

# Hort 330 - Landscape Plants for Urban and Community Environments

– Fall 2020 –

**Mondays and Wednesdays** (class): 12:10 – 1 PM  
Spark Building - room 327

**Tuesdays and Thursdays** (lab): 9:10 – 10:25 AM, 10:35 – 11:50  
Vogel Plant Sciences Building- room 43



*Catalog description:* 3 (2-3) Plants for solving problems in human-dominated landscapes: their characteristics and functions, such as storm water management and climate change mitigation, ecology, identification, and selection.

Recommended: BIO 120 or HORT 202.

*Expanded course description:* Our environment, ecosystems, and human health are impacted by increasing urbanization, globalization, and climate change. Impacts include increases in the rate of introduction of invasive plants and pests, the rising urban heat-island effect, the need for local food production, and increases in human health problems and deaths associated with reduced air quality. Landscape plants can be used in human-dominated landscapes to mitigate or adapt to some of these impacts. This course focuses on understanding environmental and human health impacts in areas of concentrated populations and on how groups of plants, based on their characteristics, can be used in human-dominated landscapes to moderate these issues.

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Office hours: Mondays 1:00 -2:00, or by appointment

**TEACHING ASSISTANT:** Justene Deubel, email: [Justene.deubel@wsu.edu](mailto:Justene.deubel@wsu.edu)

## **CLASS CONTENT:**

### **Importance of plants in urban and community environments**

60% of the class will focus on understanding environmental issues and physical/mental health problems associated with living in human-dominated landscapes. We will examine the uses or functions of landscape plants to solve, reduce, or mitigate these problems. Topics for this portion of the class will include urban heat-island effect, energy use, loss of genetic diversity, storm water management, risks to native plants/animals/insects, and increasing human health problems and deaths associated with poor air quality and increased stress. Students will also research additional, selected urban and community problems.

### **Identifying plants for urban and community environments**

40% of the class will focus on learning to select and identify landscape plants for these functions. For example, we will look at effective plant choices for green roofs and walls, temperature mitigation, edible landscapes, and improved human health. For selected labs, students will have input into plant choices for additional functions based on their research on selected urban and community problems.

## **TEXTBOOK: (Optional) and READINGS:**

**Manual of Woody Landscape Plants, Michael A. Dirr (5th or 6<sup>th</sup> edition). Also available as an app**

**Readings:** Material will be provided online, through Blackboard, in class, or found by students, based on assigned work.

**GRADING:** Points will be weighted as shown below. All scores will be posted on **Blackboard** <<https://learn.wsu.edu>>.

15% - Participation (based on level/quality of participation: attendance, discussions, class activities, out of class participation in group projects; 8 pts/week; (lowest week score dropped)

15% - Satisfactory completion of reading assignment quizzes (4 quizzes; 10 pts each, no scores dropped)

15% - Homework (3 group assignments; no scores dropped)

20% - Class exams and final (3 exams on class topics/readings; lowest score dropped)

15% - Lab ID quizzes (10 comprehensive quizzes; 2 lowest scores dropped)

20% - Lab ID exams: midterm on lists 1-6; final on lists 1-10

**Midterm Grades:** assigned based on percent of points possible two to five days before grades are due.

<b>Final Grades:</b>		<b>A</b>	93% and above	<b>A-</b>	90-92.9%
	<b>B+</b>		87-89.9%	<b>B</b>	83-86.9%
	<b>C+</b>		77-79.9%	<b>C</b>	73-76.9%
	<b>D+</b>		67-69.9%	<b>D</b>	63-66.9%
				<b>F</b>	0-62%

### **STUDENT WORK POLICIES:**

**Integrity:** You are on your honor to participate in this class as your own representative. Academic dishonesty, in any form, including copying from others on quizzes or from the web on assignments, is unacceptable. If you are caught cheating, you will receive a zero on the involved activity and be reported to the Office of Student Standards & Accountability. If you are caught violating the Standard for Student Conduct WAC 540-260010 (3) more than once, you will receive an F in the class and be reported to the Office of Student Standards & Accountability. If you are suspected of cheating, I may assign a zero or have you redo the activity under conditions of my choosing.

**Late Work: The written part of each homework assignment** may be turned in late, but you will lose 2 points for every day (including weekends).

**The oral presentations** must be given on the due date. If you are not present for your group's presentation you will not receive credit for that part of the assignment.

**Make-Up Scores, Exams & Quizzes:** You are expected to attend all classes and labs. **No make-ups** will be given for class or lab participation, class exams, lab ID quizzes, or lab ID exams. If you miss any of these, you will receive a zero for your score. A specified number (see above) of low scores for exams and quizzes are dropped to keep you from being unduly penalized for missing class for unforeseen circumstances, such as an illness, death in the family, court appearance, or faulty alarm. You do not need to provide an excuse. If there are extreme, extenuating circumstances (such as being in the hospital for 3 weeks), I may agree to an alternative arrangement or to assigning an incomplete.

### **PARTICIPATION EXPECTATIONS and POLICIES:**

**You are expected to be a positive, contributing member** of the class. Much work will be done in groups, so you must act in a manner that helps you and others learn. Come to class prepared. Assist others when you can. Don't disrupt learning by others, for example by talking or texting during presentations.

**Regular attendance and participation** are essential to doing well in this course. The material to be learned depends heavily on presentations and activities in class and lab. There are no good alternative sources of materials for much of the information covered. Assignments and other information will be posted on **Blackboard**. **CHECK BLACKBOARD OFTEN!**

**Be prepared to go outside during lab, regardless of weather!** Be prepared to walk rapidly on wet, muddy, or slippery surfaces. Participation includes being ready for the weather, so that you can think and talk about class topics and not about how cold or wet you are.

