Course Syllabus

Human Dimensions of Natural Resource Conservation

WIS 4523: Section 0227 Fall 2017

Class Times:

Tuesday: Period 8 3:00pm – 3:50pm Newins-Ziegler 222
Thursday: Periods 8 – 9 3:00pm – 4:55pm Newins-Ziegler 219

Instructor: Dr. Jane Anderson, Postdoctoral Research Associate
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Office Hours: Thursday 1pm – 2pm and by appointment

Course Description:

The field of human dimensions of natural resources conservation evaluates how peoples' values, culture, knowledge, opinions, and behaviors influence natural resource management. Practitioners of human dimensions work to identify stakeholders, understand stakeholder knowledge and opinions, and use this information to guide management decisions or to effectively communicate environmental messages. In this course, students will be exposed to the principals of human dimensions, strategies for stakeholder evaluation and communication, and human dimensions applications in management.

Course Objectives:

By the end of this course, students will be able to:

- Identify stakeholders of natural resources issues
- Identify qualitative and quantitative research tools and their applications
- Write an editorial or blog promoting a conservation issue
- Develop environmental interpretation materials
- Evaluate environmental interpretation materials and recommend improvements
- Formulate management strategies to address environmental conflict
- Demonstrate environmental negotiation skills
- Explain challenges of management in coupled human-natural systems
- Work effectively in groups

Grading Policy:

All assignments are to be typed, not-handwritten, and should be submitted in accordance with the assignment description. Assignments are due at 3pm on the due date unless otherwise specified. Late submissions of assignments will result in a 10% reduction in the assignment grade per day and will not be accepted after five days. The grading scale will be 97-100 A+, 93-96 A, 90-92 A-, 87-89 B+, 83-86 B, 80-82 B-, 77-79 C+, 73-76 C, 70-72 C-, 67-69 D+, 63-66 D, 60-62 D-, <60 = unacceptable (E)

There are a total of 500 points available between assignments, attendance, and exams. The number of points available per assignment and exam is described in the Assignments and Grades section.

Attendance Policy: Attendance will be taken at the beginning of class. Each student is allowed **one** unexcused absence. After the first unexcused absence, each will count as a 2 point deduction in the attendance portion of your grade. If you are more than 5 minutes late, it will count as a half of an unexcused absence.

Readings:

Readings are to be completed prior to class on the day listed in the course schedule. Readings will come from the required text or will be posted on the e-learning website.

Required Text: Jacobson, S.K. 2009. Communication Skills for Conservation Professionals. Island Press.

Recommended Text: Decker, D.J., Riley, S.J, & Siemer, W.F. (eds). 2012. Human Dimensions of Wildlife Management. The Johns Hopkins University Press.

Assignments and Grades:

Assignments are to be turned in by 3:00pm (prior to class) on the date due (see Grading Policy)

Assignment 1: Survey Questions (25 points - 5% of final grade)
Due Date: September 12th
Description: Rhesus macaques (*Macaca mulatta*) were introduced to the forests along the Silver River in the 1930s. This invasive population is growing quickly and poses environmental and public health threats. However, many Florida residents are fond of the rhesus macaques and feel they are part of the local culture. Managers need to better understand the knowledge and views of the public in order to decide how to manage this population.

Read the EDIS document by Anderson et al. (2016) titled "History and Status of Introduced Rhesus Macaques (*Macaca mulatta*) in Silver Springs State Park", available from http://edis.ifas.ufl.edu/pdffiles/UW/UW41200.pdf. Write sixteen questions for a survey of central Florida residents to measure their (a) knowledge, (b) attitudes, and (c) behaviors

regarding the management of rhesus macaques, and (d) socio-demographic background questions. Write 4 questions in each of these categories (a-d) that would help managers understand this audience and how to implement rhesus macaque management. Follow the instructions in the textbook for writing clear survey questions.
Grading Rubric: 6.25 points per category: 1 point for clarity & grammar per question, 2.25 points for having all questions in the proper category. Total = 25 points
Submission: Upload to e-learning website

