This class is an in-depth investigation of decision making for the environment under risk. Often when we think about improving decision making, we look to the fields of education and marketing for insight into changing behavior at the individual level. However a wealth of research in psychology and behavioral economics shows—and much regarding the 2016 U.S. election confirms—that neither education nor persuasion will necessarily lead to more thoughtful or informed decisions. The goal of this class is to examine research in these fields—often reexamining it in light of this fall’s election—and deepen our understanding of decision making under risk and uncertainty.

The bulk of this course will focus on engaging literature from judgment and decision making and discussing a) how individuals process information and b) potential errors in information processing that lead to uninformed or biased decisions under risk and uncertainty. Near the end of the term we will focus on applications from the decision-aiding literature—most notably, Structured Decision Making, which is meant to improve decision making in complex, risk-laden and multi-objective contexts. We will also examine literature from a “post-truth” perspective when appropriate.

**Course Objectives:**

This course is designed to help students:

1. Better understand the theory underlying judgment and decision-making in environmental policy and risk management contexts.
2. Gain experience with decision-aiding techniques intended to improve decision making in these contexts.
3. Engage theories, events, scientific evidence and the status quo more critically.

**Course Format:**

This course will rely on active engagement with the readings and in-class discussion and activities. Such an approach makes regular attendance a crucial component of success!

**Assignments and Exams:**

1. **Final Paper (35% of Grade)**

   The goal of the final paper is to apply concepts and lessons learned in the course to a real-world risk-based decision making problem, both in terms of understanding why the problem exists and how we might resolve it through the use of decision-aiding techniques. The instructor will work with students to choose a topic and approach that best fits with their ongoing graduate research. The final paper will be graded using the standard OSU grading scheme (A, A-, B+, etc.); there is
Conciseness and preciseness are prized; more rarely equals better.

2. Presentation of Final Paper (15% of Grade)
Throughout your career, you will—hopefully—be asked to present your work in a clear, concise, and confident manner. In this course you will have the opportunity to present your final paper to your classmates at the end of the term. Each presentation will be graded on a three-tier system. A check represents what the instructor expects from the average student in the class. A check-plus represents superior work, whereas a check-minus represents work that is below expectation.

3. Memos (20% of Grade)
Three 1-2 page single-spaced memos will be required in which you develop the ideas for your final paper, practice applying course concepts to a real-world problem of interest, and receive feedback on your ideas. As with the presentations, memos will be graded on a three-tier system, and will comprise 20% of your grade.

4. Participation & Discussion (30% of Grade)
This class relies on active engagement and discussion. Students are expected to not only do the readings, but also to think critically about them and come to class prepared with questions, concerns, and hot-takes. As with the presentations and memos, students’ participation will be graded on a three-tier system.

Additionally, each student will be assigned to lead discussion in at least TWO classes. The format for discussion will be at the discretion of the discussion leader; however, identifying current events and topics that connect concepts from the readings is encouraged! Discussion leaders’ preparation, organization and engagement with the texts will be graded on the three-tier system.

Grading:
1. Final Paper: 35%
2. Presentation of Final Paper: 15%
3. Memos: 20%
4. Participation & Discussion: 30%

This course syllabus, schedule, and assigned readings are subject to change—extremely so. The syllabus can be made available in alternative formats upon request; students with disabilities are responsible for making their needs known to the instructor and for seeking available assistance in a timely manner.

Class Textbooks:
There are two required course textbooks:


The texts are available from most online retailers (and likely in the OSU bookstore). Other required readings in the form of journal articles are listed below and available on CARMEN.
Make-up and Late Assignments:
In-class assignments and attendance/participation points cannot be made up. Late papers and memos will be accepted, but will be heavily penalized for each day that they are late (~5% or one check per day, respectively).

Academic Misconduct:
It is expected that all students have read and understand the University’s Code of Student Conduct and all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s Code of Student Conduct and this syllabus may constitute “Academic Misconduct.” The Ohio State University’s Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.”

Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s Code of Student Conduct is never considered an “excuse” for academic misconduct. If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct (COAM). If COAM determines that you have violated the University’s Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:
- The Committee on Academic Misconduct web pages (http://oaa.osu.edu/coam.html)
- Ten Suggestions for Preserving Academic Integrity (http://oaa.osu.edu/coamtsuggestions.html)
- Eight Cardinal Rules of Academic Integrity (http://www.northwestern.edu/provost/students/integrity/rules.html)

Class Schedule & Readings

Introduction to Risk

Session 1 (1/10) – Syllabus, Introductions, Class Direction, Expectations

Session 2 (1/12) – Defining Risk

Session 3 (1/17) – Ecological Risk Perception

Session 4 (1/19) – Cultural Cognition

Session 5 (1/24) – Risk and Psychological Distance

**How do individuals process information when making decisions?**

Session 6 (1/26) - Dual Process Theory

Session 7 (1/31) – Affect and Emotions
- Forgas, J.P. Ch. 1 (Introduction)

Session 8 (2/2)– Expected Utility and Bounded Rationality

**FIRST MEMO DUE!! 2/7**

Session 9 (2/7)– Descriptive Models of Decision Making
- Readings TBD

Session 10 (2/9) – Information Processing and Decision Making Wrap-up
What are some of the common errors in information processing that lead to “bad” decisions?

Session 11 (2/14) – *Probability Biases: Representativeness & Availability*

Session 12 (2/16) – *Probability Biases: Anchoring, Randomness & Correlation*

Session 13 (2/21) – *Decision Making Biases: Discounting, Loss Aversion & Probability Neglect*

Session 14 (2/23) – *Decision Making Biases: Confirmation Bias & Selective Perception*

Session 15 (2/28) – *Social Biases: Attribution Errors*

Session 16 (3/2) – *Social Biases: Ingroup Biases & Outgroup Homogeneity*

How can we help individuals and groups make better decisions?
- *SECOND MEMO DUE!! 3/7*

Session 17 (3/7) – *Foundations of Structured Decision Making*
- Gregory et al. (2012) *Structured Decision Making* pp. 1-46
Session 18 (3/9) – **Decision Sketching**  
- Gregory et al. (2012) *Structured Decision Making* – pp. 47-68

**SPRING BREAK (March 13-17)**

Session 19 (3/21) – **Objectives and Performance Measures**  
- Gregory et al. (2012) *Structured Decision Making* – pp. 69 – 121

Session 20 (3/23) – **Alternatives and Consequences**  

Session 21 (3/28) – **Making Tradeoffs and Learning**  

Session 22 (3/30) – **SDM Wrap-up**  

- **THIRD MEMO DUE!! 4/4** -

**Risk in the Era of Identity Politics.**

Session 23 (4/4) – **Biased Minds**  

Session 24 (4/6) – **Conservatives & Liberals**  

Session 25 (4/11) – **Solution Aversion**  

Session 25 (4/13) – **TBD: Readings Medley!**

**Final Papers & Presentations.**

Session 26 (4/18) – **Presentations of Final Papers**

Session 27 (4/20) – **Presentations of Final Papers**

- **Final Paper Due Thursday, Apr 27th, 3:45pm** -