Syllabus
WFSC 628: Wetland Ecology
Fall 2017

Instructor: Dr. Jacquelyn K. Grace email: jkgrace@tamu.edu
Office: 276 WFES
Office Hours: By appointment

Lecture Periods: **T-Th, 11:10-12:25 AM, WFES 407.**

Course Description: Public opinions of wetlands in the United States have shifted drastically in the last hundred years, from "waste" that should be agriculturally converted, to prime habitat worthy of conservation. Today, wetlands remain central to controversies surrounding riparian rights, conservation, and pollutants. This course will bridge social and biological viewpoints to examine wetlands as ecological systems supporting unique plant and animal communities, the history of wetland policy in the United States and their importance for human use and management in the future, and wetlands as reservoirs of environmental pollutants and endocrine disruptors.
Prerequisites: Graduate classification or Instructor approval.

Learning Objectives: As a result of taking this course, students should appreciate and understand:

- The defining features of a wetland: soils, plants, and hydrology.
- The importance of wetlands for societal, ecological, and hydrological functions.
- The history of wetland policy in the United States and the nuances of balancing agricultural and ecological demands.
- Major pollutant concerns for wetland plants and wildlife.

Additionally, this course is intended to develop student skills in:

- Scientific literature research
- Experimental design
- Oral communication
- Written communication

Textbooks

Lewis, William M. 2001. *Wetlands Explained*. Oxford University Press. (**Required).**

Additional reading materials will be provided in class or posted on e-Campus. Occasionally, material may be provided by email or placed on reserve at the library. It is expected that all handouts will be read and studied along with other assigned readings.

Course policy & expectations

Attendance to class is strongly encouraged due to the volume of material covered each week and the importance of your feedback each day. The expectations are for each of you to be present and prepared for each class. This will involve completing all assignments on time, reading the assigned material before each class, and being prepared with questions, comments, and discussion. Successful completion of this course will require a substantial amount of library research, reading, writing, and

oral communication. Absences will be handled in accordance with TAMU policies (http://student-rules.tamu.edu/rule07).

Grading

Your grade in this class will be a result of your performance in the four areas listed below. The grading scale will be based on the standard format:
90% to 100% = A;
80% to 89% = B;
70% to 79% = C;
60% to 69% = D;
50% to 59%= F.

The total number of points for this class (500) will be assigned according to the following:
Quizzes 100 points (20%, 20 points per quiz)
In-class and take-home activities 50 points (10%, 10 points per activity)
Team Project presentations 125 points (25%)
Class discussions 100 points (20%)
Term Paper and oral presentation 125 points (25%)

Major Assignments

Paper discussions

Grading of discussions and class participation will be weighted according to:

a. Leading weekly paper discussion (25%)
b. Contributions (oral and written) to weekly paper discussions (75%)

On selected **THURSDAYS** we will have paper discussions from the scientific literature, relating to the topic we are currently covering. Individuals assigned to lead discussion will choose 1 paper related to the topic to be covered during the scheduled discussion and make a digital copy (PDF) available to me one week before the scheduled discussion. I will place a digital copy on the e-Campus website (http://ecampus.tamu.edu) one week before the discussion. Discussion leaders should be prepared to give a 10 -15 minute overview of each paper, with some potential questions or talking points for discussion. Discussion may involve criticism of the research questions, methods, and conclusions, writing style or any other aspect of the paper. Be sure to read and review the papers before class. Each student will be required to provide a summary (1/2 to one full page) of the article discussed and will be due the day of the discussion.

Team Project

Working in pairs/threesomes, you will "adopt a wetland" and conduct a series of projects at this wetland and present your findings to the class with PowerPoint presentations (10-15 minutes).

a. Locate a suitable local wetland and determine whether it is really a wetland
b. Plants of your wetland
c. Invertebrates of your wetland
d. Vertebrates of your wetland
f. Threats to your wetland
g. Design an experiment on your wetland

Term Paper & Oral Presentation

a. Presentation (25%)
b. Term Paper (75%)

1) 5% outline
2) 10% first draft (3-4 pages)
2) 60% final paper (8-10 pages)

Students will be required to conduct an independent research project or literature review on a topic related with wetland ecology and pollution. The topic should be selected during the first 2 weeks in the semester and will be due at the same time as your oral presentation. Oral presentations will be scheduled for the last 2 weeks in the semester. You will submit an outline of your term paper and a draft to me, on which I will provide feedback. The final paper should be approximately 8-10 pages in length, double spaced, including literature cited.

