NURSERY MANAGEMENT HORT 5230 COURSE SYLLABUS
Fall Semester, 2008; 3 Credit Hours: (Lec. 2, Lab. 3) Pre- or Co-requisites: Plant Propagation (HORT 2240) and Growth & Development of Horticultural Plants (HORT 3000)
Instructor: Jeff Sibley, 121 Funchess Hall, 334-844-3132; jsibley@auburn.edu
Office Hours: Monday and Wednesday, 2:00 to 4:00 p.m. by appointment.

Course Objectives/Content:

Objectives:
1. To develop an appreciation of the nursery industry and its significance to the economy of the state and nation.
2. To evaluate factors affecting site selection of production facilities.
3. To determine factors affecting specific cultural practices and develop environmentally responsible production programs.
4. To develop cost efficient strategies for production of nursery crops through evaluation of various inputs such as labor, plant material, supplies, pesticides, advertising, etc.

Content: Labs will include some lectures. Instruction will include laboratory exercises, field trips to local nursery production facilities, and 3 outside projects. The schedule below describes a general direction/flow of the course in which labs will be supported by lecture material.

TENTATIVE SCHEDULE

Week Of: Topic(s)

1. 8/19/08. Course introduction; Lab information; First project (term-paper) assigned; USDA Outlook assignment - What are the top 15 states and where does Alabama rank? Overview of the nursery industry: History, economic importance in the state and nationally. Slide marathon.
Alabama Green Industry Survey Report

2. 8/21/08. Green Industry Magnitude - Presentation of Survey Compilation by Dr. Deacue Fields, Dept. of Agricultural Economics and Rural Sociology
Reading assignments: IPPS article: Nursery Construction - Details are Everything by F. Allan Elliott

3. 8/26/08. Spacing; Pot Volume, Propagation; Production Scheduling; Mission Statement.- Sibley.
Reading assignments: Problem sheets/handouts

4. 8/28/08. Substrates/Media - determining substrate characteristics, water holding capacity, porosity, aeration; Substrate preparation, pre-plant amendments and components; Container substrates, physical and chemical properties of substrates, substrates used in nursery industry, characteristics, function, guidelines for selection and management.

5. 9/2/08. Factors affecting site selection for nurseries; Field trip to 3AM Nursery (Tallassee), Southern Growers (Montgomery), and Moore & Davis Nursery, Shorter, AL (Mr. Bob Moore); How it works - how to start; Types of nursery production facilities; Characteristics of marketable products; Product limitations.

6. 9/04/08.  “Understanding ‘Current Use’ and other aspects of taxation” - Sibley

   Reading assignments: TBA

7. 9/09/08.  Agricultural labor laws; H2A/H2B Guest Worker Program; Employee Relations; Sibley


8. 9/11/08.  Business Strategies to Maximize the Bottom Line; Breaking Even is a Losing Proposition. Begin Nursery Projects and Spreadsheets - Sibley

   Reading assignments: TBA.

9. 9/16/08.  EXAM 1

10. 9/18/08.  Top Ten Insect Pests (& more!). ID, Impact and Control, Dr. David Held, Dept. Of Entomology and Plant Pathology.


11. 9/23/08.  Irrigation management for container-grown plants; Water management; Irrigation application amount, time of application, plant water requirements; Water quality guidelines; Water management strategies for problems and conservation.

   Reading assignments: Problem sheets/handouts; BMP Manual Pages 1-33.

12. 9/25/08.  Finish Irrigation.

   Reading assignments: Establishment & Operation of 20- and 40- Acre Container Nurseries in Climatic Zone 9 (Southern Cooperative Series #341, old 1990 Publication)

13. 9/30/08.  Begin Managing nutrition of nursery crops; Types and characteristics of fertilizers - release rates, factors affecting release rates, monitoring nutrition of container-grown plants.  Sibley / Dr. Joe Eakes.

