

PRINCIPLES OF WEED SCIENCE – PLS 4601c

Department of Agronomy
University of Florida
Fall 2025 – Online

- Instructor: Greg MacDonald, Professor of Agronomy and Weed Science
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- Credits: 3
- Prerequisites: Principles of Plant Science – PLS 3004c
- Course Description: An introduction to the principles of weed science. Lecture topics will include: weed biology and ecology, an introduction to weed management techniques and methodologies, factors affecting weed control, and environmental issues (emphasis on chemical weed control) associated with weed management. Topics covered in the laboratory: weed identification, crop/weed competition, application techniques including effective herbicide use and current weed control practices.
- Course Objective: To provide students with an appreciation and better understanding of the discipline of Weed Science.
- Office Hours: email anytime and I will be in touch within 24 hours, I will not be physically present to meet, although I do plan to visit at least once if you are at a Research and Education Center, but will be 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.
- Class Participation: Students are expected to participate in online/zoom portions of the course as required – primarily weed collection presentations. ***These sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. I will let students know if the session is to be recorded, and most likely we will not be recording sessions.***

Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Class Attendance: Requirements for class attendance and 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>.

Textbooks: **SUGGESTED/OPTIONAL:** "Weed Science: Principles and Applications (3rd edition)," by W. P. Anderson, West Publishing Co., 1983. ***(if considering weed science). If you have questions please contact Dr. MacDonald for further information.***

Grading System: Total points for the class is 1000 pts. The breakdown is as follows:
Lecture: Quizzes - 10 total (lowest dropped - 70 pts each x 9 = 630 points)
Laboratory: Weed collection(s) 170 points + 8 quizzes (15 or 20 pts each = 140) + homework and assignments (60 points) = total for lab = 370 points
(for specific points for each assignment are denoted on page 7)

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

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>.

Cell Phone, Laptop, etc. Policy:

Please restrict the use of these devices for classwork while in class unless taking notes. Taking pictures of slides is strictly forbidden and considered an infringement of copyright.

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.

Principles of Weed Science - PLS 4601
Fall 2025 Schedule Outline

Lecture	GENERAL TOPIC AREAS
0	Introduction to the Course
1	Definitions and Weed Science History
2	Weed Impacts
3	Characteristics and Strategies of Weeds
4A & 4B	Weed Seed Biology
5	Weed Competition
6	Weed Management – Introduction, Goals
7	Non-Chemical Weed Management
8	Chemical Weed Management
9 & 10	Herbicide Characteristics and Mode of Action

LAB	GENERAL TOPIC AREAS
1	Weed ID techniques
2-4	Weed ID: Seedlings (Grasses and Broadleaves) and Seeds
5	Weed competition
6	Tillage and Biocontrol
7	Herbicide Formulations and Adjuvants
8	Herbicide Fate in Environment; Pesticide Safety
9	Herbicide application equipment and technology
10	Herbicide symptomology

Assignment and Due Dates for PLS 4601 – Fall 2025

<u>Assignment (1000 points total)*</u>	<u>Lecture or Lab</u>	<u>Due</u>	<u>Points – Lecture**</u>	<u>Points Lab</u>
Introductory posting	Lab	Aug 25		10
Lecture 1 - Quiz 1	Lecture	Sept 2	70	
Weed Seed ID	Lab	Sept 4		15
Lecture 2 – Quiz 2	Lecture	Sept 8	70	
Seedling Broadleaf ID	Lab	Sept 11		15
Lecture 3 – Quiz 3	Lecture	Sept 15	70	
Seedling Grass ID	Lab	Sept 18		15
Lecture 4 – Quiz 4	Lecture	Sept 22	70	
^ Seedling Notebook Presentation	Lab	Sept 22-26		50
^ Crop/Field Weed Collection Presentation	Lab	Sept 29 – Oct 2		15
Crop/Field Weed Quiz	Lab	Oct 3		25
Lecture 5 – Quiz 5	Lecture	Oct 6	70	
Competition Homework	Lab	Oct 9		30
Lecture 6 – Quiz 6	Lecture	Oct 13	70	
Tillage and Pigs–Lab Quizzes (7.5 pts each)	Lab	Oct 16		15
Lecture 7 – Quiz 7	Lecture	Oct 20	70	
Turf Weed Quiz	Lab	Oct 23		40
Lecture 8 – Quiz 8	Lecture	Oct 27	70	
Formulations and Adjuvants – Quiz	Lab	Oct 30		20
Lecture 9 – Quiz 9	Lecture	Nov 3	70	
Env. Fate and Pesticide Safety Quiz	Lab	Nov 6		20
Lecture 10 – Quiz 10	Lecture	Nov 10	70	
Herbicide Application Technology Quiz	Lab	Nov 13		20
Equipment and Calibration Homework	Lab	Nov 17		20
Invasive Plant Quiz	Lab	Nov 20		40
Symptomology - Quiz	Lab	Dec 1		20
Total Points			700-70*= 630	370

*more details on assignments posted on canvas page

** lowest lecture quiz will be dropped

^ Presentations of collected specimens to be shown via zoom during a scheduled time that week