Cover Sheet: Request 13496

WIS 4XXX, Wetland Management

Info

Process	Course|New|Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Peter Frederick pfred@ufl.edu
Created	1/9/2019 4:13:12 PM
Updated	9/18/2020 10:26:29 AM
Description of request	This is a request for a new graduate/undergraduate course in Wetland Management.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Wildlife Ecology and Conservation 514947000	Eric Hellgren	Consult demonstrates articulation on wetlands course with 2 other departments	4/30/2019
No document changes					
College	Recycled	CALS - College of Agricultural and Life Sciences	Joel H Brendemuhl	Recycled by the CALS CC. Comments have been provided to submitter.	9/20/2019
No document changes					
Department	Approved	CALS - Wildlife Ecology and Conservation 514947000	Eric Hellgren		2/3/2020
No document changes					
College	Approved	CALS - College of Agricultural and Life Sciences	Joel H Brendemuhl	Edits requested by the CALS CC have been addressed.	9/18/2020
UCC consult Peter Frederick2 (1).pdf Evidence of concurrence from Chair of Soil and Water Science.docx CALS CC Checklist Wetlands course.pdf 2020 syllabus Wetland Management WIS 4XXX.docx 2020 syllabus Wetland Management WIS 6XXX.docx					8/20/2020 6/26/2020 8/19/2020 9/16/2020 9/16/2020
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			9/18/2020
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					

Step	Status	Group	User	Comment	Updated
College Notified					
No document changes					

Course|New for request 13496

Info

Request: WIS 4XXX, Wetland Management
Description of request: This is a request for a new graduate/undergraduate course in Wetland Management.
Submitter: Peter Frederick pfred@ufl.edu
Created: 9/16/2020 4:28:58 PM
Form version: 10

Responses

Recommended Prefix WIS
Course Level 4
Number XXX
Category of Instruction Joint (Ugrad/Grad)
Lab Code C
Course Title Wetland Management
Transcript Title Wetland Management
Degree Type Baccalaureate

Delivery Method(s) On-Campus
Co-Listing Yes
Co-Listing Explanation This course is for a) undergraduate students interested in pursuing careers in wetland management and restoration, and b) graduate students interested in applying wetland management and restoration techniques in their research. Undergrads are graded on a combination of in class tests and exams, lab reports and practical quizzes. In addition to these, grads must work on a project with a management agency that involves production of a management or monitoring plan to the satisfaction of the agency.
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 5
Course Description This course will prepare students for basic monitoring, field research, and management of wetlands, using ecological principles and knowledge of community variation in relation to stressors. Identification, monitoring techniques, and management and restoration techniques will be taught through a combination of class lectures and hands-on field exercises and labs.

Prerequisites none
Co-requisites none
Rationale and Placement in Curriculum This course fills an important gap for students interested in wetland ecology and management. Wetlands (SOS 4244) gives undergraduates a basic background in wetland ecology, but does not offer a lot of specifics in wetland management. The proposed course is designed in part as a next step, offering specific management techniques and restoration examples for undergraduates. This course fits an important gap for undergrads interested in professional experience with wetland management.
Course Objectives By the end of this course, students will be able to:

- Identify important plants, animals and biotic communities in southeastern wetlands
- Assess wetland soil types and what they tell about wetland history
- Contrast components of hydrological budgets and how to measure them
- Employ standard wetland delineation techniques

Evaluate appropriate sampling techniques for tracking spatial and temporal biotic parameters in

wetlands

Design different wetland management and restoration techniques for specific goals.

Course Textbook(s) and/or Other Assigned Reading Anderson, J.T. and C.T. Davis (eds). 2014. Wetland Techniques, Volumes 2 – 3. Springer Science Press, Dortrecht. Note this book is available free to UF students. Emphasis on Vol 2, Chapter 7 Wetland Wildlife Monitoring and Assessment, and Vol 3 Chapter 4, Management of Wetlands for Wildlife.
Tobe, J. et al. 1998. Florida Wetland Plants: an identification manual. Florida Department of Environmental Protection.
Johnson, S. A. and M.E. McGarrity. Identification Guide to the Frogs of Florida. University of Florida. SP 468, available from from the University of Florida/The Institute of Food and Agricultural Sciences (UF/IFAS) Publications
Florida Wetlands Delineation Manual:
http://www.dep.state.fl.us/water/wetlands/delineation/manual.htm
Wetland habitat classification: Florida Natural Areas Inventory:
http://fnai.org/naturalcommguide.cfm

Weekly Schedule of Topics Wetland Management
WIS 4XXX section 1630
Lecture and Lab schedule Fall 2020

Unit I. Wetland ecology, communities, and indicators for management.

