



## **SYLLABUS**

### **Hort 201 - Horticulture Science and Practices**

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AGLS 515

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**OFFICE HOURS:** I do not have set office hours, but I will meet with you: a) after lecture or before lecture, b) or we can set up an appointment; see me before or after lecture or call me and we will select a time.

#### **LEARNING OUTCOMES**

To recognize plant "architecture", both internal and external structure and form.

To understand of basic plant "function", especially photosynthesis, respiration and hormonal control.

To realize how plants and the environment interact.

To develop skills to "orchestrate" plant growth with hormones, pruning, nutrition, water and soil modification.

To increase competencies in the Core Objectives for Life and Physical Science.

**REQUIRED TEXT:** *Horticulture - Science and Practices*, D.W. Reed, Pearson Custom Publ., Edina, MN. Available at the campus and most off campus bookstores. Must be brought to all lectures.

**OPTIONAL TEXT:** *The Biology of Horticulture*, J.E. Preece and P.E. Read, 1993, John Wiley & Sons, Inc., NY. The text is optional. Available at the campus and most off campus bookstores.

**QUIZ FILE:** Several old exams will be posted online for you to download. I strongly suggest you look at the old exams, so you become familiar with the format and depth of questions.

**VIDEO TAPES:** Every lecture will be digitally videotaped. The videos are posted to youtube and can be linked from the home page

**LATE ARRIVALS AND DEPARTURES: Lecture:** I realize A&M is a very large campus. Therefore, reasonable late arrivals and early departures (a few minutes) are ok. Enter/exit quietly and sit towards the back of the class. However, lecture will start and end on time. **Exams:** Late arrivals are not tolerated for exams; after the first student finishes the exam and leaves the room then no other students are allowed in the room, unless there is a reasonable and documented reason for arriving late; or if you are given permission ahead of time to arrive late.

**CELLULAR PHONES:** **It is not acceptable, appropriate, nor respectful to use your cell phone during class.** If your cell phone rings during class or if you answer a phone during class, you will be asked to turn it off or you may be asked to leave the classroom.

**ATTENDANCE:** I do not take roll, but please make an effort to attend all lectures.

**EXAM DATES:** See [Exam Dates](#) on web site

#### **GRADES AND GRADING**

##### **Grade Calculation**

- Of the 5 100-point exams your lowest grade will be dropped.
- Your exam grade is based on a total of 400 points of the 500 possible points
- The Team Project will be a maximum 10 bonus points, and which will be added to your total points.
- Numerical grade: mathematical average of the highest 4 grades with bonus points, rounded to the next whole number
- Letter grade is the letter equivalent of your mathematical average based on the following 10-point scale.

**Grading Scale:** 10-point scale, A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = < 59

**Final Grade:** Your final grade will be letter equivalent of your mathematical average rounded to the next whole number; there is no curve on final grades or outside/extra work for extra credit.

**GRADES POSTED:** On eCampus by noon the next day for multiple choice exams, and within 3 days on the short answer questions/projects.

**EXAMS RETURNED:** The next lecture

<b>EXAMS – Multiple choice and short answer on Core Objectives</b>	
100 points	Exam 1
100 points	Exam 2
100 points	Exam 3
100 points	Exam 4
100 points	Final Exam
<b>500 Points Total</b>	
<b>400 Points</b>	<b>Drop lowest grade, and Average based on highest 4 exams</b>
<b>Plus, up to 10 points</b>	<b>Bonus points on Team Project</b>
<b>Exam Format</b>	
<b>MULTIPLE CHOICE, Plus up to 10 points written answers</b>	
Questions worth 10 points are part of each of the 5 exams.	<b>Short answer questions on the following Core Objective areas as part of every Exam</b>
	Written Communication – Brief essay on timely topic related to lecture material
	Critical Thinking – Interpretation of graphic scientific information
	Empirical & Quantitative Skills – Calculation or empirical analysis
<b>TEAM PROJECT on Core Objectives: One of the following team projects will be assigned for Bonus points.</b>	
10 bonus points	Visual Communication: Convert 2-Dimension Graphic to 3-Dimension Artifact
10 bonus points	Visual Communication: Convert Narrative information to Visual Artifact

## **CORE OBJECTIVES – STUDENT LEARNING OUTCOMES FOR LIFE AND PHYSICAL SCIENCES**

### **Team Work**

The class will be divided into teams of 5-7 students. Throughout the semester the teams will work on two assigned Visual Communication projects.

