

Updated: 01-10-2020

NRES 474: Integrated Resource Management (spring 2020)

Instructor: Dr. Michael Rader

Office: TNR 378

Office hours: Tue 10-11am & Thu 10-11am, or by appointment

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Course Time/Location:

Lecture- Monday 11:00 – 11:50 am, TNR 320

Discussion 1- Wednesday 9:00 – 10:50 pm, TNR 240

Discussion 2- Wednesday 1:00 – 2:50 pm, TNR 120

Course Description:

This course will examine how to make natural resource management decisions in a complex, multidisciplinary, uncertain environment, often with competing interests. We will consider how social, economic, and environmental factors affect current resource management issues. Lectures will focus on exposing you to a structured approach to natural resource decision making and problem solving. Discussion will concentrate on developing your natural resource problem-solving and communication skills through case-study analysis. During Discussion, you will also practically apply the structured decision-making process discussed in lecture in a group project, culminating in an oral presentation at the end of the semester.

Course Objectives:

1. You will learn and apply a structured approach to making management decisions for a variety of natural resource management problems.
2. You will develop and demonstrate oral and written communication, and critical thinking skills.
3. You will demonstrate the ability to collaborate and work effectively in a team.
4. You will be able to identify and describe the root causes and competing interests for a variety of natural resource problems and develop possible solutions.

Readings:

1. Textbook: Gregory, R., L. Failing, M. Harstone, G. Long, T. McDaniels, and D. Ohlson. 2012. Structured decision making- a practical guide to environmental management choices. (required)
2. Assigned case studies (available online/Canvas)
3. Selected handouts or postings to Canvas

Assigned readings are testable material.

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Discussion: The goal of discussion is to reinforce topics covered in lecture and to give students practical application in integrated resource management. We will accomplish this through *analysis of case studies* and a *group natural resource management project*. Attendance and participation are mandatory.

Grading Scheme:

Your course grade will be based on the following components:

| | |
|---------------------------|-----|
| Exam 1: | 15% |
| Exam 2: | 15% |
| Final Exam: | 25% |
| Discussion/Participation: | 25% |
| Management Project: | 20% |

Exams can be a combination of multiple choice, fill-in-the-blank, short answer, matching, True/False, and discussion.

| Grade | % |
|-------|----------|
| A | 93-100 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 80-82 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-69 |
| D | 65-66 |
| F | Below 65 |

Exams: There will be two midterms and a final exam. The final is cumulative. Exams must be taken on the scheduled dates or a score of zero will be assigned. See “Due Dates/Late Policy” for absence policy.

Case Studies: Each week during Discussion we will analyze a case study (see Schedule). You must read each case study prior to class and be prepared to discuss the case in class. Each student is expected to contribute to the discussion each week. 25% of your course grade is dependent on your case study discussion participation. After each case study discussion, you will be assigned a grade of 0-100 points (0 = no contribution; 68 = infrequent comments/unprepared; 75 = satisfactory; good quality, work on quantity; 75 = satisfactory; good quantity, work on quality; 100 = well-prepared, frequent contributor).

Management Project: During discussion, I will assign students to teams to work on a group natural resources management project that practically applies the structured decision-making

process we discuss in lecture. Each week, you will complete a component of the structured decision-making process for your group project. At the end of the semester, each group will give an oral presentation summarizing their project. I will provide a scoring rubric. Peer evaluation will be utilized to assess individual effort and weight presentation grades. Group members will independently and confidentially assign each group member (including themselves) a percentage to indicate group member contribution. For example, a group of four people would have a total of 400% to divide amongst the group members. I will take the average of the percentages assigned to each group member and multiply that number by the group's score to get an individual grade. Groups can remove a member by majority vote in consultation with the instructor. Dropped members have four options: 1) persuade their original group to re-accept them; 2) find another group willing to accept them; 3) complete the project on their own; or, 4) receive a failing grade for the project.

Attendance: Attendance is mandatory and necessary to be successful in the course. I consider attendance to be a component of professionalism (See "Professionalism" below). Additionally, material will be covered in class that is pertinent to exams and class assignments that will not be directly stated in any provided slides, class outlines, class notes, etc. I have noticed in previous classes that success is consistent with regular attendance. ***No more than two absences will be excused for Discussion since this component of the course depends on participation.***

Communication: Students are expected to routinely check their UWSP email and the Canvas course site for updates and materials.

Due Dates/Late Policy: All assignments are due on the specified due date at the beginning of class. Late assignments will incur a **5% penalty per day they are late**. ***You are responsible for your own time management and keeping up with due dates.*** Illness, family emergency, etc., may be cause for extending a due date if I am notified **prior** to the due date (email and voicemail have date and time stamps) and you can **document** (e.g., Dr.'s note) your absence.

Course Effort/Study: I believe being a full-time University student is akin to having a full-time job. A full-time job generally equates to at least 40 hours of work per week. You will only spend approximately a third of this time in class. You must spend the additional time on ***your own*** studying, reading, completing assignments, etc. To get the most out of this course and your University experience (i.e., grades, knowledge, skills, etc.), ***you*** must put in the time outside of class. A good rule of thumb is to plan on spending two hours of outside preparation for every hour you spend in class. Budget this time into your weekly/monthly planner.

