

MOREHEAD STATE UNIVERSITY  
COLLEGE OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF BIOLOGY AND CHEMISTRY  
Fall 2010 COURSE SYLLABUS

**COURSE:** Biology 636. Wetland Ecology and Management. (3-0-3)

**CATALOG DESCRIPTION:** Structure and functioning of shallow water bodies; biological, physical, chemical, and ecological aspects of the major wetland ecosystems of the United States; valuation and management of biotic and abiotic wetland resources.  
*Prerequisites: BIOL 510, or equivalent; or permission of instructor.*

**PROFESSOR:** Brian C. Reeder, Ph.D.  
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office hours posted  
web site: [http://irapp.moreheadstate.edu/Members/breeder/index\\_html](http://irapp.moreheadstate.edu/Members/breeder/index_html)

**REQUIRED TEXTS:** Mitsch, W.J., and J.G.Gosselink. 2007.Wetlands. J.Wiley

**COURSE GOALS:** The purpose of the course is to concentrate on the structures and functions of wetland ecosystems, including hydrology, biogeochemistry, soils, and plant and animal adaptations to shallow waters. Students will become familiar with current wetland law and management, as well as the current literature and research in wetland ecology.

**COMPETENCIES:** Students will be expected to:

- demonstrate a knowledge of terms and theories used by wetland ecologists
- be capable of accurately and clearly analyzing, and scientifically reporting, ecological data and information
- be proficient with the refereed literature in wetland ecology, including obtaining useful scholarly articles and integrating information in verbal and written presentations.
- have a demonstrated competency and understanding of wetland ecosystem processes, included food webs, energy flow and modeling, biogeochemistry, and the effects hydrology on ecosystem structures and functions
- have a demonstrated competency and understanding with concepts in wetland community ecology, including wetland succession theory, biodiversity, and productivity
- have a demonstrated competency and understanding of adaptations of plants and animals to varied environmental stresses, both at the organismal and cellular levels
- have a demonstrated understanding of current wetland laws, management techniques, and evaluation methods.

**COURSE ACTIVITIES:** Students will be asked to listen, think, and interact with the teacher in regard to course material presentations, take quizzes and exams that require critical thinking and writing skills, read assigned materials, and interact with classmates and the teacher to answer questions/solve problems/conduct library research. Students will formulate hypotheses, collect and analyze data and the literature, formulate conclusions, and present results.

**ATTENDANCE:** Because this class meets only once each week, missing a single time can be devastating. Students are expected to attend all scheduled meetings of class, for the entire time scheduled. Exams and quizzes that are missed can not be made-up, nor can required work be submitted late for any credit. According to MSU policy, "official university absences do not excuse a student from class responsibilities." Absences must be approved by the Dean of Students before you submit them to me (UAR 131.01). I generally only consider medical excuses valid if the condition required hospitalization. Funeral excuses are only valid for the day of the funeral, and with the following qualifications: 1) it is your death; or 2) the death is of your immediate family member. To maintain fairness, I do not want to be put into the position of judging the validity or seriousness of your excuses.

**OTHER RULES AND REGULATIONS:** Electronic devices can not be used during class (e.g. cell phones, beepers, tape recorders, etc.).

**Approximate Topic Schedule:**

Day	Topics	Chapter(s)
23-Aug	Overview, Definitions, Gulf Oil Spill	1,2
30-Aug	Wetland extent, status and trends	2,3
6-Sep	<b>Holiday</b>	
13-Sep	Hydrology	4
20-Sep	Hydrology	4
27-Sep	Biogeochemistry	5
4-Oct	Biogeochemistry	5
11-Oct	<b>EXAM 1 + Wetland Cladistics</b>	8
18-Oct	Plant and Animal Adaptations	6
25-Oct	Ontogeny of Wetlands	7
1-Nov	Impacts and Management	9
8-Nov	Climate Change	10
15-Nov	<b>EXAM 2 + Values and Economics</b>	11
22-Nov	Creation and Restoration	12
29-Nov	Wetland Treatment Cells	13
6-Dec	Wetland Law and Trends	14
13-Dec-08	<b>FINAL EXAM</b>	

**Grading Policy:** Grades will be roughly based on the weighted average of the following

Midterm Exams	30%
Daily Quizzes	25%
Comprehensive Final Exam	15%
Research Papers	20%
Presentations	10%

A = 90 - 100%; B = 80 - 89%; C = 70 - 79%; D = 60 - 69%; E = <60%

**Use of technology:** Students will be expected to use Internet and World Wide Web for literature searches of lab projects as well as use e-mail, word processing, and appropriate ecological modeling and data analysis software as assigned.

**Diversity Issues:** Inherent in this course is the discussion of the abundance and distribution of species (biodiversity); however, human diversity is not addressed.

**Campus Safety Statement:** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at [www.moreheadstate.edu/emergency](http://www.moreheadstate.edu/emergency).

**Academic honesty:** Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of the student assessment item or course, and/or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read The Eagle: Student Handbook or ask your instructor. The policy is located at <http://www.morehead-st.edu/units/studentlife/handbook/academicdishonesty.html>. For example: Copying information from the Internet is plagiarism if appropriate credit is not given.

**Policy for Accommodating Students with Disabilities:** Professional staff from MSU Academic Services Center (ASC) coordinates efforts to address accessibility needs and class accommodations with instructors of students who have learning or physical disabilities. Faculty will cooperate with the ASC staff to accommodate the needs of students taking departmental courses.

**The instructor may change or amend the schedules and rules to enhance your educational experience.**

**RELAVENT TEACHER STANDARDS**

North American Association for Environmental Education (NAAEE)/National Council for Accreditation for Teacher Education (NCATE) Standards:

<http://www.ncate.org/ProgramStandards/NAAEE/NAAEEStandards.pdf>

1. Nature of Environmental Education and Environmental Literacy
2. Environmental Literacy of Candidates
3. Learning Theories and Learner Knowledge
4. Curriculum: Standards and Integration
5. Instructional Planning and Practice
6. Assessment and Evaluation
7. Professional Growth in Environmental Education

**Kentucky Teacher Standards:**

<http://www.kyepsb.net/documents/EduPrep/Kentuckyteacherstandards.doc>

- Standard 1: Demonstrates Professional Leadership
- Standard 2: Demonstrates Knowledge of Content
- Standard 3: Designs/Plans Instruction
- Standard 4: Creates/Maintains Learning Climate
- Standard 5: Implements/Manages Instruction
- Standard 6: Assesses and Communicates Learning Results
- Standard 7: Reflects/Evaluates Teaching/Learning
- Standard 8: Collaborates with Colleagues/Parents/Others
- Standard 9: Engages in Professional Development
- Standard 10: Demonstrates Implementation of Technology