Week 1. Wetland Ecology basics and Wetland Plants
8/25/2020 Course introduction, wetland ecology overview
8/27/2020 Wetland Plants identification- (meet at NATL, see map at Canvas under Files>Reference Material)

Week 2. Hydric Soils
9/1/2020 Wetland ecology, Hydric Soils - Dr. Mark Clark
9/4/2020 Hydric soils identification lab – (Meet at NATL)

Week 3. Wetland Communities I
9/8/2020 FNAI community types I, typical and impaired
9/10/2020 Soils and plants quiz, FNAI Community types, Herp and fish id

Week 4. Wetland Communities II
9/15/2020

Wetland communities quiz, Herps as indicators
9/17/2020

Wetland Community types field trip – (meet NZ breezeway)

Unit II. Monitoring Wetlands

Week 5. Herp and fish monitoring
9/22/2020

Herp and fish monitoring techniques
9/24//2020 Wetland fish and herp field monitoring exercise – (meet in NZ breezeway)

Week 6. Wetland Classification and Delineation
9/29/2020 Fish and Herp ID quiz, Wetland Classification and delineation
10/1/2020 Wetland delineation field exercise – (meet in NZ breezeway)

Week 7. Agriculture and wetlands
10/6/2020 Test I
10/8/2020 Agriculture and wetland management, Bird ID lab

Week 8. Quantifying wetland vegetation

10/13/2020 Wetland Delineation quiz. Monitoring vegetation
10/15/2020 Field exercise- quantifying wetland vegetation – (meet at NATL)

Week 9. Aquatic birds and wetlands
10/20/2020 Avian monitoring techniques. Wetland Vegetation exercise due
10/22/2020 Field trip to Sweetwater Wetlands Park (Meet in NZ breezeway)

Week 10. Measuring hydrology
10/27/2020 Monitoring wetland hydrology – Dr. David Kaplan

10/29/2020 Cedar Key and coastal areas (meet in NZ breezeway)

Unit III. Managing and restoring wetlands

Week 11. Wetland fire ecology, field logistics
11/3/2020 Wetland fire ecology
11/5/2020 Field safety & logistics

Week 12. Hydrological management
11/10/2020 Managing Hydrology. Reports from logistics exercise due
11/12/2020 Field Logistics quiz, Waterfowl and wetland management
Week 13. Mosquito management, wetland restoration
11/17/2020 Vector control
11/19/2020 Shellfish and Seagrass restoration, Aquatic bird ID quiz

Week 14. Wetland restoration
11/24/2020 Wetland hydrology quiz. Chesapeake restoration
11/26/2020 Thanksgiving Break, no class

Week 15. Graduate project presentations
12/1/2020 Kissimmee and Everglades restoration, review
12/3/2020 Graduate Presentations, graduate projects due

Week 16. 12/8/2020 Test II

Links and Policies Grades and Grade Points
For information on current UF policies for assigning grade points, see https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.

Attendance and Make-Up Work
Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/.

Online Course Evaluation Process
Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.

Academic Honesty
As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge

to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."
It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code.
Software Use:
All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities
The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation
0001 Reid Hall, 352-392-8565, https://disability.ufl.edu/

Campus Helping Resources
Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.
• University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching

• U Matter We Care, www.umatter.ufl.edu/

• Career Connections Center, First Floor JWRU, 392-1601, https://career.ufl.edu/.

Student Complaints:
• Residential Course: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/.
• Online Course: http://www.distance.ufl.edu/student-complaint-process

Cultural Accommodation: Because our students represent a myriad of cultures and many faiths, the University of Florida is not able to assure that scheduled academic activities do not conflict with the holy days of all religious groups. We therefore rely on individual students to make their need for an excused absence known in advance of the scheduled activities. As you look through the course syllabus, if you have a religious or cultural observance conflict, contact me at the beginning of the semester or as soon as you can, and we will make appropriate arrangements. Here is UF's policy on cultural accommodation: https://administrativememo.ufl.edu/2018/10/uf-religious-observances-policy-

Safe Space & Mutual Respect: My classroom and my office are safe spaces. What that means for you, as a student, is that while in class or in my office you have the right to express yourself freely and openly (and appropriately), and have me, your TA and your classmates respect your expression. In these safe spaces, mutual respect is expected; this means that both parties have respect for one

another (note: this does not mean we always agree). In order to foster this environment conducive of learning and growth experiences, please join me in treating your classmates with respect.

