In this course, we will explore many scientific, cultural, and perceptual aspects of environmental risk issues. We will discuss, in depth, toxicological and epidemiological concepts, psychological aspects of risk perception and coping, and influences on self-protective behavior. We will also spend time discussing risks and the media, and how to communicate with the public about risks. This course has three main learning goals. When you have completed the class you should have a demonstrable understanding of the basic principles of toxicology and epidemiology. You should be able to analyze the characteristics of a hazard and identify likely influences on perception of risk; and, you should be able to put together a practical plan to communicate about those risks with the public.

The success of the class depends very much on thoughtful discussion, and active participation by the members of the seminar. That, in turn, requires that you have read, and thought about the books and articles assigned. The emphasis in this class is on critical thinking about risk issues.

Class meets Tuesdays from 10:55 to 1:55 in Blake 131. Attendance is mandatory. Missing more than one class can result in a reduction in your final grade. Missing three classes will result in a failing grade. Grading will be based on class assignments/homework (20%), a midterm (30%), group projects (20%) written (20%) and oral reports (10%).

You will need to purchase one book: The Dose Makes the Poison: A Plain-Language Guide to Toxicology, 3rd Edition (Paperback) Publisher: Wiley; (2011). You will read most of the chapters in the book and will answer questions related to them, so this is not simply optional reading material. Copies are available on Amazon. Just make sure to get the third edition. All other readings are available through the Ecompanion site for the course: https://ecollege.rutgers.edu.

Class assignments: Because reading and thinking about the material before class is so important, we are providing some incentive (beyond your own insatiable thirst for knowledge) to do both. As part of your overall grade, you will be required to submit answers to questions about the material using the Ecompanion drop box. You are required to print out your answers and to bring them to class so that you may refer to them and take notes as we talk about important issues. We expect a submission for each chapter or article before the class date assigned. No late assignments will be accepted. All of the articles will be available in electronic form.

In addition to the chapters and articles assigned to the entire class, each seminar member will be assigned to a group with a specific risk topic to review, summarize, and discuss with the class on a particular day. The assignment for the group is to prepare a written summary of the main scientific, social, political, and communications issues related to their problem. Based on their written summary, the group will design risk communication materials to address the problem and present these to the class during an assigned class period.

Dr. Hallman’s office hours (202 Cook Office Building) are by appointment. The phone number at the COB is 848 932 9227.

Dr. Robson’s office hours (204A Foran Hall) are by appointment. Please contact Mrs. Yudin at 848-932-6361 or yudin@aesop.rutgers.edu for an appointment. Dr. Robson’s e-mail is robson@aesop.rutgers.edu his number is 848-932-6276.

Note: Readings and Assignments are DUE in the DROP BOX on the Date Listed.

Sept. 10 **Basic Toxicological Concepts - Robson.** Read the Introduction to the 3rd Edition, Preface to the 2nd Edition, and Chapters 1-2 and pages 31-35 in Chapter 3 of Ottoboni, *The Dose Makes the Poison.* Remember to answer questions related to the chapters and submit to the drop box before class. Read FAQ – Dihydrogen Monoxide, answer questions at the end, and submit to drop box.

Sept. 17 **Basic Toxicological Concepts II - Robson.** Read chapter 4 and chapter 6 of *The Dose Makes the Poison.* Remember to answer questions related to the chapter and submit to the drop box before class.

Sept. 24 **Basic Epidemiological Concepts – McWilliams.** Read chapter 10 of *The Dose Makes the Poison*. Read Introduction to Epidemiology. Complete worksheet on major causes of death in the United States and submit to drop box.

Oct. 1 **First hour: Exam 1 – Turn in Bibliography for Paper 1**

**Mutagenesis, Carcinogenesis and Reproductive Toxicity - Robson.** Read chapters 7-8 of *The Dose Makes the Poison*. Read Slovic et al. *Intuitive Toxicology*. Remember to answer questions related to the chapters and to write a brief summary of the article. Submit both to the drop box before class. Read Introduction to the 11th report on Carcinogens. Choose one carcinogen [known or reasonably anticipated] to report on in class. Pick one that begins with the same first letter as your last name.

Oct. 8 **Regulating Toxics - Robson.** Read pages 36-45 and Chapter 9 of Ottoboni, *The Dose Makes the Poison*. Remember to answer questions related to the chapter and submit to the drop box before class. Read (but don’t summarize): The Story of the Laws Behind the Labels Parts I, II, and III; The 'Poison Squad' and the Advent of Food and Drug Regulation; Sugar, a Cautionary Tale; and, The Apple Bites Back.

Oct. 15 **Student Presentations – Paper 1**

Oct. 22 **Microbial Risk Issues - Hallman.** Read Franklin, *Germ Crazy*; Goff, *Germ Wars*; Tomes, *The Making of a Germ Panic, Then and Now*; Anderson et al. *A Camera’s View of Consumer Food-Handling; Preventing Foodborne Illness*; *Foodborne Illness: What Consumers Need to Know*. Write summaries for these articles and submit to Drop Box. Read (but don’t summarize): Hallman, *Communicating about Microbial Risks*.

Oct. 29 **First hour: Exam 2**


Nov. 12 **Perception of Risks II – Hallman.** Read and summarize: Is it a Drink? No, It’s Cleaning Fluid; and, Haggerty et al. Young Adults’ Perceptions of Cigarette Warning Labels in the United States and Canada; Review new FDA Cigarette Warning Labels.

http://www.fda.gov/TobaccoProducts/Labeling/CigaretteWarningLabels/default.htm

*Remember to bring in warning labels*


Dec. 3 **Communicating about Risks with the Public II - Hallman.**

Dec. 10 **Student Presentations – Paper 2 - Robson**