

**WEED SCIENCE**  
**(APBI 328/BIOL 317)**  
**LECTURE OUTLINE**  
**(2018-2019)**

**SCHEDULE:** Lectures: MWF, 9:00-10:00 a.m., 1001 Forest Sciences

Laboratory: Section L01 - Monday, 12:00-13:30, Weed Garden, Totem Field  
 Section L02 - Monday, 13:30-15:00, Weed Garden, Totem Field  
 Section L03 - Monday, 15:00-16:30, Weed Garden, Totem Field

**TEXTBOOK:** 1. Fundamentals of Weed Science, R.L. Zimdahl, Academic Press  
 2. Non-chemical Weed Management, M.K. Upadhyaya and R.E. Blackshaw, CAB International Press

**INSTRUCTOR:** Mahesh K. Upadhyaya, Professor, Plant Science  
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**LECTURE SCHEDULE:**

DATE	TOPIC
Sept. 5	Introduction to weeds and weed science; classification of weeds
Sept. 7	Harmful and beneficial aspects of weeds
Sept. 10	Weed-crop interaction, predicting yield losses, and experimental designs used in weed-crop interaction studies
Sept. 12	Factors affecting weed-crop interaction
Sept. 14	Persistence, reproduction and dissemination of weeds
Sept. 17	Methods of weed control: prevention, control and eradication of weeds
Sept. 19	Cultural weed control
Sept. 21	Cover crops and weed control; Allelopathy and its potential uses
Sept. 24	Mechanical control of weeds.
Sept. 26	Non-living mulches
Sept. 28	Thermal weed control
Oct. 1	Biological control of weeds - Classical
Oct. 3	Biological control of weeds - Mycoherbicides
Oct. 5	Weed management methods - <i>pros</i> and <i>cons</i> . Guest lecture by Prof. H. Ghadiri
Oct. 8	<b><u>Thanksgiving Day Holiday</u></b>

<b>Date</b>	<b>Topic</b>
Oct. 10	Chemical control: history and classification of herbicides; herbicide metabolism
Oct. 12	Fate of herbicides in soil
Oct. 15	Herbicide uptake and translocation
Oct. 17	Herbicide selectivity
Oct. 19	Growth regulator-type herbicides
Oct. 22	Growth regulator-type herbicides
Oct. 24	Growth regulator-type herbicides
Oct. 26	<b><u>MIDTERM EXAMINATION</u></b>
Oct. 29	Inhibitors of mitosis and cell growth
Oct. 31	Inhibitors of mitosis and cell growth
Nov. 2, 5	Inhibitors of photosynthesis
Nov. 7	Inhibitors of amino acid metabolism
Nov. 9	Weed Biology – Knapweeds
Nov. 12	<b><u>Holiday in lieu of the Remembrance Day</u></b>
Nov. 14	Weed Biology – Wild oat
Nov. 16	Weed Biology – Eurasian water-milfoil
Nov. 19, 21	Summer fallow and weed control; minimum tillage and weed control
Nov. 23	Livestock poisoning by weeds; Integrated Pest Management
Nov. 26, 28	Orchard-floor vegetation management
Nov. 30	Weed control in lawns; tree and brush control

### **DISTRIBUTION OF MARKS**

Lecture Midterm	15
Lecture Final	45
Laboratory Midterm	10
Laboratory Final	15
<u>Special Project</u>	<u>15</u>
Total	100

**Note: Special Project submission deadline is Monday, November 12, 2018.**