Grading Scheme Contributions to final grade for WIS 4xxx:

Participation and attendance: 10%

Lab quizzes

15%

Field trips and exercises

10%

Mid Term

30%

Final exam

35%

Total

100%

Grading: A (94.0% or greater), A- (90.0%-93.9%), B+ (87.0%-89.9%), B (84.0%-86.9%), B- (80.0%-83.9%), C+ (77.0%-79.9%), C (74.0%-76.9%), C- (70.0%-73.9%), D+ (67.0%-69.9%), D (64.0%-66.9%), D- (60.0%-63.9%), E (<60.0).

Instructor(s) Dr. Peter Frederick, Research Professor, Department of Wildlife Ecology and Conservation.

Syllabus

Wetland Management

WIS 4934 Fall 2020

Online synchronous course

3 credits

Instructor: Dr. Peter Frederick, Department of Wildlife Ecology and Conservation

pfred@ufl.edu , Ofc 352-846-0565

Office: Building 87, next to Florida Cooperative Wildlife Research Unit

(knock on entrance door, someone will open it).

Office hours: Dr. Frederick T Period 8, TH Period 9 – please arrange with me ahead of time for an appointment on Zoom

Class Time and location: Tuesday Period 7 1:55 – 2:45pm, Zoom meetings

Thursdays periods 6-8 12:50 – 3:50 pm Zoom, self guided trips, or experiences at UF Natural Area Teaching Lab.

Course Description

This course will prepare students for basic monitoring, field research, and management of wetlands, using ecological principles and knowledge of community variation in relation to stressors. Identification, monitoring techniques, and management and restoration techniques will be taught through a combination of class lectures and hands-on field exercises and labs.

Course Learning Objectives:

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

Identify important plants, animals and biotic communities in southeastern wetlands

Assess wetland soil types and what they tell about wetland history

Contrast components of hydrological budgets and how to measure them

Employ standard wetland delineation techniques

Evaluate appropriate sampling techniques for tracking spatial and temporal biotic parameters in wetlands

Design different wetland management and restoration techniques for specific goals.

Course Schedule : See schedule at end of this document for lectures and dates.

Critical dates : see schedule at the end of this document for dates of quizzes, tests, and Canvas site for due dates of assignments

of assignments.

Prerequisites or concurrency: none

Course requirements: Class attendance, field trip attendance, lab practical quizzes, lab practical exercises, and two written exams. Participation (below) is graded on evidence of active engagement in the class and lab, such as questions asked, evidence of evolving thinking, and interactions with students and faculty in the class and on assignments.

Contributions to final grade for undergraduate section, WIS 4934:

Participation and attendance:

10%

Lab quizzes

30%

Field trips and exercises

15%

Mid Term

20%

Final exam

25%

Total

100%

** Participation is based on both attendance and on evidence of engagement in classes and labs – asking questions in or out of class times, and evidence of preparation. See UF attendance policy at https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/*

Grading: A (94% or greater), A- (90%-93%), B+ (87%-89%), B (84%-86%), B- (80%-83%), C+ (77%-79%), C (74%-76%), C- (70%-73%), D+ (67%-69%), D (64%-66%), D- (60%-63%), E (<60). See https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx for UF grading policy.

Course Materials and Readings.

This course is heavily based on identification and hands on field experience, which will be supplemented with readings, and a combination of field guides and online material. This course relies considerably on material presented in class and encountered in the field – **this is definitely not a class where you can miss classes and catchup by reading the materials on the Canvas site.**

Required Materials:

General : Anderson, J.T. and C.T. Davis (eds). 2014. Wetland Techniques, Volumes 2 – 3. Springer Science Press, Dortrecht. ***Note this book is available free to UF students*** , see the Canvas site (under Files>Reference Materials) for downloads. The two chapters (below) must be finished BEFORE the lectures that they pertain to. The goal is to supplement information from lectures and build general knowledge about commonly accepted techniques for monitoring and assessing wetland biota and condition.

