NRM 403, Environmental Decision Making
Course Syllabus, Fall Semester 2018
9:45-11:15 AM Tuesdays & Thursdays, AHRB 183

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Office Hours: We maintain "open door" policies to maximize student access. If you have trouble finding us, feel free to make an appointment.

Course goal: To introduce the student to the tools necessary to make natural resource management decisions in the face of complexity, uncertainty, and competing values and to enhance students' critical thinking skills. By the end of this course, you should be able to:

Articulate and apply the foundations (science, economics, ethics/values, and policy) upon which natural resource management decisions are made.

- ➢ **Apply critical thinking skills** when evaluating information and be able to distinguish between fact, theory, and opinion.
- ➢ Independently **find reliable sources of information** to support positions in natural resource issues.
- ➢ **Deliver clear analysis and persuasive presentations**, both orally and in writing.
- ➢ **Discuss and use a variety of techniques** employed by resource managers in decision-making.
- ➢ **Gain perspective** ("big picture" sense) on perspectives ("points of view" sense).

Textbook: Conroy, MJ & JT Peterson. 2013. Decision making in natural resource management: A structured, adaptive approach. Wiley-Blackwell, Hoboken, NJ. 474 pp.

NRM 403 is an upper division, capstone class. The emphasis is on discussion and active learning, **not** lecture and passive learning. Class participation is a substantial portion of your final grade, and depends on both your presence in class and the quality of your participation. More than two absences will reduce your class participation grade. Participation quality depends on active participation in discussions, thoughtful comments, and good questions. Effort counts here. We will do all we can to provide the atmosphere necessary for fun and challenging discussions.

NRM 403 meets Oral- and Writing-intensive requirements, reflecting our emphasis on clarity of communication. Although some new information will be presented, the emphasis will be on improving how you synthesize and work with information you already have, e.g., from previous courses.

Disabilities: If you have a physical or learning disability, please advise the course coordinator in writing of any necessary special consideration by the beginning of the 2nd week of class. We will do everything reasonable possible to accommodate you in accordance with the Americans with Disabilities Act and university policy.

Technology Policy: We are using Zoom to distance-deliver the course to at least 1 student not on the UAF campus. Most classes will be recorded. Use of laptops, phones, tablets, and other devices for purposes not directly related to the class is prohibited during class, unless specifically permitted by the instructors.

Blackboard: This course will make extensive use of Blackboard (http://classes.alaska.edu) for archiving class notes and reading materials, submitting assignments, coordinating activities with project group members, retrieving grades, and updating your course progress. Please check it regularly for announcements and updates. In addition, we occasionally will need to contact you between class periods via Blackboard e-mail. If you prefer to use a different e-mail address, you will need to set up e-mail forwarding.

Assignment submission: All assignments MUST be turned in using Blackboard's assignment submission tool. DO NOT use any other means of submission (e.g., e-mail). Assignments received by email will receive the response that the assignment must be handed in on blackboard. Late assignments will be penalized 10% of the assignment value per day. We are reasonably proficient with various tools to detect plagiarism, which is a serious violation of the UAF honor code that merits a failing grade.

Issues: The instructors and invited guests will present current, controversial natural resource issues and cases that will highlight the foundations of decision-making in natural resources management. The issues are complex, with "good" answers, "bad" answers, but no "right" answers. We encourage you to present your perspective energetically and rationally while challenging (politely) those you disagree with (including ours). We welcome (and occasionally offer) "devil's advocate" arguments as a way to challenge assumptions. **Your grade does not depend on what conclusions you reach, but rather on how you reach those conclusions.**

Grading: Letter grades will be assigned based on the fraction of total points obtained in the class: 90-100 = A, etc. We will assign + or – modifiers for scores within 2 points of the letter grade cutoffs. All grades and feedback for assignments will be provided via the gradebook feature on Blackboard.

Date	Topic	Reading	Assignment due	Points	
				Written	Oral
28-Aug	Introduction, critical thinking, comm.	Final project (FP) preference			
30-Aug	Foundations, Pebble mine exercise	Ch. 1, BB folder readings	Plagiarism results, FP preference	5	
4-Sep	SDM & ARM, uncertainty	Ch. 2			
6-Sep	Defining problems, setting objectives				
11-Sep	FP Problem definitions, objectives				
13-Sep	Economics, Utility Functions	Ch. 3			
18-Sep	Case study 1	TBD	Topic descriptions	50	
20-Sep	Case study 1 discussion		CS 1 critiques	10	
25-Sep	Stakeholders	Ch. 4			
27-Sep	Pete Fix, Attitudes, behavior				
2-Oct	Student presentations: SH group positions		FP SH group pos.	30	30
4-Oct	Chanda Meek, policy example	Fish papers			
9-Oct	Student presentations: fish		Fisheries critiques		30
11-Oct	Student presentations: fish				
16-Oct	Case study 2	TBD	FP outline	30	
18-Oct	Case study 2 discussion	Energy papers	CS 2 critiques	10	
23-Oct	Statistics & decision making	Ch. 5			
25-Oct	Decision tools	Ch. 6			
30-Oct	ID & reduce uncertainty	Ch. 7			
1-Nov	Case studies	Ch. 9			
6-Nov	Student presentations: energy		Energy critiques		30
8-Nov	Student presentations: energy		FP rough draft	50	
13-Nov	Case study 3	TBD	FP rough ppt	25	
15-Nov	Case study 3 discussion		CS 3 critiques	10	
20-Nov	FP Group meetings				
22-Nov	NO CLASS: Thanksgiving				
27-Nov	Student presentations: FP		FP final version	100	100
29-Nov	Student presentations: FP				
4-Dec	Student presentations: FP				
6-Dec	Student presentations: FP, course wrap up	Ch. 10	FP evaluation	10	
			Class Participation		100
			Course evaluation	10	
Subtotal				340	290
Total				**630**	