

HORT 334 Spring 2015 Greenhouse Cultivation

Instructor:

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Lectures:

Plant Sciences Building, Room 108
8:50AM Tuesday and Thursday.

Office hours:

Office hours are from 9:45-10:45 a.m. on Tuesday and Thursday. Please note that I maintain an open door policy and encourage you to stop by at any time. If you wish to set up a specific time to meet, please see me in class, call, or send an email.

Suggested Texts:

Nelson, P.V. 2011. Greenhouse operation and management. Prentice Hall, Upper Saddle River, NJ.

Dole, J.M. and H.F. Wilkins. 2002. Floriculture. 2nd Ed. Prentice Hall, Upper Saddle River, NJ.

Course objectives:

To become familiar with the greenhouse industry and principals of growth in controlled environments.

Grading:	Field trip attendance	100 points
	Field trip report	50 points
	Pre-Lecture Questions (15 at 10 points each)	150 points
	Homework Assignments (4 at 50 points each)	200 points
	Semester exams (2 at 100 points each)	<u>200 points</u>
	Total	700 points

Field trip:

A one-day field trip is required. The trip is tentatively scheduled for Thursday, March 26th. ***You are required to attend this trip.*** Failure to participate in the field trip will result in a lowering, by one letter grade, of your final course grade.

Field trip report:

After the field trip, a written summary is required of each facility visited. The report should be in the format of an executive summary; to the point and organized. Maximum length of total report is limited to 4 pages. Reports shall be double spaced, Times New Roman font, and font size of 12 point. Reports are due two weeks after the field trip.

Evaluation for each company visited

Name of firm

Market sector of firm

What did you see and learn about this business

What is your sense (your opinion) of the businesses climate?

Would you work with this firm?

Conclusion with your opinion

Pre-Lecture Questions:

In preparation for each lecture topic, students will be assigned a short question for consideration outside of class. Answers must be turned in by the beginning of lecture on the day they are due and are worth 10 points. You will receive 5 points simply for turning in your answer on time. If your answer is incorrect or incomplete I will let you know and you will have until the beginning of the next class period to resubmit your answer for up to 5 additional points. More details are available on the course website.

Worksheet Assignments:

During the semester four take-home worksheets will be assigned. Each is worth 50 points.

Exams:

There will be two exams in this class. Exam questions will consist of short answer, multiple-choice, true or false, essay, etc. Students are expected to take the exams at the designated times. If unusual circumstances arise and you are unable to take the examination it is your responsibility to contact me *beforehand* if at all possible to arrange for an alternative. Failure to do so will result in a grade of zero.

<u>Date</u>	<u>Topic</u>	<u>Related Readings</u>	<u>Notes</u>
Jan *20	Introduction/Greenhouse Industry and Crops	Nelson Ch. 1	
*22	Greenhouse Site Selection	Nelson Ch. 2	
*27	Greenhouse Structural Components and Styles	Nelson Ch. 2	
*29	Greenhouse Framing, Glazing Materials	Nelson Ch. 2	
Feb 3	Greenhouse Benches and Space Utilization	Nelson Ch. 2, Biernbaum 1	
5	Greenhouse Crop Scheduling	Biernbaum 1	Worksheet 1
*10	Light in Crop Production	Dole & Wilkins Ch. 4	
12	Light in Crop Production	Nelson Ch. 12	
17	Temperature in Crop Production	Dole & Wilkins Ch. 3	Worksheet 2
19	Temperature in Crop Production	Nelson Ch. 3 & 4	
24	Media in Crop Production	Nelson Ch. 8	Worksheet 3
26	Water and Nutrition in Crop Production	Nelson Ch. 6 & 9, Dole & Wilkins 6 & 7	
Mar *3	Environmental Controllers	Nelson Ch. 5	
*5	Energy Efficiency	Nelson Ch. 5	Scott Sanford
10	Greenhouse Management		video
12	Exam I		
*17	Pesticide Safety	Nelson Ch. 14	video
19	Integrated Pest Management	Nelson Ch. 14	
*24	Diseases of greenhouse crops	Nelson Ch. 14	Brian Hudelson
26	Industry tour all day		Field Trip
31	Spring Break		
April 2	Spring Break		
*7	Greenhouse Pests		PJ Loesch
9	Discuss field trip, Hydroponics	Biernbaum 2	Worksheet 4
*14	Greenhouses and Vegetable Production		J. Hendrickson
*16	High Tunnel Production		Beth Workmaster
21	Cost Analysis		
*23	Plant Growth Regulators	Nelson Ch. 13	
28	Aquaponics		J Robinson
30	Post Production: Handling and Quality	N Ch. 16, D&W Ch. 10	
May *5	Greenhouse Innovation: Putting it all Together		
7	Review and catch-up day		
	Exam II	2:45 to 4:45	Location TBA
	*Pre-Lecture question due		