Academic Integrity: Academic integrity is central to the mission of higher education in general and UWSP in particular. Academic dishonesty (cheating, plagiarism, etc.) is taken very seriously. Don't do it! The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment. For more information, see the "Student Academic Standards and Disciplinary Procedures" section of the Community Rights and Responsibilities document, UWSP Chapter 14. This can be accessed by viewing page 11 of the document at:

<http://www.uwsp.edu/dos/Documents/CommunityRights.pdf>

Professionalism: A professional is competent, reliable, respectful, and has integrity. It is a necessary attribute for most careers, particularly law enforcement. It is never too early to begin developing a professional mindset, e.g., being on time with the appropriate equipment, being competent and knowledgeable in your field, completing assignments correctly and on time, being respectful to others, etc. **I may deduct up to 5% of your final course grade for lack of professionalism**, e.g., absences, profanity, disrespect, sleeping, disrupting class with unsolicited texting and talking, etc.

Disability Policy: Please discuss with me as soon as possible any concerns you may have regarding a disability so we can accommodate you as per UWSP policy.

Tentative Schedule

| | | Topic | Reading | Assignments |
|-----------------------------------|-------------------|--|---|---------------------------|
| Week 1 1/20-1/24 | <i>Lecture</i> | NO CLASS | | |
| | <i>Discussion</i> | Introduction to Integrated Resource Management | Preface & Forward | |
| Week 2 1/27-1/31 | <i>Lecture</i> | Structuring Environmental Management Choices | Ch. 1 | |
| | <i>Discussion</i> | The Case Method/Team assignments | Too Many Deer! | |
| Week 3 2/3-2/7 | <i>Lecture</i> | Foundations of SDM | Ch. 2 | |
| | <i>Discussion</i> | Case #1 | The Big Bad Wolf or Symbol of American Wilderness | Project topic due |
| Week 4 2/10-2/14 | <i>Lecture</i> | Decision Sketching | Ch. 3 | |
| | <i>Discussion</i> | Case #2 | Community-based Management & Conservation in Africa | Decision Sketch |
| Week 5 2/17-2/21 | <i>Lecture</i> | Understanding Objectives | Ch. 4 | |
| | <i>Discussion</i> | Case #3 | To Be or Not to Be a Golf Course in Wimberley? | Project Objectives |
| Week 6 2/24-2/28 | <i>Lecture</i> | EXAM 1 | | |

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|------------------------------------|-------------------|---|--|------------------------------|
| | <i>Discussion</i> | Case #4 | Hunting the Black Rhino | |
| Week 7 3/2-3/6 | <i>Lecture</i> | Identifying Performance Measures | Ch. 5 | |
| | <i>Discussion</i> | Case #5 | Of Silt & Ancient Voices | Performance Measures |
| Week 8 3/9-3/13 | <i>Lecture</i> | Incorporating Uncertainty | Ch. 6 | |
| | <i>Discussion</i> | Case #6 | Unsustainable Use of the High Plains Aquifer | Structure Uncertainty |
| Week 9 3/23-3/27 | <i>Lecture</i> | Creating Alternatives | Ch. 7 | |
| | <i>Discussion</i> | Case #7 | Seeing the Forest for the Trees | Project Alternatives |
| Week 10 3/30-4/3 | <i>Lecture</i> | Characterizing Consequences | Ch. 8 | |
| | <i>Discussion</i> | Case #8 | Could Grazing Be Dangerous? Ask the Cows | Consequence Table |
| Week 11 4/6-4/10 | <i>Lecture</i> | Making Trade-Offs | Ch. 9 | |
| | <i>Discussion</i> | Case #9 | The Bear Facts | Trade-Off Assessment |
| Week 12 4/13-4/17 | <i>Lecture</i> | EXAM 2 | | |
| | <i>Discussion</i> | Case #10 | Cauldron of Democracy | |
| Week 13 4/20-4/24 | <i>Lecture</i> | Learning | Ch. 10 | |
| | <i>Discussion</i> | Presentation prep. | | Monitoring Plan |
| Week 14 4/27-5/1 | <i>Lecture</i> | Implementation | Ch. 11 | |
| | <i>Discussion</i> | Project Presentations | | Project Presentations |
| Week 15 5/4-5/8 | <i>Lecture</i> | Conclusion | Ch. 12 | |
| | <i>Discussion</i> | Project Presentations | | Project Presentations |
| Week 16 5/11-5/15 | | FINAL EXAM Mon., 5/11 8:00 – 10:00 AM | | FINAL EXAM |

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Emergency Procedures:

If you see/hear something, say something.

In the event of a medical emergency call 9-1-1 or use Red Emergency Phone. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure. See www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx for floor plans showing severe weather shelters on campus. Avoid wide-span structures (gyms, pools or large classrooms).

In the event of a fire alarm, evacuate the building in a calm manner. Meet at location 200 yards from building. Notify instructor or emergency command personnel of any missing individuals.

Active Shooter/Code React – Run/Escapes, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders.

See UW-Stevens Point Emergency Procedures at www.uwsp.edu/rmgt/Pages/em/procedures for details on all emergency response at UW-Stevens Point.

(Source: UWSP Risk Management Dept.)