

[Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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