





## Grading

Grades will be based on total accumulated points throughout the semester from:

- 1) Class participation and ODE attendance 90 pts
- 2) Three hourly exams (each will be comprehensive),
  - Exam I maximum 150 pts
  - Exam II maximum 150 pts
  - Final Exam maximum 100 pts
- 3) Research paper, assignments 90 pts

Hourly exams and quizzes cannot be made up if missed. Papers, and assignments, are due at the beginning of class on the designated date. A 10% grade penalty per day will be applied for each day the project is late. Your final grade will be based on total number of points accumulated from all sources during the semester. The grading scale is:

100-93%	A	77-79%	C+
90-92%	A-	73-76%	C
87-89%	B+	70-72%	C-
83-86%	B	65-69%	D+
80-82%	B-	60-64%	D
		<60	F

**Final Exam: Location-PBS rm 43 Thursday, May 7, 2014 7 – 10 am**

**Grades can be calculated during the semester by dividing points earned by total possible points and comparing to the grade scale listed above.**

## Course Topics

Plants and their role in society and the environment

Finding and evaluating information on plant production systems

Basics of life (overview of introductory botany that must be understood to evaluate plant production systems:

- Plant structure and function

- Plant growth and development

- Photosynthesis, respiration, and transpiration

How plant growth factors, including light, water, temperature, fertilizers, and soils, have an affect on plant production.

Sexual and asexual reproduction of plants

Applications of plants in society, based on research findings:

- Sustainable horticulture

- Fruit and vegetable production

- Growing plants in controlled environments

## Class Topic and Lab Schedule

Week 1      Research articles on plants. Finding and evaluating information.

Lab      Outside, walk to Hort department teaching garden look at plants selected for this landscape, take cuttings up to the teaching greenhouses and propagate deciduous cuttings.

Week 2      Scientific method

Lab      Propagation of succulents.

Week 3      Plant life basics

Lab      Holiday no lab

Week 4      Plant structure and function.

Lab      Park's seed catalog crop scheduling assignment and activity. Overview of experimental treatments for germination research project. perennials for experiment. Counting, labeling correct number of seeds 21 different flowers annuals and

Week 5 Lab	Plant growth and development. Groups plant germination experiments at greenhouse 118. Plants all started from seeds. Groups discuss predictions for this experiment.
Week 6 Lab	Photosynthesis <b>Exam I. Friday of this week.</b> Collect data and record observations on germination experiment. Vegetative propagation of house plants.
Week 7 Lab	President's day. Observation and collect data on germination experiment. Collect data and record observations on germination experiment.
Week 8 Lab	Photosynthesis, respiration, and transpiration. Collect data and record observations. Begin transplanting from germination flats into 1204 cell packs. Discuss results.
Week 9 Lab	Plant sexual reproduction Collect data and record observations. Transplant seedling into cell packs.
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Week 10 Lab	Sustainable Horticulture. Collect final data. Transplant seedlings to 3 1/2" pots. Transplant Rooted cuttings from vegetative propagation of house plants.
Week 11	Sustainable Horticulture. Fruit tree pruning techniques at the Tukey Orchard.
Week 12 Lab	Plant asexual reproduction. <b>Exam II.</b> Tour of WSU compost facility.
Week 13 Lab	Water, Fertilizers, and Plant Growth Collect data on plant germination, transplant to 3 and 1/2" pots
Week 14 Lab	Light, effect on plant growth Final transplanting of germination experiment flowers into 3 1/2" pots. Discussion of final results. Study 21 flowers in germination experiment for identification quiz next Lab.
Week 15 Lab	Light, effect on plant growth. Tree fruits. Plant identification quiz.