14. 10/02/08.  Fertilizer Selection - John Johnson, Pursell Industries

15. 10/07/08.  We will leave at 6:00 AM From Heart of Auburn parking lot for a Chartered Bus Field Trip to Mobile and the Lucedale, Mississippi area, returning Wednesday night, Oct. 8 about 9:00 PM.  The trip is in conjunction with Greenhouse Management and Plant Propagation classes.  You will have tours of 10 of the top nurseries in the South, with almost all costs covered by the Dwight and RuthAnn Bond Endowment.

16. 10/09/08.  We will have class on the Thursday after the Industry Field Trip and cover Pruning, Growth Regulators, Misc...

17. 10/14/08.  Plant disease diagnosis; IPM strategies; Mr. John Olive, Superintendent, Ornamental Horticulture Substation, Mobile, AL.

18. 10/16/08.  Marketing; Trade and Industry Associations - Mr. James Harwell Exec. Dir. Alabama Nursery & Landscape Association

19. 10/21/08.  EXAM 2.
20. 10/23/08. Spacing; Shipping; Overwintering practices - Sibley.

21. 10/28/08. Herbicides. Pre-emergence and post-emergence applied herbicides for nursery crops; Safety considerations; Federal regulations of herbicide use; Cultural practices that affect herbicide effectiveness. Dr. Charles Gilliam.

Reading assignments: ANR-465 Weed Control for Commercial Nurseries.

22. 10/30/08. Herbicides. Weed management; Pesticide equipment calibration in lab.

Reading assignments: Digger article “Why Herbicides Fail”

24. 11/04/08. Nursery Crop Pesticide Management; IPM; Pesticide Laws, Regulations, Quarantines; Pesticide Storage Guidelines; Pesticide Safety. Jeremy Pickens & Sibley

25. 11/06/08. “How to Start a Small Business” Dr. Jackie DiPofi, AU Small Business Development Center, AU College of Business.


27. 11/13/08. Branding, What’s in a Name? Andy Rogers, McCorkles Nursery, Dearing GA

28. 11/18/08. EXAM 3.
29. 11/20/08.
11/24-28 Thanksgiving Break; 11/29 Bama Game
30. 12/2/08. Project Presentations
31. 12/4/08. Project Presentations

Lecture: 11:00 a.m. to 12:15 p.m. Tuesday and Thursday (along with some lectures in lab), in 105 Funchess Hall

Laboratory Description: Location will be announced weekly. When in doubt, meet at 105 Funchess unless otherwise specified. One lab meeting day per week; Tuesday 1:00- 4:50+. Objective is to gain a hands-on understanding of the basic principles and practices involved in the operation of commercial nurseries. In addition to hands-on labs at the Paterson Greenhouse Complex, several field trips will occur. Questions and Camera (disposable allowed) required. You will pay for your own lodging and food. Chartered transportation will be provided. No open-toed shoes or tobacco use allowed.

Text:


Available from Alabama Nurserymen’s Association via Department of Horticulture.

Assigned reading material will be selected and provided weekly from the following:
American Nurseryman Trade Magazine & NMPro Trade Magazine
Journal of Environmental Horticulture
Combined Proceedings of the International Plant Propagators Society
Proceedings of the Southern Nursery Association Research Conference
**Student Services Note:** Disability Accommodations: Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Haley Center, 844.2096 (V/TT) or email: sew0005@auburn.edu. Student Counseling Services professionals are also available to assist all students in the Auburn University Medical Clinic, Suite 2086 (844.5123).

**Student Contributions:**

1. Each student is expected to attend and participate in all classes and laboratories. There is no official attendance policy, but 50 points (10% of the total points) are attendance based along with 20 points for unannounced quizzes.