#### **Visual Communication**

##### **Project 1: Convert a 2-dimensional diagram into a 3-dimensional artifact**

The plant anatomy and morphology lectures are based entirely on 2-dimensional drawings (pages 1-20). To demonstrate one's ability to visualize the 3-dimensional structure, the team will take any of the 2-dimensional diagrams in the text and create a 3-dimensional model or artifact. The model or artifact will be graded on scientific accuracy, clarity of representation and professionalism. Team members grades will be weighted on % participation and contribution.

##### **Project 2: Convert Narrative information into a Visual Artifact**

The team will take any topic from throughout the text and create a visual artifact. The artifact could be a comparison and contrast matrix (example p. 18, 29), a diagram or PowerPoint image/slide (example page 34, 62), or it could be a short video demonstrating any of the numerous principles throughout the text (such as the demonstration by the instructor on fiber composition and strength of bamboo relative to wood, or the use of students to act-out the light reaction of photosynthesis). The visual artifact will be graded on scientific accuracy, clarity of representation, and professionalism. Team members grades will be weighted on % participation and contribution.

### **Written Communication and Critical Thinking**

On one or two Exams, a question(s) will be added based on a timely topic that appears in the news and that is related to a topic covered in class. A brief reading will be assigned and distributed. You will be instructed to develop a properly written narrative addressing some aspect or interpretation of the topic. To demonstrate critical thinking, the answer will require developing/suggesting a solution. The question(s) will be worth 10 points on the exam.

#### **Critical Thinking**

On one or two Exams, a question(s) will be added relative to your ability to analyze graphic, tabular, or written information relative to course topics and synthesis of an answer or opinion. The question(s) will be worth 10 points on the exam.

### Empirical and Quantitative Skills

On one or two Exams, a question(s) will be added relative to your ability conduct mathematical calculations or analyze empirical data related to course topics. The question(s) will be worth 10 points on the exam.

### MAKE-UP EXAMS:

Read the Student Rules (<http://student-rules.tamu.edu/>) on the following pages relative to excused absences and make-up exams. Make-up exams will be given only for acceptable University excuses as defined in Student Rules. As per Student Rules: *"The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence"*, which requires some type of written and approved excuse. And, *"to be excused the student must notify his or her instructor in writing (acknowledged e-mail message is acceptable) prior to the date of absence if such notification is feasible. In cases where advance notification is not feasible (e.g. accident, or emergency) the student must provide notification by the end of the second working day after the absence. This notification should include an explanation of why notice could not be sent prior to the class."* **However, it is strongly advised to talk to me directly (in person or a phone call) to inform me of the absence - Why? So, I can confirm the validity of the absence and explain your options.** If possible, the make-up exam will be tentatively scheduled at the time I verify the excused absence. **Arrangements for make-up exams must be done directly with me, either in person or a phone call. I do not discuss arranging make-up exams via email or texting, unless it is an extraordinary situation.** Student Rules require that the make-up is *"to be completed within 30 calendar days form the last day of the absence"*. However, the exact time allowed for the make-up depends on the nature of the excused absence. My guidelines are: The student is given the number of days to make-up the exam equal to the number of days of the excused absence, starting with the day of the exam. For example, if the student has an illness and an excused absence for 2 days (the day of the exam plus the next day), then the student is allowed 2 calendar (2) days, and the make-up exam must be taken by the end of the 3rd day. If the excused absence includes days before the exam such that lectures were missed, then see the instructor for a case-by-case decision to allow sufficient time to view the videos of the missed lectures. If the excused absence is for a planned event, such as sponsored activity, and no lectures are missed, then the student may take the exam before departure if feasible, a proctored exam may be administered on the trip, or the exam is taken by the end of the day after return; if lectures are missed, an appropriate amount of time will be allowed to view the video tapes of the lectures missed, plus study time - this is arranged on a case-by-case basis. Notification of missing an exam must by the timeline stated above, but written documentation of the excused absence can be turned-in at the time of the make-up exam. If the make-up exam is taken after the exams have been returned in class, then a different, but comparable, make-up exam will be given. **Any exam missed without following the Student Rules will result in a grade of 0** (unless there are extraordinary extenuating circumstances, and in such cases, you must appeal directly to the instructor). If this is your first 0, then it will automatically be used as your drop grade. If you have already used your drop grade, then the 0 will be averaged as a grade. **If all this seems confusing, that is why I want you to call me, so I can verify your excuse and explain to you the make-up options.**

**STUDENT COMMENTS:** I am extremely receptive to student comments, both positive and negative. Leave me a note on the podium if you want to be anonymous, or e-mail me at [dwreed@tamu.edu](mailto:dwreed@tamu.edu).