Material in these chapters will be on Mid-term and Final exams, and we will discuss much of the reading and situations in which different methodologies are used, and the ability to name and identify what is generally involved in each technique. For example, I might ask an exam question about the situation in which a funnel net might be used to capture turtles, or the most likely method to sample amphibians emerging from a pond postbreeding. These readings will also build your knowledge for more synthetic questions that involve designing a monitoring study for a particular purpose, that involves multiple forms of biota and wetland response. These are also likely to be on the tests.

Reading schedule:

Date due	**Assignment**
August 22, field trip	Lightning Safety (be prepared to answer questions)
September 17, class	Chapter 7 in Wetland Wildlife Monitoring and Assessment (vol 2)
September 17, class	Chapter 7 in Wetland Wildlife Monitoring and Assessment (vol 2)
September 26, field trip	Methods section in the Florida Wetland Delineation Manual
October 10, lab	Updated Wetland Plant Sampling Protocol
October 31, class	Chapter 2 in Management of Wetlands for Wildlife (vol 3)
October 29, class	Chapter 2 in Management of Wetlands for Wildlife (vol 3)
October 17, field trip	Payne's Prairie Sheetflow project pdf
November 14, class	Kellogg paper (Kellog et al 2013) Mann and Powell paper (2007) Plus one other paper of your choice
November 20, class	Chapter 2 in Management of Wetlands for Wildlife (vol 3)
November 19, class	Sklar paper (Sklar et al 2005) Smith paper (Smith et al 2011)

Other required material for this course:

Bird identification: Sibley Field Guide to Birds –book or the eguide app (recommended). https://play.google.com/store/apps/details?id=com.coolideas.eproducts.sibleybirds&feature=search_result . Other field guides such as Audubon guides or National Geographic guides are also acceptable, but you will need to find a source for calls (which are in the app).

Wetland Soil identification: Field Indicators of Hydric Soils in the United States. A Guide for Identifying and

Delineating Hydric Soils, Version 7.0, 2010. Available on the Canvas site under Files>Unit 1>Labs>Hydric Soils Lab materials.

Wetland Plant identification: Tobe, J. et al. 1998. *Florida Wetland Plants: an identification manual* . Florida Department of Environmental Protection and UF/IFAS Publications.The manual is no longer available in print, but the pdf is available on the Canvas site under Files>Unit 1>Labs>Wetland Plant Identification Lab. **Download to your phone or tablet ahead of the first lab** !

Frog calls: Use the Florida Frog Calls lookup https://www.pwrc.usgs.gov/Frogquiz/index.cfm?fuseaction=main.lookup&CFID=6366850&CFTOKEN=288034ba0 0B5283B7-D5D5-4EA0-BD3B20F30FA9B4A6

Wetlands Delineation: Florida Wetlands Delineation Manual: on the Canvas site Files>Unit II.Labs>Weltnad delineation lab materials.

Wetland habitat classification : Florida Natural Areas Inventory: below, or on the Canvas site Files>Unit I>Lectures>FNAI Wetland Communities.

http://fnai.org/naturalcommguide.cfm http://fnai.org/natcom_accounts.cfm

Other nonrequired resources:

Wetland Plants:

Godfrey, R.K. and J.W.Wooten 1981. Aquatic and Wetland Plants of Southeastern United States: Vol. 1. Monocots, Vol 2. Dicotyledons. University of Georgia Press. This is the authoritative book for wetland flora complete with keys and detailed descriptions.

Tiner, R. 1993. Field guide to coastal wetland plants of the southeastern United States. U niversity of Massachusetts Press.

Aquatic and Wetland Plants in Florida – Plant management http://plants.ifas.ufl.edu/manage/why-manage-plants/aquatic-and-wetland-plants-in-florida/

Links to information and research on frogs and toads: http://ufwildlife.ifas.ufl.edu/frogs/links.shtml

Waterfowl Management: Baldassare G.A. and E. G. Bolen. 2006. Waterfowl ecology and management. Krieger Publishing. Second edition.

