Weeds: Impact & Management in Urban Landscapes (WIMUL)

(3.0 credits)

Normally Offered: Fall every year. By Stephen Hart/Albert Ayeni and Carrie Mansue.

Pre-requisites and other registration restrictions:
A minimum of one 200-400 level course in Biology, Plant Science, Biochemistry or related courses is required to register for WIMUL. When in doubt, student must seek Instructor’s permission to register for the course

Format: Two 80-minute lectures plus 3-hour laboratory

Description:
This is a senior level course which, in three modules, examines the impact of weeds in urban landscapes and the management options. Urban landscape is broadly defined as the area of greenery integrated into human population centers including home/community lawns; home/community gardens, small farms and orchards; nurseries (field & container); recreation areas including agro-tourism centers and parks; sporting grounds (e.g. baseball, football and lawn tennis pitches, golf courses, polo grounds, etc.); industrial sites; rights of way (rails & roads); etc. Module 1 of WIMUL covers the basic principles of weed ecology and management, Module 2 focuses on the description of major landscape settings where weeds are encountered and their significance (ecological & economic), while Module 3 discusses weed management options for selected major weed situations in urban landscapes, highlighting advantages and disadvantages.

Learning Goals:
• Identify a minimum of 15 weed species of Mid-Atlantic USA by their common and scientific names
• Associate each of the identified weed species with an urban landscape setting where it is mostly encountered
• Describe the significance of identified weed species in urban landscape settings
• Name a minimum of three management options that may be used to control weeds in a given urban landscape setting
• Analyze the strengths and weaknesses of any of the weed management options one may apply to a given weed situation in an urban landscape setting
Measures of Assessment:
- Two class exams (one mid-semester, one end of semester) (50%)
- Semester-long Lab reports (20%)
- Class presentation (20%)
- Class participation (10%)

Course Website:
Sakai or eCompanion

Topics:
- **Module 1: Weed ecology and management**
  Course introduction, weed definition, and significance
  Weeds: Identification and classification
  Weed ecology: Nature and Examples
  Weed management methods Part 1: Non-chemical methods
  Weed management methods Part 2: Chemical and Integrated methods

- **Module 2: Weeds in Urban Landscape Settings and Significance**
  Home/community lawns and sport grounds
  Nurseries (field & container), ornamentals and landscapes
  Home/community gardens, small farms, and orchards
  Recreation areas including agro-tourism centers and parks

- **Module 3: Weed Management Options in Urban Landscape Settings**
  Home/community lawns and sport grounds
  Nurseries (field & container), ornamentals and landscapes
  Home/community gardens, small farms, and orchards Recreation areas including agro-tourism centers and parks

Required and Recommended Course materials:

Teaching methods: This is a lecture and lab course. Lecture topics will be covered using a traditional lecture format based on chapters that may (or may not) be found in the recommended textbook. Guest lecturers may be invited to give lectures. Often, power point presentations will accompany lectures to facilitate learning and understanding. Class exams will be based on what
has been treated in the class. Class is highly interactive and critical thinking is expected. Lab sessions will be tied as much as possible to the lecture topics, with students required to submit lab reports at the end of each lab session.

Policies for Exams, Assignments, Attendance, and Grading

Grading: This is based on (i) two Exams (50%), a class presentation (20%), semester-long lab reports (20%), and class participation (10%). Exam 1 takes place at the end of Module 1; Exam 2 at the end of Module 2. Each exam carries 25% of total course grade. Class exams are generally a mixture of multiple choice and short answer questions. The class presentation takes place towards the end of the semester. Topic of presentation will be selected from several options to be given to the class at the beginning of the semester. Lab reports are based on lab activities carried out during the semester. Lab grades will be based on lab reports and accounts for 20% of the total course grade. Class attendance and participation are highly essential in this course. These components carry 10% of total class grade. Laptops may be used to take notes, but internet surfing is not allowed. Cell phones or similar distractions are to be turned off during lecture and lab sessions. Students who are absent for a scheduled class or lab period are responsible for materials covered during that period. A total of three (3) absences from lectures & lab sessions without special note expressing reason for absence are allowed. Subsequent absences without good reason supported with written note from a recognized Rutgers’ authority will be penalized. Grades will be classified based on Rutgers approved system: A, B, B+, C, C+, D, F etc.

Other Information:
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