### American Disabilities Act

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

### Aggie Honor System and Scholastic Dishonesty

*"An Aggie does not lie, cheat or steal, or tolerate those who do."*

For additional information, please visit: <http://aggiehonor.tamu.edu>.

It is my class policy to prosecute scholastic dishonesty to the fullest extent allowed

## LECTURE OUTLINE AND EXAM TIMING

Number Lectures	<i>Horticulture: Science and Practices, Reed</i>	<i>The Biology of Horticulture, Preece and Read</i>	Topic
<b>PART I - BASICS OF HORTICULTURE</b>			
1	pages 1-2	Chapter 1	<b>Introduction and Definition of Horticulture</b>
3	pages 3-20	Chapter 3	<b>Plant Anatomy, Morphology &amp; Development</b> Vegetative & Reproductive
3	pages 21-29	Chapter 5	<b>Plant Metabolism and Functioning</b> Photosynthesis & Respiration
<i>1st EXAM</i>			
<b>PART II - ENVIRONMENT IN HORTICULTURE</b>			
2	pages 30-32	Chapter 11 & 12	<b>Hormones and Growth Regulators</b> Manipulating Plant Growth
2	pages 33-49	Chapter 6	<b>Temperature</b> Cardinal Temperatures, Chilling & Freezing Damage & Prevention, Stratification, Vernalization, Dormancy
2	pages 50-59	Chapter 5	<b>Light</b> Effects of Quantity & Quality, Light Measurement, Photoperiodism, Light Acclimatization
<i>2nd EXAM</i>			
2	pages 60-66	Chapter 7	<b>Water</b> Humidity, Precipitation, Soil Water, Irrigation Systems, Absorption Translocation, and Transpiration
2	pages 67-73	Chapter 8 & 10	<b>Soil &amp; Growing Medium</b> Types and Components, Chemical and Physical Properties
2	pages 74-80	Chapter 9	<b>Nutrition and Fertilizers</b> Essential Elements, Functions, Deficiency Symptoms, Fertilizer Sources
<i>3rd EXAM</i>			
<b>PART III- HORTICULTURAL PRINCIPLES AND PRACTICES</b>			
2-3	pages 81-93	Chapter 4 & 14	<b>Propagation</b> Sexual by Seeds; Asexual by Cuttings, Layering, and Grafting; Chimeras
1	pages 94-96	Chapter 13	<b>Growth Control</b> Pruning Methods and Terminology, Chemical Pruning, Timing of Pruning
1	pages 97-100	Chapter 16	<b>Pest and Pest Control</b> Pest Control, IPM, Biological Control, Pest Types -Insects, Mites, Disease Causing Microbes, Weeds
<i>4th EXAM</i>			
<b>FINAL EXAM - COMPREHENSIVE</b>			

## Student Rule 7. Attendance

(Revised: 2014)

<http://student-rules.tamu.edu/rule07>

### Introduction

The university views class attendance as an individual student responsibility. Students are expected to attend class and to complete all assignments. Instructors are expected to provide notice of the dates on which major exams will be given and assignments will be due on the course syllabus, which must be made available by the first class period. Graduate students are expected to attend all examinations required by departments or advisory committees as scheduled formally.

The School of Law requires regular and punctual attendance of students in all courses. Juris Doctorate (JD) students are not required to seek an excused absence from an instructor or equivalent, but students will be administratively dropped from a class for excessive absences as defined in the School of Law Academic Standards. JD students are expected to take examinations as scheduled. Requests to reschedule an examination must be submitted to the Associate Dean for Academic Affairs in accordance with the process set forth in the School of Law Academic Standards.

Students who are requesting an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code (See Rule 24).