Important - Coronavirus safety procedures: Because of coronavirus risks, this course will be taught as a synchronous online course during fall 2020, with all lectures, tests, quizzes and office hours accomplished online through Canvas and Zoom. However, this course has always had a strong field component, and we have several face to face labs outside. Most exercises will be at the Natural Areas Teaching Lab on the UF campus, others will be at locations that can be accessed by bus or bicycle. Students are required to travel to labs on their own, and to wear face coverings, use hand sanitizer frequently and maintain six-foot distances at all times. The Coronavirus Safety Plan for this course can be found on the course Canvas under Files.

In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- Sanitizing supplies are available at labs if you wish to wipe down your immediate area or belongings prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the lab area. Practice physical distancing to the

- Follow your instructor's guidance on how to enter and exit the lab area. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus) , please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms .
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies .

Grades and Grade Points
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• *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,* **www.counseling.ufl.edu**
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching

• U Matter We Care, **www.umatter.ufl.edu/**

• *Career Connections Center,* First Floor JWRU, 392-1601, https://career.ufl.edu/ .

Student Complaints:
• Residential Course: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/.
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Safe Space & Mutual Respect : My classroom and my office are safe spaces. What that means for you, as a student, is that while in class or in my office you have the right to express yourself freely and openly (and appropriately), and have me, your TA and your classmates respect your expression. In these safe spaces, mutual respect is expected; this means that both parties have respect for one another (note: this does not mean we always agree). In order to foster this environment conducive of learning and growth experiences, please join me in treating your classmates with respect.

Wetland Management

WIS 4934/6934

Lecture and Lab schedule Fall 2020

See Canvas site for dates for assignments, tests and quizzes

Unit I. Wetland ecology, communities, and indicators for management.

Week 1. Wetland Ecology basics and Wetland Plants
9/1/2020

Course introduction, wetland ecology overview
9/3/2020 Wetland Plants identification- (**meet at NATL, see map at Canvas under Files>Reference Material)**

Week 2. Hydric Soils

9/8/2020

Wetland ecology, Hydric Soils - Dr. Mark Clark

9/10/2020

Hydric soils identification lab – **(Meet at NATL)**

Week 3. Wetland Communities I

9/15/2020 FNAI community types I, typical and impaired
9/17/2020 FNAI Community types, Herp and fish id

Week 4. Wetland Communities II

9/22/2020

Herps as indicators
9/24/2020 Wetland Community types field trip (self guided trips)

Unit II. Monitoring Wetlands

Week 5. Herp and fish monitoring

9/29/2020

Herp and fish monitoring techniques

10/1/2020 Wetland fish and herp field monitoring exercise – (**meet at NATL**)

Week 6. Wetland Classification and Delineation

10/6/2020 Wetland Classification and delineation
10/8/2020 Wetland delineation field exercise – (meet at NATL)

Week 7. Agriculture and wetlands

10/13/2020 Agriculture and wetland management

10/15/2020 **Test I** and Avian Identification lab

Week 8. Quantifying wetland vegetation

10/20/2020 Monitoring vegetation
10/22/2020 Field exercise- quantifying wetland vegetation – (**meet at NATL**)

Week 9. Aquatic birds and wetlands

10/27/2020 Avian monitoring techniques.
10/29/2020

Field trip to Sweetwater Wetlands Park (**Meet at SWP**)

Week 10. Measuring hydrology

11/3/2020

Monitoring wetland hydrology – Dr. David Kaplan

11/5/020

Wetland hydrology lab exercise

Unit III. Managing and restoring wetlands

Week 11. Wetland fire ecology, field logistics

11/10/2020 Wetland fire ecology

11/12/2020 Field safety & logistics

Week 12. Hydrological management

11/17/2020 Managing Hydrology.
11/19/2020 Waterfowl and wetland management

Week 13. Mosquito management, wetland restoration

11/24/2020 Vector control

11/26/2020 Thanksgiving Break, no class

Week 14. Wetland restoration

12/1/2020 Chesapeake restoration
12/3/2020 Kissimmee and Everglades Restoration

Week 15. Coastal restoration
12/8/2020 **Test II**

Syllabus

Wetland Management

WIS 6934 Fall 2020

Online synchronous course

3 credits

Instructor: Dr. Peter Frederick, Department of Wildlife Ecology and Conservation

pfred@ufl.edu , Ofc 352-846-0565

Office: Building 87, next to Florida Cooperative Wildlife Research Unit

(knock on entrance door, someone will open it).