Assignment 2: Propaganda statements about climate change (10 points - 2% of final grade)
Due Date: September 19th
Description: Based on the list of 6 propaganda types (bandwagon, testimonial, emotional appeal, card-stacking, name-calling/loaded words, and repetition) listed in Jacobson, Chapter 3, page 64, choose 5 types of propaganda and write a brief (one or two sentences) example for each of these 5 types of propaganda, arguing either for or against the notion that climate change is a major threat, human-caused, and that people should address it with policy/regulation/behavior change. (Students with last names beginning with A to L will write messages refuting climate change. Students with last names beginning with M to Z will write messages supporting climate change action). Use actual examples from articles or websites about climate change, or make up examples of propaganda you think might work based on the readings about human behavior and potential barriers to addressing climate change. Identify each propaganda technique and ensure that each of your 5 examples clearly demonstrate a different, specific propaganda technique.
Grading Rubric: 2 points per propaganda type
Submission: Upload to e-learning website prior to class AND bring hard copy to class

Assignment 3: Conservation editorial for newspaper or online news source (60 points - 12% of final grade)
Due Date: September 28th
Description: Write a 200 to 300 word editorial or blog post on a conservation topic of your choice. Follow the format, examples, and criteria provided in assigned readings. Check your editorial to ensure your writing does not exceed a 6th grade reading level. Instructions on how to check reading level in MS Word are here: https://www.youtube.com/watch?v=79jDbVN371Q
Grading Rubric: Meets word count and grade level requirements (12 points), sentence structure, format, clarity (12 points); uses mental imagery, analogy, relevant language; lively quotations or story (12 points); raises an audience need, concern or interest (12 points); presents consequences, solutions, and desired actions (what should the reader do?!) (12 points).
If editorial is published = automatic A+
Submission: Upload to e-learning website

Assignment 4: Personal ecological footprint (15 points - 3% of final grade)
Due Date: October 12th
Description: Calculate your personal ecological footprint using The Nature Conservancy Tool http://www.nature.org/greenliving/carboncalculator/. Turn in your results to the quiz: Your Total Footprint, Similar Households, and Better/Worse Than Average percentage. Name three things you could do to improve your footprint. Write one paragraph evaluating this tool for the public. Using your knowledge of environmental interpretation and evaluation, describe what you think this website does well or needs to improve.

Grading Rubric: Score reporting (3 points); Reporting three methods for improvement (3 points); Evaluation of tool (9 points).
Submission: Upload to e-learning website

Assignment 5: Interpretive exhibit for Reitz Union Pond (75 points - 15% of final grade)
Due Date: October 31st
Description: Work with your group to design an interpretive exhibit based on your assessment of audience needs and site goals. You may choose any topic to interpret within the Reitz Union Pond. Your materials should demonstrate your knowledge of effective interpretive techniques and sound educational approaches. Select a subject appropriate for the site and audience. Before designing your exhibit, develop a logic model of your proposed audience, theme, content, technique, and potential method of evaluation of effectiveness. The logic model should show your audience, input, output and outcomes. We will share our exhibits in class on October 31st and use them for Assignment 6 (see below).
Grading Rubric: Logic model clarity and detail (25 points); exhibit aesthetics, clarity, grammar, application to audience, and demonstration of interpretation techniques (50 points).
Submission: Upload PDF of exhibit file and logic model to e-learning website prior to class. Bring exhibit to class.

Assignment 6: Criteria (10 points) and evaluation (15 points) of environmental interpretation materials (25 points - 5% of final grade)
Due Date: Criteria due October 31st, evaluation due November 7th
Description: Based on the readings and class discussion, bring a list of criteria for assessing the Reitz Union Pond exhibits designed by your classmates. Bring the criteria with you to the presentation on October 26th. Use your criteria to develop an evaluation for the other exhibits. Your evaluation should include a paragraph on each exhibit discussing whether the exhibit was developed properly for the audience, whether it accomplished the objective of clearly communicating a subject, and whether you feel it would be an effective interpretative exhibit and why. Also include at least one recommendation for improvement.
Grading Rubric: Criteria demonstrates knowledge of effective evaluation (10 points); evaluation demonstrates knowledge of audience needs and effective communication (15 points).
Submission: Upload criteria to e-learning website prior to class, AND bring hard copy to class
Upload evaluation to e-learning website

Assignment 7: Reflection of NPR Podcast on black bear management (40 points - 8% of final grade)
Due Date: November 28th
Description: Listen to the NPR Podcast Invisibilia, Episode Reality Part I (link below). While listening, take notes on the questions posted on the e-learning website. Write a 2-3 paragraph reflection of the stakeholders and the issue, and what human dimensions techniques could have been used to diffuse the situation. Then write 1 -2 paragraphs on the podcast itself, including how the authors framed the story, whether it appropriately included details for the relevant audience, and what biases the authors may have that could have influenced the story.