## Student Learning Goals and Outcomes

Learning Goal	At the end of the course, you should be able to:	Topics to advance the learning goal:	Evaluated primarily by:
Scientific literacy	<ul style="list-style-type: none"> <li>explain how scientific research has advanced knowledge about growing plants</li> <li>recognize competing societal benefits and risks associated with conventional versus sustainable horticulture and defend your opinions with factual information</li> </ul>	Instruction and discussions related to this goal are integrated throughout all lectures and labs. Topics that deal with this directly include: <i>Scientific method</i> , <i>Plant growth factors</i> , and <i>Sustainable horticulture</i>	Exams Assignments on Journal article review and Science reporting Research project and paper Class discussion
Critical and creative thinking	<ul style="list-style-type: none"> <li>ask relevant questions regarding the scientific basis behind information you receive about plants</li> <li>explore and analyze the scientific accuracy behind media stories on plant growth</li> </ul>	Instruction and discussions related to this goal are integrated throughout all lectures and labs. Topics that deal with this directly include: <i>Evaluating information</i> and <i>Basics of life</i>	Exams Assignments on Journal article review and Science reporting Research project and paper Class discussion
Quantitative reasoning	<ul style="list-style-type: none"> <li>organize and use data related to bedding plant seedling production</li> </ul>	Instruction related to this goal is integrated in various lectures and labs, including: <i>Reproduction of plants</i> .	Exams Crop scheduling exercise Research project and paper
Information literacy	<ul style="list-style-type: none"> <li>find and assess the scientific value of information on growing a range of horticultural commodities</li> </ul>	Instruction related to this goal is integrated in many lectures and labs, particularly in: <i>Finding and evaluating information</i>	Assignments on Library orientation, Journal article review, and Science reporting Research project and paper
Communication skills	<ul style="list-style-type: none"> <li>write accurately on topics related to the role of plants in today's society</li> </ul>	This is demonstrated in reading materials, practiced in assignments,	Exams Assignments on Journal article review and Science reporting

		and discussed in topics including: <i>Applications of plants in society</i>	Research project and paper
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## Written Assignments and due dates

Crop scheduling exercise (Completed in lab, wk 4 Jan 28 15 pts  
Journal article review Mar 6 40 pts

Research Project and paper Ap 19 30 pts

During the semester, you will be conducting an experiment on seed germination during lab sessions. You will work in groups of three to conduct the experiment and grow plants from seeds to transplants with the final size being 3 and ½” pots of 21 different flowering annuals and perennials. Each week your group will collect growth data, and you will make observations.

At the end of the experiment, you will prepare a written paper on your experiment. This paper will be in the form of a scientific research paper. It will have an introduction, materials and methods, results, and discussion sections. The materials and methods section and the results section will be the same for all members of your lab group. The introduction and discussion of results will be written by each member of the group and will represent individual effort. Many labs during the semester will help you to gather data for this report, handouts will be given out in lab which will help you to write this report.

**Disability statement**

I am committed to providing assistance to help you be successful in this course. Reasonable accommodations are available for students with a documented disability. Please go to the Disability Resource Center (DRC) during the first two weeks of every semester to seek information or to qualify for accommodations. All accommodations MUST be approved through the DRC, located in the Administration Annex Bldg, Room 205. To make an appointment with a disability counselor, please call 335-3417.

**Cheating (WAC 504-25-310)**

Cheating is the intentional use of, or attempt to use, unauthorized material, information, or study aids in any academic activity to gain advantage. Cheating includes, but is not limited to, communicating improperly with others, especially other students, during tests or the preparation of assignments for classes; copying from books, notes, or other sources during a test when this is not permitted; copying from another student's work (reports, laboratory work, computer programs, files, etc.); making improper use of calculators or other devices during a test; illegitimately procuring or using copies of current examinations; allowing a substitute to take an examination or write a paper for oneself.

**Plagiarism (WAC 504-25-310)**

Plagiarism is knowingly representing the work of another as one's own, without proper acknowledgment of the source. The only exceptions to the requirement that sources be acknowledged occur when the information, ideas, etc., are common knowledge. Plagiarism includes, but is not limited to, submitting as one's own work the work of a "ghost writer" or work obtained from a commercial writing service; quoting directly or paraphrasing closely from a source without giving proper credit; using figures, graphs, charts, or other such material without identifying the sources.

**Academic Integrity Processes (WAC 504-25-315)**

Every act of academic dishonesty affects academic evaluation of the student and also is a violation of the University's standards of conduct. Responsible instructors retain the authority and responsibility to assign grades to students, considering from an academic standpoint the nature of the student's action. This is the case even when the case is referred to the University Academic Integrity Process. Students have recourse to appealing the responsible instructor's assignment of grades according to usual academic policy. See Academic Regulation 104.

All clear instances of academic dishonesty shall be reported to the Office of Student Conduct as outlined in 504-35-335(2). The first reported instance at WSU of academic dishonesty by a student will be treated as purely an academic matter unless, in the judgment of the responsible instructor, more serious action should be taken through the disciplinary process. Any allegation of subsequent academic dishonesty will be treated as a matter to be referred to the Office of Student Conduct.

**Reports of Academic Dishonesty (WAC 504-35-320)**

Any member of the University community who witnesses an apparent act of academic dishonesty shall report the act either to the instructor responsible for the course or activity or to the Office of Student Conduct.

**WSU Safety Procedures**

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. Please, go to:

WSU Pullman Campus Safety Plan at: <http://safetyplan.wsu.edu>

WSU Emergency Management web site: <http://oem.wsu.edu/emergencies>