Office hours: Dr. Frederick T Period 8, TH Period 9 – please arrange with me ahead of time for an appointment on Zoom

Class Time and location: Tuesday Period 7 1:55 – 2:45pm, Zoom meetings

Thursdays periods 6-8 12:50 – 3:50 pm Zoom, self guided trips, or experiences at UF Natural Area Teaching Lab.

Course Description

This course will prepare students for basic monitoring, field research, and management of wetlands, using ecological principles and knowledge of community variation in relation to stressors. Identification, monitoring techniques, and management and restoration techniques will be taught through a combination of class lectures and hands-on field exercises and labs.

Course Learning Objectives:

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

Identify important plants, animals and biotic communities in southeastern wetlands

Assess wetland soil types and what they tell about wetland history

Contrast components of hydrological budgets and how to measure them

Employ standard wetland delineation techniques

Evaluate appropriate sampling techniques for tracking spatial and temporal biotic parameters in wetlands

Design different wetland management and restoration techniques for specific goals.

Course Schedule : See schedule at end of this document for lectures and dates.

Critical dates : see schedule at the end of this document for dates of quizzes, tests, and Canvas site for due dates of assignments

of assignments.

Prerequisites or concurrency: none

Course requirements: Class attendance, field trip attendance, lab practical quizzes, lab practical exercises, and two written exams. Participation (below) is graded on evidence of active engagement in the class and lab, such as questions asked, evidence of evolving thinking, and interactions with students and faculty in the class and on assignments.

Course Requirements for Graduate Students that are different from undergraduate students . In addition to the requirements above, graduate students enrolled in this class will also research and write a management and monitoring plan or detailed section thereof, for a wetland in consultation with the manager. Graduate students will also be required to present their management or monitoring plan to the class as an assignment. See detailed description of this assignment on the Canvas site.

Contributions to final grade for graduate section, WIS 6934:

Attendance and participation*

10%

Lab quizzes

25%

Field trips and exercises

15%

Mid Term

15%

Final exam

20%

Written Management plan

15%

Presentation of management plan

5%

Total

100%

* *Participation is based on both attendance and on evidence of engagement in classes and labs – asking questions in or out of class times, and evidence of preparation. See UF attendance policy at https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/*

Grading: A (94% or greater), A- (90%-93%), B+ (87%-89%), B (84%-86%), B- (80%-83%), C+ (77%-79%), C (74%-76%), C- (70%-73%), D+ (67%-69%), D (64%-66%), D- (60%-63%), E (<60). See https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx for UF grading policy.

Course Materials and Readings.

This course is heavily based on identification and hands on field experience, which will be supplemented with readings, and a combination of field guides and online material. This course relies considerably on material presented in class and encountered in the field – **this is definitely not a class where you can miss classes and catchup by reading the materials on the Canvas site.**

Required Materials:

General : Anderson, J.T. and C.T. Davis (eds). 2014. Wetland Techniques, Volumes 2 – 3. Springer Science Press, Dortrecht. ***Note this book is available free to UF students*** , see the Canvas site (under Files>Reference Materials) for downloads. The two chapters (below) must be finished BEFORE the lectures that they pertain to. The goal is to supplement information from lectures and build general knowledge about commonly accepted techniques for monitoring and assessing wetland biota and condition.

Material in these chapters will be on Mid-term and Final exams, and we will discuss much of the reading and situations in which different methodologies are used, and the ability to name and identify what is generally involved in each technique. For example, I might ask an exam question about the situation in which a funnel net might be used to capture turtles, or the most likely method to sample amphibians emerging from a pond postbreeding. These readings will also build your knowledge for more synthetic questions that involve designing a monitoring study for a particular purpose, that involves multiple forms of biota and wetland response. These are also likely to be on the tests.

Reading schedule:

Date due	Assignment
August 22, field trip	Lightning Safety (be prepared to answer questions)
September 17, class	Chapter 7 in Wetland Wildlife Monitoring and Assessment (vol 2)
September 17, class	Chapter 7 in Wetland Wildlife Monitoring and Assessment (vol 2)
September 26, field trip	Methods section in the Florida Wetland Delineation Manual
October 10, lab	Updated Wetland Plant Sampling Protocol

October 31, class	Chapter 2 in Management of Wetlands for Wildlife (vol 3)
October 29, class	Chapter 2 in Management of Wetlands for Wildlife (vol 3)
October 17, field trip	Payne's Prairie Sheetflow project pdf
November 14, class	Kellogg paper (Kellog et al 2013) Mann and Powell paper (2007) Plus one other paper of your choice
November 20, class	Chapter 2 in Management of Wetlands for Wildlife (vol 3)
November 19, class	Sklar paper (Sklar et al 2005) Smith paper (Smith et al 2011)

Other required material for this course:

Bird identification: Sibley Field Guide to Birds –book or the eguide app (recommended). https://play.google.com/store/apps/details?id=com.coolideas.eproducts.sibleybirds&feature=search_result . Other field guides such as Audubon guides or National Geographic guides are also acceptable, but you will need to find a source for calls (which are in the app).