**If you miss a class,** ask other students what you missed. Obtain any handouts on Blackboard and do the assigned reading. If anything is still unclear, ask the instructor.

**Use electronic devices wisely.** Computers, tablets, and other electronic devices may be used for taking notes. Other uses must be approved by the instructor. During class turn off all ringers, alarms, notifications, etc.

**Check your student e-mail.** WSU policy: All official WSU email communication (including info about this class) must be sent to the student's WSU email address.

**Safety:** "Washington State University is committed to maintaining a safe environment for its faculty, staff, and students. Safety is the responsibility of every member of the campus community and individuals should know the appropriate actions to take when an emergency arises. In support of our commitment to the safety of the campus community the University has developed a Campus Safety Plan, <https://safetyplan.wsu.edu/>. It is highly recommended that you visit this web site as well as the University emergency management web site at <https://oem.wsu.edu/> to become familiar with the information provided."

**Safety will be enforced** in this class. For example, you may be dismissed from lab if you throw objects such as pinecones or snow balls on lab walks.

### ADDITIONAL POLICY NOTES:

**Reasonable Accommodations:** "Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, Go to: <https://accesscenter.wsu.edu/> to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center."

**Syllabus Changes:** Information in this syllabus, on Blackboard, and in class handouts is assumed correct, but could change if something unexpected occurs. Changes will be presented in class, on Blackboard, and/or in class handouts.

**Class Policy Violations:** Any violations of class policies or instructors' instructions could result in losing privileges, such as the use of a computer to take notes, or could result in being banned from specific classes or labs or expelled from the entire course.

### STUDENT LEARNING GOALS AND OUTCOMES:

WSU Learning Goal	Outcome: By the end of the semester, you will be able to:	Activity to advance learning goal	Evaluation of proficiency
1. Critical & creative thinking	Select plants to solve different environmental or human health problems, including climate change, and justify the selection	Lectures, readings, and discussions	Participation; Homework; Exams
2. Quantitative reasoning	Explain graphical information on environmental and human health issues associated with human-dominated landscapes and the role of plants in mitigating the issues	Lectures, readings, and discussions	Participation; Homework; Exams; Quizzes
3. Scientific literacy	Describe biological basis for plant responses to environmental factors, and define how this contributes to plants' ability to benefit human-dominated landscapes	Lectures, lab activities, readings, and discussions	Participation; Homework; Exams; Quizzes
4. Information literacy	Find and evaluate resources on plants, environment, and human health issues associated with human-dominated landscapes	Class discussions and homework	Participation; Homework
5. Communication skills	Describe (orally and in writing) functional uses of landscape plants to solve selected environmental and human health issues associated with human-dominated landscapes	Class discussions, lab activities, and homework	Participation; Homework; Exams; Quizzes
6. Diversity	Recognize and compare the values of working effectively alone and in groups	Class and lab activities	Participation; Homework
7. Depth of learning	Demonstrate awareness of the ways that landscape plants can be used to solve environmental and human health issues associated with human-dominated landscapes	Class discussions, lab activities, and homework	Participation; Homework; Exams; Quizzes

## Horticulture 330 – 2020 Tentative Weekly Schedule

(Subject to change as presented in class, on the class web site, or on Blackboard)

Week	Class (M/W)	Lab (T/Th)	Homework, quiz, or exam
1	Introduction; Preparation for urban and community topic selection by class	Introduction; Scientific names; Morphology	H.W. - 1
2	Taxonomy & Nomenclature; Pollution	List 1: Pollution reduction	Lab quiz 0 (Tues.)
3	Holiday (Mon.); Plants for pollinators and wildlife	List 2: Pollinators and wildlife	Lab quiz 1 (Tues.)
4	Raingardens and storm water management	List 3: Storm water mgt.	Lab quiz 2 (Tues.)
5	Edible landscapes	List 4: Edible landscapes	Lab quiz 3 (Tues.)
6	Stormwater management	List 5: Parking strips	Lab quiz 4 (Tues.)
7	Class exam review Exam 1	List 6: Green roofs and walls	Lab quiz 5 (Tues.) Class exam 1 (Wed)
8	Green roofs and walls	Lab midterm ID review	Lab quiz 6 (Tues.)
9	ID Review; Invasive plants	Lab midterm ID exam	ID exam (Tues. & Thurs.)
10	Plants to mitigate urban heat island effect	List 7: Cooling	No quiz (Tues)
11	Windbreaks and energy use	List 8: Windbreaks	Lab quiz 7 (Tues.)
12	Water conservation	List 9: Water conservation	Lab quiz 8 (Tues.)
13	Genetic diversity	List 10: Selected problems	Lab quiz 9 (Tues.)
14	Class exam preparation or catch-up; Exam 2	Lab exam ID review	Lab quiz 10 (Tues.) Class exam 2 (Wed)
15	ID Review; Class summary and conclusions	Final lab ID exam	ID exam (Tues. & Thurs.)
<b>Exam</b>	Tuesday, Dec. 10, 1-3 PM		Final class exam

### Important dates:

Homework	Date
#1 – Blackboard post	Wed. Aug. 28
#1 - Presentations	Wed. Sept. 4
#2 – Written & Presentations	Mon. Sept. 16
#3 – Written & Presentations	Wed. Oct. 30, Nov. 4
#3 - Presentations	Mon. Nov 4

Exam	Date
Lecture exam 1	Wed. Oct. 2
Midterm ID exam	Tues. & Thurs. Oct. 15 & 17
Lecture exam 2	Wed. Nov. 20
Final ID exam	Tues. & Thurs. Dec. 3 & 5
Lecture exam 3	Tues. Dec. 10, 1-3 PM

**Reading and reading quizzes due per dates posted in Blackboard.**