

ES&P 749 Wetland Ecology and Management: 3 Credits, TH 12:00-5:00, MAC 234

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Course website: [www.uwgb.edu/medlandv/wetlands](http://www.uwgb.edu/medlandv/wetlands)

Check [here](#) for updates on class, intros and maps of field trips, the syllabus, readings, links to plant keys, and other wetland resources etc.

Course Objectives: Wetlands are important ecological and economic features in the landscape. In order to investigate their importance we will combine field, short lecture, and discussion. The types of wetlands and their roles will be discussed, as will local, state and federal regulations pertaining to their use, management and protection. Ecological processes and characteristics of wetlands such as primary productivity, hydrology, decomposition and nutrient dynamics are studied. We will visit wetlands that feature the complexities and problems of the wetland ecosystems of northern Wisconsin. Wetland vegetation, geology and hydrology, as well as classification and delineation systems will be examined and applied in the field. We will learn to identify common plants and birds found in Northern Wisconsin wetlands. We will discuss historical human influence on wetlands and current views regarding wetlands, the definition of jurisdictional wetlands based primarily on Section 404 of the Clean Water Act, Wisconsin Wetland legislation and current efforts to create and restore wetland ecosystems. Management practices and potential as well as current approaches to values assessment will be addressed.

The lab and field experience is an essential component to this class, by which the concepts and terms presented in the discussions and labs will be better comprehended through hands-on experience and visualization of the organisms, features, and management practices we discuss. Hands-on experience is also the only way to acquire taxonomic skills necessary in the identification of wetland plants, hydrologic features and soils.

Course Requirements and mechanisms for evaluation:

Field trip participation	15%
Discussion participation	25%
Quizzes	10%
Plant Identification Practicals	20%
Group Wetland Delineation Projects	30%

Field and Laboratory expectations: As graduate students each of you brings a unique educational and work experience to this course. We expect you to draw on your knowledge and expertise to participate in discussions and observations and takes notes on what we observe. In lab take notes and draw pictures of the material to facilitate later study. Much of the lab consists of examining and keying out representatives of the groups we collect in the field. There will two lab practicals, in which your understanding of morphology and skill at identification will be tested using material we have examined in lab.

Paper Discussions: You will give a 10-15 minute summary on the readings you chose. Your discussion strategy should be to present a question or series of questions designed to generate class discussion. Your grade on this discussion will be largely based on your ability to generate a lively and meaningful examination of the topic.

Readings: Discussion leaders are responsible for choosing 1-2 papers from the current literature for discussion and making copies of each paper available for copying to class the week prior to the discussion.

Delineations: groups of 2 or 3 will evaluate and delineate a wetland and write a report on their findings. Each group is responsible for delineating the wetland and making a plant list. Based on observations and current literature each group will write a 7-10 page paper recommending restoration and/or conservation of the wetland and a continuing management plan. Each group will present their report and we will then discuss the results and issues related to the delineation.

## Field Equipment

Knee-boots, hip-boots or waders

Hat (Please be prepared for several hours in the full sun.)

Notebooks and writing utensils

Clothing appropriate to the weather (we do go out in the rain)

Water

Insect repellent

Sunscreen

Comfortable walking shoes

Backpack to keep your gear together during our field excursions

Field guides and/or technical keys. Your choice. We will be identifying common organisms in the field.

We will provide a list of books in class.

Hand lens (optional) for aid in identification of plants and small beasts.

## Tentative Schedule

Wk	Date	Agenda	Reading	Discussion Leaders
1	2 Sept.	Course goals and mechanics. Intro to plants and field trips	Keddy: 1	
2	9 Sept.	Field trip 1: Nicolet National Forest: Swamps, Bogs, Stream progression (n.b. we will leave at 8 am)	Skim Keddy: 3	
3	16 Sept.	Field trip 2: Peshtigo		
4	23 Sept.	Field trip 3: Pecor Point		
5	30 Sept.	Field trip 4: Lily Lake		
6	7 Oct.	Field trip 5: Atkinson's Marsh	Skim Keddy: 12	
7	14 Oct.	Biodiversity	Keddy: 3, 6	1) 2)
8	21 Oct.	Wetland plants: adaptations and ecosystem patterns	Keddy: 5, 11	
9	28 Oct.	Wetland animals: adaptations, ecosystem patterns, and secondary production	Keddy: Cha 7, 8	1) 2)
10	4 Nov.	Wetlands as biogeochemical units of the landscape guest speaker Kevin Fermanich	Keddy: Cha 9	1) 2)
11	11 Nov.	Climate, geomorphology, and hydrology guest speaker Patricia Terry	Keddy: Cha 4	1) 2)
12	18 Nov.	Issues in wetland conservation, regulation, and management: Wetland restoration and mitigation	Keddy: Cha 12	1) 2)
13	25 Nov.	No class!		
14	2 Dec.	Issues in wetland conservation, regulation, and management: Policy	Keddy: Cha 10	1) 2)
15	9 Dec.	Issues in wetland conservation, regulation, and management: Policy cont.	TBA	1) 2)
16	16 Dec.	Wetland delineation presentations and potluck		