Wetland Soil identification: Field Indicators of Hydric Soils in the United States. A Guide for Identifying and

Delineating Hydric Soils, Version 7.0, 2010. Available on the Canvas site under Files>Unit 1>Labs>Hydric Soils Lab materials.

Wetland Plant identification: Tobe, J. et al. 1998. *Florida Wetland Plants: an identification manual* . Florida Department of Environmental Protection and UF/IFAS Publications.The manual is no longer available in print, but the pdf is available on the Canvas site under Files>Unit 1>Labs>Wetland Plant Identification Lab. **Download to your phone or tablet ahead of the first lab** !

Frog calls: Use the Florida Frog Calls lookup
https://www.pwrc.usgs.gov/Frogquiz/index.cfm?fuseaction=main.lookup&CFID=6366850&CFTOKEN=288034ba0
0B5283B7-D5D5-4EA0-BD3B20F30FA9B4A6

Wetlands Delineation: Florida Wetlands Delineation Manual: on the Canvas site Files>Unit II.Labs>Weltnad delineation lab materials.

Wetland habitat classification : Florida Natural Areas Inventory: below, or on the Canvas site Files>Unit I>Lectures>FNAI Wetland Communities.

http://fnai.org/naturalcommguide.cfm http://fnai.org/natcom_accounts.cfm

Other nonrequired resources:

Wetland Plants:

Godfrey, R.K. and J.W.Wooten 1981. Aquatic and Wetland Plants of Southeastern United States: Vol. 1. Monocots, Vol 2. Dicotyledons. University of Georgia Press. This is the authoritative book for wetland flora complete with keys and detailed descriptions.

Tiner, R. 1993. Field guide to coastal wetland plants of the southeastern United States. U niversity of Massachusetts Press.

Aquatic and Wetland Plants in Florida – Plant management http://plants.ifas.ufl.edu/manage/why-manage-plants/aquatic-and-wetland-plants-in-florida/

Links to information and research on frogs and toads: http://ufwildlife.ifas.ufl.edu/frogs/links.shtml

Waterfowl Management: Baldassare G.A. and E. G. Bolen. 2006. Waterfowl ecology and management. Krieger Publishing. Second edition

Publishing. Second edition.

Important - Coronavirus safety procedures: Because of coronavirus risks, this course will be taught as a synchronous online course during fall 2020, with all lectures, tests, quizzes and office hours accomplished online through Canvas and Zoom. However, this course has always had a strong field component, and we have several face to face labs outside. Most exercises will be at the Natural Areas Teaching Lab on the UF campus, others will be at locations that can be accessed by bus or bicycle. Students are required to travel to labs on their own, and to wear face coverings, use hand sanitizer frequently and maintain six-foot distances at all times. The Coronavirus Safety Plan for this course can be found on the course Canvas under Files.

In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- Sanitizing supplies are available at labs if you wish to wipe down your immediate area or belongings prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the lab area. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus) , please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms .
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies .

Grades and Grade Points
For information on current UF policies for assigning grade points, see https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/ .

Attendance and Make-Up Work
Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/ .

Online Course Evaluation Process
Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/ . Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/ . Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/ .

Academic Honesty
As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: " *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment* ."
It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:
http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code .

Software Use:
All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation
0001 Reid Hall, 352-392-8565, https://disability.ufl.edu/

Campus Helping Resources
Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.
• *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,* **www.counseling.ufl.edu**
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching

• U Matter We Care, **www.umatter.ufl.edu/**

• *Career Connections Center,* First Floor JWRU, 392-1601, https://career.ufl.edu/ .