Grading Rubric: Follows writing prompts and paragraph requirements (20 points, 50%); demonstrates understanding of issue and related human dimensions concepts (10 points; 25%); uses appropriate grammar and style (10 points; 25%).
Submission: Upload to e-learning website

Extra Credit: Art example for conservation (5 points; 1% of final grade)
Due Date: November 28th
Description: Present an example of art to the class (e.g., painting, song, sculpture) that conveys a conservation concept. Artwork can be original or an example by another artist; artwork presented from another artist must include appropriate recognition.
Grading Rubric: Art example relevant to conservation (2 points); student appropriately prepared when presenting to class (3 points)
Submission: Bring to class

Attendance/Participation (50 points - 10% of final grade)

Exam I (100 points - 20% of final grade)
Date: October 5th
Description: All course materials through October 3rd

Exam II (100 points - 20% of final grade)
Date: November 30th
Description: All course materials from October 10th – November 28th

Extra Credit - Art example for conservation (5 points - 1%)

Course Schedule:

August 22: Course Introduction

Theme I: Human Dimensions Concepts & Research Techniques

August 24: Introduction to Human Dimensions: principals, governance, and applications in management
Readings: 1. Jacobson & McDuff. 1998. Conservation Biology
2. Bennett et al. 2016. Biological Conservation

August 29: Stakeholder identification, research, and outreach
Readings: 1. Jacobson Chapter 1: *Communications for Conservation*
2. George et al. 2016. Biological Conservation

August 31: Guest Lecture: Dr. Rebecca Williams, UF International Center and Department of Animal Sciences – Qualitative Research Techniques
Readings: 1. Jacobson Chapter 5: *Researching Audiences Using Qualitative Approaches*

September 5: Quantitative Research Techniques
Readings: 1. Jacobson Chapter 4: *Researching Audiences Using Quantitative Approaches*

Theme II: Stakeholder Identification and Communication

September 7: Conservation Psychology and Environmental Communication
Readings: 1. Jacobson Chapter 2: *Influencing Public Attitudes & Behaviors*
2. Jacobson Chapter 3: *Designing a Public Communications Program*
3. TED Talk: Why are we so attached to our things? Available from: https://www.youtube.com/watch?v=H2_by0rp5q0

September 12: Using Mass Media for Conservation
Readings: Jacobson Chapter 8: *Using Mass Media*

September 14: Environmental Education & Interpretation
Readings: 1. Jacobson Chapter 9: *Methods & Materials for Interpreting the Environment*
2. Jacobson Chapter 10: *Conservation Through Education*

September 19: Persuasive Writing
Readings: 1. Editorials on e-learning website
2. NPR short podcast on framing: http://www.npr.org/2015/12/17/460082538/is-arguing-with-passion-the-most-effective-way-to-persuade-opponents

September 21: Guest Lecture: Dr. Mark Hostetler, UF Department of Wildlife Ecology & Conservation – Human Dimensions in the Built Environment ****Fieldtrip to Madera****
Readings: Hostetler & Drake. 2008. Landscape and Urban Planning

September 26: Guest Lecture: Dr. Nia Morales, Florida Fish and Wildlife Conservation Commission – Culture, Race, Ethnicity, and Gender in Natural Resources
Readings: 1. Killer Whale article. 2004. Gainesville Sun
2. Floyd. 1999. Social Science Research Review
3. Schmidt & Stricker. 2010. The Wildlife Professional

September 28: ***Field trip to Reitz Union Pond***
Readings: Jacobson Chapter 6: *Communication Strategies & Actions*

October 3: Guest Lecture: Ben Lowe, UF Department of Wildlife Ecology & Conservation – Religion and Natural Resources

Readings: 1. McKibben, B. 2006. The gospel of green. Will evangelicals help save the earth? Onearth 28:35-37.
2. McDuff, M. 2010. Natural Saints: How people of faith are working to save God's Earth, pages 3-10.

October 5: Exam I

October 10: Program Evaluation

Readings: Jacobson Chapter 11: *Evaluating & Monitoring Program Success*

October 12: ***Field trip to Morningside Nature Center***

Readings: 1. Silvy ed. 2012 Adaptive management in wildlife conservation, pages 43-54 in Wildlife Techniques
2. Meffe et al. 2002 *Ecosystem Management: Adaptive, Community-based Conservation* Ch 2. pp. 57-76. And pp. 95-111.
-An in-class assignment will be based on this reading, come prepared.

