December 12, 2014

Introductory Nursery Management, ORH3253C

Instructor Contact Info

Dr. Kimberly Moore
3205 College Ave. Davie FL 33314
954-577-6328
954-475-4125 (fax)
Email: klock@ufl.edu; Skype: kimberly.moore27
Email/phone messages: students can expect a response within 24 hrs. M-F and within 72 hrs. on weekends. **My preferred way of communicating with students is using email.** I check my UF email frequently every day and on the weekends. If I plan to be out of the office or out of email communication, I will email the class and post an announcement on the class website.
[Top]

Course Overview

This course presents an overview of planning, organizing, and managing protected horticulture production systems (greenhouses and nurseries) for ornamental and vegetable production. Topics to be covered include layout, growing structures (greenhouse structures), growing systems to manage light and temperature, irrigation and fertilization using soilless substrates, chemical and cultural growth regulators, and insect and disease management.
 [Top]

Required Reading

Nelson, P.V. *Greenhouse Operations and Management, 6th edition*. Prentice Hall Inc. Upper Saddle River, NJ ISBN 0-13-010577-5
[Top]

Additional Reading

Agnew, M.L., N.H. Agnew, N.E. Christians, and A. M. VanDerZanden. 2008. Mathematics for the Green Industry. John Wiley & Sons Inc. Hoboken, NJ.

Anonymous. 1998. Grades and Standards for Nursery Plants. Florida Department of Agriculture and Consumer Services, Tallahassee, FL.

Ball, V. 1998. Ball RedBook 16th edition. Ball Publishing, Batavia, IL.

Davidson, H., R. Meckenburg, and C. Peterson. 2000. Nursery Management: Administration and Culture. Prentice Hall, Upper Saddle River, NJ.

Larson, R. 1992. Introduction to Floriculture. Academic Press Inc. San Diego, CA.

Reed, D.W. 1996. A Grower's Guide to Water, Media, and Nutrition for Greenhouse Crops. Ball Publishing, Batavia, IL.

December 12, 2014

Styer, R.C. and D. S. Koranski. 1997. Plug and Transplant Production, A Growers Guide. Ball
       Publishing, Batavia IL.
Whitcomb, C. E. 1984. Plant Production in Containers. Lacebark Publishing Inc. Stillwater, OK
 [Top]

Course Prerequisites

This is an introductory course in greenhouse and nursery crop production and management. To
be successful, students should have a general knowledge of biology/botany/zoology.
[Top]

Learning Outcomes

Upon successful completion of this course, students will be able to
1. Demonstrate a comprehensive understanding of greenhouse and protected horticulture
    industry as a business locally, nationally, and globally.
2. Compare and evaluate different protected structures (greenhouse designs) used to
    produce high value crops
    a. Perform simple heating and cooling calculations and costs
    b. Analyze impact of proper lighting
    c. Evaluate impacts and relationship among growing substrate, irrigation, and
        fertilization
3. Develop management plans for successful protected horticulture system that is
    economical and environmentally sustainable
    a. Evaluate alternative substrate, fertilizer, and irrigation
    b. Evaluate different methods for controlling plant growth
    c. Evaluate integrated pest management system for controlling weeds, insects, and
        disease

Acceptable Course Participation

Each week, students are expected (see schedule) to complete the reading assignment, watch
the narrated lecture and submit the weekly assignment (see course goals and assignments &
assessment).

Discussions: Discussion posts should be well written and address the issue or question being
discussed. All posts should be made within in the week assigned. Discussions will be graded on
the quality and timeliness of the response (see discussion grading rubric attachment under
syllabus tab). Each student is expected to comment on three fellow class mates' posts.
Discussion posts will be accepted up to four days after the due date on the schedule but will be
marked down five points. Each discussion post is worth 25 points.

Homework: Each homework assignment has clear instructions on how to complete the
assignment as well as the rubric on how it will be graded. Homework will be accepted up to
four days after the due date on the schedule but will be marked down 5 points. All homework is

available under the assignment tab on the class website. Each homework assignment is worth 25 points

Challenge question: During the semester, the instructor will issue several challenges. You may work with your classmates to come up with an answer but each student must submit a report. Reports should be written following the guidelines in the rubric attached to the challenge question. Each challenge is worth 25 points.

Crop project: Everyone will receive cuttings to use in an experiment of their own design. Results from your experiment are due at the end of the semester. Students are expected to keep a weekly log of activities and observations throughout the semester. Students may work with a partner but each student must keep a log and turn in a report on their results. This project is worth 100 points

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu.