Student Complaints:
• Residential Course: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/.
• Online Course: http://www.distance.ufl.edu/student-complaint-process

Cultural Accommodation: Because our students represent a myriad of cultures and many faiths, the University of Florida is not able to assure that scheduled academic activities do not conflict with the holy days of all religious groups. We therefore rely on individual students to make their need for an excused absence known in advance of the scheduled activities. As you look through the course syllabus, if you have a religious or cultural observance conflict, contact me at the beginning of the semester or as soon as you can, and we will make appropriate arrangements. Here is UF's policy on cultural accommodation: https://administrativememo.ufl.edu/2018/10/uf-religious-observances-policy-

Safe Space & Mutual Respect : My classroom and my office are safe spaces. What that means for you, as a student, is that while in class or in my office you have the right to express yourself freely and openly (and appropriately), and have me, your TA and your classmates respect your expression. In these safe spaces, mutual respect is expected; this means that both parties have respect for one another (note: this does not mean we always agree). In order to foster this environment conducive of learning and growth experiences, please join me in treating your classmates with respect.

Wetland Management

WIS 4934/6934

Lecture and Lab schedule Fall 2020

See Canvas site for dates for assignments, tests and quizzes

Unit I. Wetland ecology, communities, and indicators for management.

Week 1. Wetland Ecology basics and Wetland Plants
9/1/2020

Course introduction, wetland ecology overview
9/3/2020 Wetland Plants identification- (**meet at NATL, see map at Canvas under Files>Reference Material)**

Week 2. Hydric Soils

9/8/2020

Wetland ecology, Hydric Soils - Dr. Mark Clark

9/10/2020

Hydric soils identification lab – **(Meet at NATL)**

Week 3. Wetland Communities I

9/15/2020 FNAI community types I, typical and impaired
9/17/2020 FNAI Community types, Herp and fish id

Week 4. Wetland Communities II

9/22/2020

Herps as indicators
9/24/2020 Wetland Community types field trip (self guided trips)

Unit II. Monitoring Wetlands

Week 5. Herp and fish monitoring

9/29/2020

Herp and fish monitoring techniques

10/1/2020 Wetland fish and herp field monitoring exercise – (**meet at NATL**)

Week 6. Wetland Classification and Delineation

10/6/2020 Wetland Classification and delineation

10/8/2020 Wetland delineation field exercise – (meet at NATL)

Week 7. Agriculture and wetlands

10/13/2020 Agriculture and wetland management

10/15/2020 **Test I** and Avian Identification lab

Week 8. Quantifying wetland vegetation

10/20/2020 Monitoring vegetation

10/22/2020 Field exercise- quantifying wetland vegetation – (**meet at NATL**)

Week 9. Aquatic birds and wetlands

10/27/2020 Avian monitoring techniques.
10/29/2020

Field trip to Sweetwater Wetlands Park (**Meet at SWP**)

Week 10. Measuring hydrology

11/3/2020

Monitoring wetland hydrology – Dr. David Kaplan

11/5/020

Wetland hydrology lab exercise

Unit III. Managing and restoring wetlands

Week 11. Wetland fire ecology, field logistics

11/10/2020 Wetland fire ecology

11/12/2020 Field safety & logistics

Week 12. Hydrological management

11/17/2020 Managing Hydrology.
11/19/2020 Waterfowl and wetland management

Week 13. Mosquito management, wetland restoration

11/24/2020 Vector control

11/26/2020 Thanksgiving Break, no class

Week 14. Wetland restoration

12/1/2020 Chesapeake restoration
12/3/2020 Kissimmee and Everglades Restoration

Week 15. Coastal restoration

12/8/2020 **Test II**

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

__x__ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

__x__ Review the CALS Syllabus Policy. This document can be viewed at the committee site (https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

__x__ Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

__x__ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

__x__ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

__x__ The course schedule should be concise and include the appropriate number of weeks in the semester.

__x__ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

__X__ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

__X__ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

__x__ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

__X__ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

__X__ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers.

The Curriculum Committee asked me to obtain concurrence from the Chair of Department of Soil and Water Science for the creation of the Wetlands Management Course. Below is the email from Dr. Matt Whiles indicating concurrence.

Original file: Evidence of concurrence from Chair of Soil and Water Science.docx

UF UNIVERSITY of FLORIDA

UCC: External Consultations

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department	Name and Title
Phone Number	E-mail
Comments	

Department	Name and Title
Phone Number	E-mail
Comments	

Department	Name and Title
Phone Number	E-mail
Comments	