2. Each student is expected to complete 3 hour-long exams during the semester. Exams will occur in the lecture hour and are tentatively scheduled for Tuesday, September 16, Thursday, October 16, and Tuesday, November 18. Exams will be cumulative including all lecture and laboratory material, and reading assignments. Each exam is worth 100 points. Any exam missed with an excused absence (I must be notified by email the day of your absence and excuse must be presented on first day back in class) must be made up during the following 2 days. Make-ups will be different than scheduled exams.

3. Each student will prepare a major project to be described in a separate handout worth 100 points. Point structure and due dates will be outlined in a separate handout with final project due.

4. In addition to field trips within the context of normally scheduled labs, a two-day field trip is planned for later in the semester. This field trip is of critical importance to the overall understanding of the course. As such, 30 points will be placed on attendance and participation during this trip. **NOTE: There will be no alcohol consumption on the field trip.** Those not able to participate in the field trip will be required to write a term paper of not less than 15 pages (double spaced, 12 point, Times New Roman font, with electronic and hard copy) on an assigned topic. Papers must be re-written until a grade of C or better is achieved.

**Note:** Academic dishonesty is an offense that will be reported to the Academic Honesty Committee. Please refer to Title XII (page 83) in the Tiger Cub.

**Evaluation:** The translation of performance to a grade will be based on total points earned for student contributions. A = 450 to 500 points, B = 400 to 449 points, C = 350 to 399 points, D = 300 to 349 points, & F = below 300 points earned.

**DATES TO REMEMBER:**

- **Sept. 16** - Lecture Exam #1 = 100 points
- **Oct. 16** - Lecture Exam #2 = 100 points
- **Nov. 18** - Lecture Exam #3 = 100 points
- **Dec. 4** - Final Version of Projects Due = 100 points
- - Unannounced Quizzes = 20 points
- - Overnight Field Trip = 30 points
- - Class attendance/participation = 25 points
- - Laboratory attendance/participation = 25 points

**TOTAL** = 500 points
Please put a check mark beside the topic you would prefer to prepare your project/term paper on:

Project Choices:

_____ Traditional Field Nursery / Pot in Pot / Containerized Plants (finished product)

_____ Greenhouse Operations / Tropicals / Florists

_____ Wholesale / Retail / Mail-order / E-commerce / Brokerage

_____ Container Shrub / Container Tree

_____ Propagation / Groundcovers / Tree-liner and Fruit-plant liners / Tissue Culture

_____ Christmas Trees / Fruit Crops (Perennial crops such as hops, cranberries, banana, strawberry, pineapple)

_____ Turf / Specialty Crops (topiary, grafted, espaliered; asparagus; bulbs; cut flowers; clematis; medicinal plants (ginkgo, taxus, herbs); orcharding (seed orchards, dried/preserved stock supply) cut greens/garland, etc.

Requirements:

Text:
12 point, Times New Roman font only
Double spaced laser printed
12 page minimum
Diskette submitted with final version
Class presentation from slides, overheads, PowerPoint, not to exceed 30 minutes.
NAME:__________________________________________________________

PHONE AND E-MAIL:____________________________________________

ANTICIPATED GRADUATION DATE: ______

HOMETOWN:_____________________________________________________

CHECK YOUR DEGREE OPTION:

_______ Landscape Design

_______ Nursery Crop Production

_______ Fruit and Vegetable Production

PREVIOUS CLASS HISTORY:

- HAVE YOU PASSED (OR ARE YOU CURRENTLY ENROLLED IN) GROWTH AND
  DEVELOPMENT OF HORTICULTURAL PLANTS?

______________________________________________________________

- HAVE YOU PASSED (OR ARE YOU CURRENTLY ENROLLED IN) PLANT PROPAGATION?

______________________________________________________________

- HAVE YOU WORKED AT A NURSERY BEFORE? IF SO, WHEN & WHERE:

________________________________________________________________

- HAVE YOU HAD AN INTERNSHIP? IF SO, WHEN & WHERE:

________________________________________________________________

IF NOT, WOULD YOU LIKE TO HAVE ONE? _______________________

WHAT DO YOU EXPECT TO LEARN IN THIS COURSE?