### Excused Absences

7.1 The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Among the reasons absences are considered excused by the university are the following: (<sup>4</sup>Muster)

7.1.1 Participation in an activity appearing on the university authorized activity list. (see List of Authorized and Sponsored Activities)

7.1.2 Death or major illness in a student's immediate family. Immediate family may include: mother, father, sister, brother, grandparents, spouse, child, spouse's child, spouse's parents, spouse's grandparents, stepmother, step-father, step-sister, step-brother, step-grandparents, grandchild, step-grandchild, legal guardian, and others as deemed appropriate by faculty member or student's academic Dean or designee.

7.1.3 Illness of a dependent family member.

7.1.4 Participation in legal proceedings or administrative procedures that require a student's presence.

7.1.5 Religious holy day. (See Appendix IV.)

7.1.6 Injury or Illness that is too severe or contagious for the student to attend class.

7.1.6.1 **Injury or illness of three or more days.** For injury or illness that requires a student to be absent from classes for three or more business days (to include classes on Saturday), the student should obtain a medical confirmation note from his or her medical provider. The Student Health Center or an off-campus medical professional can provide a medical confirmation note only if medical professionals are involved in the medical care of the student. The medical confirmation note must contain the date and time of the illness and medical professional's confirmation of needed absence.

7.1.6.2 **Injury or illness less than three days.** Faculty members may require confirmation of student injury or illness that is serious enough for a student to be absent from class for a period less than three business days (to include classes on Saturday). At the discretion of the faculty member and/or academic department standard, as outlined in the course syllabus, illness confirmation may be obtained by one or both of the following methods:

a. Texas A&M University Explanatory Statement for Absence from Class form available at <http://attendance.tamu.edu>.

b. Confirmation of visit to a health care professional affirming date and time of visit.

7.1.6.3 An absence for a non acute medical service does not constitute an excused absence.

7.1.7 Required participation in military duties.

- 7.1.8 Mandatory admission interviews for professional or graduate school which cannot be rescheduled.
- 7.1.9 Mandatory participation as a student-athlete in NCAA-sanctioned competition.
- 7.1.10 In accordance with Title IX of the Educational Amendments of 1972, Texas A&M University shall treat pregnancy (childbirth, false pregnancy, termination of pregnancy and recovery therefrom) and related conditions as a justification for an excused absence for so long a period of time as is deemed medically necessary by the student's physician. Requests for excused absence related to pregnancy should be directed to the instructor; questions about Title IX should be directed to the University Title IX Coordinator.
- 7.2 The associate dean for undergraduate programs, or the dean's designee, of the student's college may provide a letter for the student to take to the instructor stating that the dean has verified the student's absence as excused.
- 7.3 Students may be **excused** from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Section 7.1, or other reason deemed appropriate by the student's instructor. Except in the case of the observance of a religious holiday, to be excused the student must **notify his or her instructor in writing (acknowledged e-mail message is acceptable) prior to the date of absence** if such notification is feasible. In cases where advance notification is not feasible (e.g. accident, or emergency) the student must provide notification by the **end of the second working day after the absence**. This notification should include an explanation of why notice could not be sent prior to the class. Accommodations sought for absences due to the observance of a religious holiday can be sought either prior or after the absence, but not later than two working days after the absence.  
If needed, the student must provide additional documentation substantiating the reason for the absence, that is satisfactory to the instructor, within one week of the last date of the absence.  
If the absence is excused, the instructor must either provide the student an opportunity to make up any quiz, exam or other work that contributes to the final grade or provide a satisfactory alternative by a date agreed upon by the student and instructor. If an instructor has a regularly scheduled make up exam, students are expected to attend unless they have a university approved excuse. **The make-up work must be completed in a timeframe not to exceed 30 calendar days** from the last day of the initial absence.
- 7.4 The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence.
- 7.5 See Part III, Grievance Procedures: 49. Unexcused Absences, for information on appealing an instructor's decision.
- 7.6 If the student is absent for excused reasons for an unreasonable amount of time during the semester, the academic Dean or designee of the student's college may consider giving the student a grade of W during the semester enrolled or a NG (no grade) following posting of final grades.
- 7.7 Whenever a student is absent for unknown reasons for an extended period of time, the instructor should initiate a check on the welfare of the student by reporting through the head of the student's major department to the Dean or designee of the student's college.

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<sup>1</sup> In accordance with Faculty Senate Resolution FS.14.101 (see Faculty Senate meeting minutes of Feb. 10, 1997), "faculty members are encouraged not to hold exams on the day of Muster. Any absence from classes beginning after 5 p.m. to attend Muster will be considered a university excused absence."