Aquatic Weed Control
PLS 4613 (3 credits)
Agronomy Department - University of Florida
Fall 2025

Instructor: Greg MacDonald, Professor of Agronomy and Weed Science
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Course Website:
Course material and communication will be provided through the Canvas site at http://lss.at.ufl.edu

Course Communications:
All assignments are administered through the course site in Canvas. Unless otherwise requested on an individual basis, all other interactions between students and instructor will be via email (pineacre@ufl.edu) or via Canvas.

Office Hours:
email anytime and I will be in touch within 24 hours, I may not be physically present to meet, but able to zoom.

Class Schedule:
This is an online course, but NOT a go-at-your-own-pace course. Students are expected to watch the lectures and complete the accompanying assignments during their assigned week (see schedule below). Weekly assignments (quizzes, discussion posts, etc.) will be due as denoted by the instructor.

Course Description:
This course will provide students with a better understanding of aquatic plant management. Students will learn about aquatic ecosystems, focusing on the role and impacts of nuisance aquatic plants, and how to manage aquatic weeds using chemical, mechanical, cultural, biological, and preventative methods. This online course uses a mix of lectures, video demonstrations, and interviews.

Course Prerequisites:
Required - Botany (BOT 2010C). Plant Physiology (BOT 3503, HOS 4304, or AGR 4512) and basic limnology (GLY 4930) helpful, but not required.

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

1) Describe aquatic ecosystems, water quality, and plant growth
2) Compare the basic biology and physiology of aquatic plant species
3) Identify several common aquatic plant species (both native and exotic)
4) Describe the activity and utility of different management techniques for aquatic plants
5) Develop an appropriate management plan for aquatic weeds

Class Participation:
Students are expected to participate in discussion boards with other students and the instructor. For every discussion assignment, students will be expected to respond to two other classmates.

Textbooks:

This textbook book is free as a pdf: http://www.aquatics.org/bmp.html
Gettys, L.A., Haller, W.T., and Petty, D.G. 2014. *Biology and Control of Aquatic Plants. A Best Management Practices Handbook* (4th ed.). Marietta, Georgia: Aquatic Ecosystem Restoration Foundation.

Assessments: (1000 points total)

- **Discussion Posts:** A discussion board will be used to explore topics in more depth. There are 4 discussion posts throughout the semester. Students are expected to respond 2 times for full credit. (200 points)

- **Lecture Quizzes:** There will be 6 quizzes (600 points) on lecture material throughout the semester. Quizzes will be administered through the course site in Canvas.

- **Plant ID:** You must select 5 species within each zone/type (emergent, floating, submersed) to make a Plant Identification Guide. This can take the form of either a series of plant sketches, or a series of dichotomous keys (example is provided). These are worth 50 points each, totaling 150 points.

- **Homework Assignments:** The chemical management modules will have one homework assignment associated requiring calculations, interpretations of data, or short-answer responses. This will be an open-book homework assignment (50 points).

A complete list of topics, assignments, due dates and points is provided on page 4.

Course Grading Scale:
For University of Florida grading policy see
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

The following grading scale will be used in this class:

Point range (%)	Letter Grade	GPA Equivalent
93.0 – 100	A	4
90.0 – 92.9	A-	3.67
87.0 – 89.9	B+	3.33
83.0 – 86.9	B	3
80.0 – 82.9	B-	2.67
77.0 – 79.9	C+	2.33
73.0 – 76.9	C	2
70.0 – 72.9	C-	1.67
67.0 – 69.9	D+	1.33
63.0 – 66.9	D	1
60.0 – 62.9	D-	0.67
< 60	E	0

Late Policy:
Assignments that are posted later than the due date and time will be reduced by 10% per day. The group discussion board will close on the due date and time, and since it is a group activity no additions can be made afterwards. If you have a legitimate reason for a late assignment, please contact me before it is due so we can work out an alternative arrangement. Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Any late submissions due to technical issues (i.e., Internet, Canvas, computer technology, etc.) must be accompanied by the ticket number received from the UF Help Desk (https://helpdesk.ufl.edu/; helpdesk@ufl.edu; 352-392-HELP) when the problem was reported to them.

Grade Corrections:
If you believe a grade has been assigned in error, submit corrections promptly within 3 business days of the grade posting. You must submit corrections in writing with a concise statement of why you believe there has been an error. Note that the instructor has the final determination in the grade assigned.

Class Outline:
This schedule is approximate and weekly lecture topics may be adjusted. Students will be notified if any changes are made.

Date and Topic	**Assignment (quizzes linked to topic material)**	**Due Dates**	**Points**
August 21-22 – Introduction to course, drop/add	Introductory posting	Aug 29	25
Aug 25-29 – Freshwater Systems, Definitions, Why We Control	No quiz	----	----
Sept 2-5 – Lake Morphology, Stratification, Measurements	Quiz 1	Sept 8	100
Sept 8-12 – Factors Impacting Water Quality, Plant Growth	Discussion post open all week Quiz 2	Sept 12 Sept 15	30 100
Sept 15-19 – Adaptations, Emergent Aquatic Species	Identification HW	Sept 19	50
Sept 22-26 – Adaptations, Floating and Rooted Aquatic Species	Identification HW	Sept 26	50
Sept 29 – Oct 2 – Adaptations, Submersed Aquatic Species	Identification HW Quiz 3	Oct 2 Oct 6	50 100
Oct 6-10 – Algae and HAB's	Discussion	Oct 10	50
Oct 13-17 – History of Aquatic Control and Prevention	No quiz	----	----
Oct 20-24 – Cultural and Mechanical Management	Quiz 4	Oct 27	100
Oct 27-31 – Biological Management	Discussion post open all week	Oct 31	30
Nov 3-7 – Introduction to Herbicide Reg. and Regulation	Interpreting an Herbicide Label Quiz 5	Nov 7 Nov 10	30 100
Nov 10-14– Herbicide Mode of Action	Quiz 6	Nov 17	100
Nov 17-21 – Application Methodology and Calibration	Calibration Homework	Nov 21	50
Nov 24-28 – no material, Thanksgiving Break	Nothing due	----	----
Dec 1-3 – Stakeholders and the Public	Discussion Post	Dec 3	35

Course Evaluation:
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. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

Student 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, www.dso.ufl.edu/drc/

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.

UF Counseling Services and Student Resources:
Students experiencing crises or personal problems that interfere with their general wellbeing 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/*
- *Sexual Assault Recovery Services (SARS)*
- Student Health Care Center, 392-1161
- *University Police Department* - 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/

Academic Resources:
E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. http://www.crc.ufl.edu/

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. http://teachingcenter.ufl.edu/

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/

Student Complaints: http://www.distance.ufl.edu/student-complaint-process

Software Use:
All faculty, staff and students of the University of Florida 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.

We, the members of the University of Florida, pledge to hold ourselves and peers to the highest standards of honesty and integrity.