You have two options for this assignment:

A) Conduct an experiment on your wetland and write a formal scientific paper on your experiment and results (Abstract, Introduction, Methods, Results, Discussion, Acknowledgements, Literature Cited, Figures & Tables). This scientific paper should be as concise as possible while still providing an introduction to your topic, rationale, full methods, and explanation of your results within the context of current literature.

B) Write a formal review paper on a wetland topic of your choice. This review paper should follow formal scientific review format and provide original analysis of the existing literature. The literature cited in this review is expected to be comprehensive. Figures and tables that summarize existing literature or graphically illustrate your analysis are expected.

Student Resources

A variety of student resources focused on health and safety are available to you should you need them at https://wfsc.tamu.edu/additional-info/student-support-resources/

Americans with Disabilities Act (ADA) Policy Statement

The Americans with Disabilities Act (ADA) is a federal antidiscrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Room B118 of Cain Hall or call 845-1637.

Aggie Honor Code Statement

"An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit:www.tamu.edu/aggiehonor/

On all course work, assignments, and examinations at Texas A&M University, the following Honor Pledge shall be preprinted and signed by the student: *"On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work."*

Class Attendance

Students are expected to attend to class all the time; **late homework assignments will not be accepted**, and "make-up" exams and lab exercises will not be given, unless students present written proof of a University excused absence. For information concerning excused absences, and other university rules and procedures, please refer to TAMU Student Rules: http://student-rules.tamu.edu.

Tentative Topic Outline and Due Dates

Week	Date	Topic	Assignment Due
1	Aug. 29	Syllabus, course overview, Introduction to Wetlands & Wetland Policy	
	Aug. 31	Establish dates for presentations, article discussions. Continue Introduction to Wetlands & Wetland Policy	Wetlands – Ch. 1
2	Sept. 5	Wetland Policy Discuss Team Project	Wetlands – Ch. 2
	Sept. 7	1) Paper discussion – Introduction to wetlands, JKG leads Discuss term papers, conducting literature searches, and identifying good papers.	Paper summary
3	Sept. 12	What is a Wetland? (1) Definition presentations	Wetlands - Ch. 3
	Sept. 14	2) Paper discussion – Wetland Policy *Selection of term paper topic: provide ½ page summary by end of class* Continue "What is a Wetland?"	Paper summary
4	Sept. 19	Hydric Soils, and Saturation **Quiz** – Wetland definitions and policy	Wetlands – Ch. 4
	Sept. 21	3) Paper discussion – hydric soils *1st team presentation: Introducing & defining your wetland*	Paper summary
5	Sept. 26	Hydrophytic Vegetation	Wetlands – Ch. 5
	Sept. 28	4) Paper discussion – hydrophytic vegetation	Paper summary *Term paper outline*
6	Oct. 3	(2) Hydrophytic Vegetation Exercise *(bring computers)*	Wetlands – Ch. 6
	Oct. 5	5) Paper discussion – hydrophytic vegetation *2nd team presentation: Plants of your wetland*	Paper summary
7	Oct. 10	Wetland Wildlife **Quiz –** Hydric Soils and Hydrophytic Vegetation	Wetlands – Ch. 7
	Oct. 12	6) Paper discussion – wetland wildlife *3rd team presentation: Wetland experiment design*	Paper summary
8	*Oct. 17*	(3) At home video critique and e-lecture	Wetlands – Ch. 8
	Oct. 19	E-lecture and work on projects	
9	Oct. 24	Wetlands & Climate Change (*bring computers*) **Quiz –** Wetland Wildlife	
	Oct. 26	7) Paper discussion – Wetland Wildlife 8) Paper discussion – Wetlands & Climate Change	Paper summary x2 *Term paper first draft*

10	Oct. 31	*Guest Lecture - Dr. Martina, wetland management and vegetation*	
	Nov. 2	9) Paper discussion - pollution and bioaccumulation, and Wetlands & Climate Change *4th team presentation: Threats to your wetland*	Paper summary
11	Nov. 7	Pollution and bioaccumulation in wetlands	
	Nov. 9	10) Paper discussion – endocrine disruptors *5th team presentation: Invertebrates of your wetland*	Paper summary
12	Nov. 14	Endocrine Disruptors (4) Watershed Success Stories exercise (*bring computers*) **Quiz** - Climate change and Management	
	Nov. 16	11) Paper discussion – Open topic *6th team presentation: Vertebrates of your wetland*	Paper summary
13	*Nov. 21*	(5) Take home activity	
	Nov. 23	*Thanksgiving Holiday, no classes*	
14	Nov. 28	Last minute term paper question & answers **Quiz –** Endocrine disruptors and pollution	
	Nov. 30	*Term Paper Presentations*	Term papers due
15	Dec. 5	*Term Paper Presentation*	Term papers due