

LRES 443 - WEED ECOLOGY & MANAGEMENT

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Office Hours: By Appointment
Prefer Tues. or Wed. Afternoons

by appointment

Lecture: Tuesday and Thursday, 10:00-10:50, 301 Linfield Hall

Lab: Thursday 3:00-5:30 p.m., 211 Plant Growth Center

Course Objectives:

1. To develop a knowledge and understanding of the principles of weed science.
2. To develop an appreciation for adaptations that allow weeds to survive and prosper in natural and human disturbed ecosystems.
3. To become familiar with terminology and concepts associated with plant population and community ecology.
4. To develop an understanding of how weed management technology can be strategically applied based on a knowledge of weed ecology principles.

Text Books:

Not Required:

Radosevich, S., J. Holt and C. Ghera. 2007. **Ecology Of Weeds And Invasive Plants** (3rd Edition). John Wiley & Sons, Inc. New York, NY. pp 454.

Supplemental reading to the text: (On reserve in Renne Library)

1. Cousens, R. and M. Mortimer. 1995. **Dynamics of Weed Populations.** Cambridge Press.
2. M.A. Ross and C.A. Lembi. 1999. **Applied Weed Science.** 2nd Edition. Burgess Publishing Company.
3. M. Liebman, C.L. Mohler and C.P. Staver. 2001. **Ecological Management of Agricultural Weeds:** Cambridge Press.

LRES 443: Weed Ecology & Management, 2009

Lecture Schedule		Text Book	Laboratory Schedule & Assignments		
Date	Day	TU TH 10 AM in 301 Linfield	Pages	No.	TH 3-5 in 211 PLGR
9-1	TU	Expectations. Definition of Weeds	1-42		
9-3	TH	Weed Sci. History & Principles	43-65		<u>Discussion about plant growth</u>
9-8	TU	Weed Biology: Life history models	103-114	1.1	Weed ID and Biol. Burke Park. Meet at the pit
9-10	TH	Weed Biology: Weed Dispersal	115-123		
9-15	TU	Quiz 1. Weed Biology: Weed Dispersal	123-138	1.2	Weed ID Quiz. Seed dispersal Assignment. Meet in 211 PGC
9-17	TH	Weed Biology: Seed banks			
9-22	TU	Weed Biology: Seed banks	138-148	2	Weed Population Monitoring (Burke Park) Meet at the pit. Weed pop. monitoring assignment
9-24	TH	Weed Biology: Dormancy			
9-29	TU	Weed Biology: Germ. and Estab. Seedling Survival	148-162	3	Purdy Cr. Fire Tour. Meet at the pit Seed dispersal Assignment due
10-1	TH	Weed Biology: Intra-Specific Interactions	163-201		
10-6	TU	Quiz 2. Weed Biology: Inter-Specific Interactions	201-216	4	Life history models (232 Linfield Hall) Life history models assignment
10-8	TH	Weed Biology: Thresholds			
10-13	TU	Weed Life History Models & Decision Aids	335-347	5	<i>Life history models assignment due</i> Threshold Calculations (232 Linfield) Threshold Assignment
10-15	TH	Weed Management			
10-20	TU	Quiz 3. Herbicide Use & Application	396-444	6	<u>Calibration problems assignment</u> Sprayer Calibration (Post Farm)
10-22	TH	Herbicide Application			
10-27	TU	Herbicide uptake & translocation (Dr. William Dyer)	445-459	7	Threshold Assignment Due NO LAB
10-29	TH	Herbicides: Modes & Mech. of Action	459-472		
11-3	TU	Herbicides in Environment	472-496	8	Cal. Problems Due Land Rehab Site
11-5	TH	Herbicides in Environment			
11-10	TU	Herbicides in Environment	347-381	9	<u>Quiz. Herbicide Absorption & Transloc. (PGC 211)</u>
11-12	TH	Physical/Cultural Weed Mgmt.			
11-17	TU	Weed Mgmt through Crop Diversity		10	Quiz. Herbicides & Soil (PGC 211)
11-19	TH	Natural Selection and Mangement			
11-24	TU	Weed Control Exam			NO LAB
11-26	TH	THANKSGIVING HOLIDAY			
12-1	TU	Biol. Weed Mgmt	382-387		<u>Quiz. Biological Weed Mgmt. (PGC 211)</u> Hand In Lab Man.
12-3	TH	Weed Management In Natural Areas			
12-8	TU	Weed Management Plan			Review Session if wanted
12-10	TH	Weed Metapopulation Dynamics			
12-16	We	Final Exam , 4:00-5:50 pm			301 Linfield