Topics
- Protected horticulture as a business (local, national, global)
    - Marketing and competition
    - Layout and flow
    - Considerations (pots, seeds, - indirect and direct costs)
- Greenhouse structure and design
    - Solar greenhouse
    - High tunnel
    - Hydroponics/aeroponics
    - Shade house
    - Greenhouse/modified greenhouse
    - Gutter connected, saw tooth etc
    - Greenhouse geometry
- Light and temperature
    - Heating and cooling
    - Growth regulators vs natural
- Substrates; soilless media
- Irrigation and fertilization
- Pests
    - Weeds
    - Insects
    - Disease
    - IPM

December 12, 2014

Assessment

See schedule for dates. The week begins on Monday (8 am ET) and ends on Sunday (5 pm ET). All discussions or assignments need to be completed by the end of each week (Sunday 5 pm, Eastern time zone). The accepted format for all assignments is MS Word files. If there is a malfunction with the class site or computer malfunctions occur, assignments may be emailed or sent via fax. It is the obligation of the student to inform me of such malfunctions immediately.

TOTAL POSSIBLE POINTS & GRADES   =   400 pts.

For information on current UF policies for assigning grade points, see
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Percentage of Points

94-100	A	(376-400 points)
90-93	A-	(360-375 points)
86-89	B+	(344-359 points)
83-85	B	(332-343 points)
80-82	B-	(320-331 points)
76-79	C+	(304-319 points)
74-75	C	(296-303 points)
70-72	C-	(280-295 points)
66-69	D+	(264-279 points)
63-65	D	(252-263 points)
60-62	D-	(240-251 points)
59-below	E	(0-239 points)

Absences and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

December 12, 2014

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "***We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.***" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: ***"On my honor, I have neither given nor received unauthorized aid in doing this assignment***."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,* **www.counseling.ufl.edu/cwc/**
  Counseling Services
  Groups and Workshops
  Outreach and Consultation
  Self-Help Library
  Training Programs
  Community Provider Database

- *Career Resource Center,* First Floor JWRU, 392-1601, **www.crc.ufl.edu/**

December 12, 2014

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, **www.dso.ufl.edu/drc/**

Student Complaints

Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See http://distance.ufl.edu/student-complaints for more details.

December 12, 2014

Tentative Schedule – Introductory Nursery Management

Week of	Topic and Assignments	Due Date – 5 pm Eastern Time
Module 1 		
Jan 5	*Introductions*	
	Lecture – Introduction to Course	
	Self-introductions – discussion board	Jan 11
Jan 12	*Greenhouse Business*	
	Reading – Chapter 1	
	Lecture 1 – narrated Power Point	
	Discussion 1 – Greenhouse history	Jan 18
Jan 19	*Greenhouse Construction and Design*	
	Reading – Chapter 2	
	Lecture 2 – narrated Power Point	
	Homework 1 – Greenhouse layout	Jan 25
Jan 26	*Heating and Cooling*	
	Reading – Chapter 2 and 3	
	Lecture 3 – narrated Power Point	
	Homework 2 – Heating and Cooling	Feb 1
Feb 2	*Light and temperature*	
	Reading – Chapter 12	
	Lecture 4 – narrated Power Point	

December 12, 2014

Week of	Topic and Assignments	Due Date – 5 pm Eastern Time
	Challenge 1	Feb 8

Module 2
[Top]

Feb 9	*Substrates*	
	Reading – Chapter 6 and 7	
	Lecture 5 – narrated Power Point	
	Homework 3 – Comparison of substrates	Feb 15
Feb 16	*Water and irrigation systems*	
	Reading – Chapter 8	
	Lecture 6 – narrated Power Point	
	Discussion 2 – The person controlling the watering	Feb 22
Feb 23	*Fertilization*	
	Reading – Chapter 9	
	Lecture 7 – narrated Power Point	
	Challenge 2	Mar 1
Mar 2	*Spring Break – No Class*	
Mar 9	*Growth regulators*	
	Reading – Chapter 13	
	Lecture 8 – narrated Power Point	
	Homework 4 – Comparison of growth regulators	Mar 10

Module 3
[Top]

Mar 16	*Weeds*	
	Read handouts posted online	

December 12, 2014

Week of	Topic and Assignments	Due Date – 5 pm Eastern Time
	Lecture 9 – narrated Power Point	
	Quiz 1 - Weed identification	Mar 22
Mar 23	*Insects*	
	Read – Chapter 14	
	Lecture 10 – narrated Power Pont	
	Quiz 2 – Insect identification	Apr 5
Apr 6	*Disease*	
	Read – Chapter 15	
	Lecture 11 – narrated Power Point	
	Discussion 3 – Implementing IPM	Apr 12
Apr 13	*Pesticide application*	
	Challenge 3	Apr 19
Apr 20	*Crop project*	Apr 26
Apr 27	Final exam week	