October 17: Collaborative Management & The Nominal Group Process

Readings: 1. Lehrer. 2008. Ecological Freakonomics.
2. Jacobson et al. 2005. Applied Environmental Education & Communication.

October 19: Creative Thinking & Citizen Science

Readings: 1. Dehaan. 2011. Teaching Creative Science Thinking
2. Watch video - The Awesome Power of Citizen Science: https://www.youtube.com/watch?v=SZwJzB-yMrU
3. Read journal article and skim supplementary information assigned to your group. Come prepared to discuss in class:

Group 1: Last Names: Boettcher – Edwards
Article: Goodenough et al. 2017. PLOS ONE
Supplementary Info: http://www.npr.org/sections/13.7/2017/01/04/506400719/video-swooping-starlings-in-murmuration

Group 2: Last Names: Freed – Langford
Article: Newson et al. 2015. Biological Conservation
Supplementary Info: http://www.batsurvey.org/

Group 3: Last Names: Lazaro – Mitjans
Article: Vercayie & Heremans. 2015. Nature Conservation
Supplementary Info: https://www.natuurpunt.be/pagina/dieren-onder-de-wielen-20 *This article can be read in English using Google Chrome

Group 4: Last Names: Pridgen - Scarola
Article: Meentemeyer et al. 2015. Frontiers in Ecology & The Environment
Supplementary Info: http://nature.berkeley.edu/garbelottowp/wp-content/uploads/SOD-Blitz-2014-Fall-Results-Meeting-PPT-for-webv2.pdf
Group 5: Last Names: Schultz – Wittenberg
Article: Weckel et al. 2010. Journal of Wildlife Management
Supplementary Info: N/A

October 24: Guest Lecture: Megan Walker-Radtke, UF Office of Sustainability – Climate Change Adaptation & Mitigation

Readings: 1. CRED. The Psychology of Climate Change Communication
2. Skim Cameron-Devitt et al. 2010. Florida Biodiversity Under a Changing Climate

Theme III: Human Dimensions Applications in Management

October 26: Guest Lecture: Dr. Taylor Stein, School of Forest Resources & Conservation – Ecotoursim to Promote Conservation

Second Period – **Negotiation & Environmental Conflict**

Readings: 1. Honey, M. 2008. Ecotourism and Sustainable Development: In search of the golden toad. Island Press. Wash. D.C. pp 3-33
2. Jacobson Chapter 7: *Communicating with Groups*

October 31: Present interpretative materials for Reitz Union Pond

November 2: Environmental Negotiation – Harvard Case Studies on Fisheries Management

Readings: 1. Thoroughly read confidential stakeholder materials and do not discuss with others prior to class. Come prepared to negotiate based on your reading materials.

November 7: Guest Lecture: Dr. Brian Child, UF Department of Geography – Community-Based Conservation

November 9: Guest Lecture: Dr. Nia Morales, Florida Fish and Wildlife Conservation Commission – Human Dimensions Applications in Agencies

November 14: Guest lecture: Dr. Elizabeth Pienaar, UF Department of Wildlife Ecology & Conservation – Environmental Economics

Readings: 1. Decker et al. Chapter 6: Economic Considerations in Wildlife Management. Pg. 68-83
2. Pimental et al. 1997. Bioscience

November 16: Guest Lecture: Dan Pearson, Florida Department of Environmental Protection – Conflict in Management of Large Mammals
Readings: Skim Florida DEP website http://www.dep.state.fl.us/mainpage/default.htm

November 21: No meeting in class. In lieu of class, listen to Invisibilia Reality Part 1.
Available from: http://www.npr.org/2017/06/08/531904266/reality-part-one

November 23: No Class - Happy Thanksgiving!

November 28: Art in Conservation
Readings: 1. Nature's Voice. 1998. The Birth of Yellowstone
2. Jacobson et al. 2007. Conservation Biology

November 30: Exam II

December 5: Results of Nominal Group Technique

The curriculum for this course is largely influenced by that of Dr. Susan Jacobson, taught in Fall 2016. Dr. Anderson thanks Dr. Jacobson for course materials and guidance in developing this curriculum.