WHAT IS THE ONE MOST DOMINANT QUESTION YOU EXPECT TO FIND THE ANSWER FOR
IN THIS CLASS?
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Objectives:
1. To develop an appreciation of the nursery industry and its significance to the economy of the state and nation.
2. To evaluate factors affecting site selection of production facilities.
3. To determine factors affecting specific cultural practices and develop environmentally responsible production programs.
4. To develop cost efficient strategies for production of nursery crops through evaluation of various inputs such as labor, plant material, supplies, pesticides, advertising, etc.
5. To investigate current paradigms for irrigation, substrates, and pesticides and be able to articulate current and alternative approaches to undergraduate students.

Content: Labs will include some lectures. Instruction will include laboratory exercises, field trips to local nursery production facilities, and 4 outside projects. The schedule below describes a general direction/flow of the course in which labs will be supported by lecture material.

TENTATIVE SCHEDULE

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Characteristics of marketable products; Product limitations.

**Reading assignments:** IPPS Starting Nursery Business by Bob Moore. BMP Manual Pages 1-4.

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**Laboratory Description:** Location will be announced weekly. When in doubt, meet at 105 Funchess unless otherwise specified. One lab meeting day per week; Tuesday 1:00- 4:50+. Objective is to gain a hands-on understanding of the basic principles and practices involved in the operation of commercial nurseries. In addition to hands-on labs at the Paterson Greenhouse Complex, several field trips will occur. Chartered transportation will be provided. No open-toed shoes or tobacco use allowed.

**Text:**

**Required.** *So You Want to Start a Nursery.* 2003 Tony Avent, Timber Press.

Available from Alabama Nurserymen’s Association via Department of Horticulture.

Assigned reading material will be selected and provided weekly from the following:
- American Nurseryman Trade Magazine & NMPro Trade Magazine
- Journal of Environmental Horticulture
- Combined Proceedings of the International Plant Propagators Society
- Proceedings of the Southern Nursery Association Research Conference

**Student Services Note:** Disability Accommodations: Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Haley Center, 844.2096 (V/TT) or
email: scw0005@auburn.edu. Student Counseling Services professionals are also available to assist all
students in the Auburn University Medical Clinic, Suite 2086 (844.5123).

Student Contributions:
1. Each student is expected to attend and participate in all classes and laboratories. There is no official
attendance policy, but 25 points are class attendance based along with 20 points for unannounced
quizzes. In addition, each graduate student will bring to class weekly “weed of the week” specimens and
present the weed to the class in a teaching format for 25 points.

2. Each student is expected to complete 3 hour-long exams during the semester. Exams will occur in the
lecture hour and are tentatively scheduled for Tuesday, September 16, Thursday, October 16, and
Tuesday, November 18. Exams will be cumulative including all lecture and laboratory material, and
reading assignments. Each exam is worth 100 points. Any exam missed with an excused absence (I
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Point structure and due dates will be outlined in a separate handout with final project due.

4. In addition to field trips within the context of normally scheduled labs, a two-day field trip is planned
for later in the semester. This field trip is of critical importance to the overall understanding of the
course. 30 points will be placed on trip attendance/participation. NOTE: There will be no alcohol
consumption on the field trip. Those not able to participate in the field trip will be required to write a
term paper of not less than 15 pages (double spaced, 12 point, Times New Roman, with electronic &
hard copy) on an assigned topic. Papers must be re-written until a grade of C or better is achieved.

5. Each graduate student will present one lecture or supervise one lab during the term as a component of
the extra requirement for graduate students in the class. This component will be worth 50 points as lab
attendance/participation. This 50 points will be graded subjectively by the instructor.

Note: Academic dishonesty is an offense that will be reported to the Academic Honesty Committee.
Please refer to Title XII (page 83) in the Tiger Cub.

Evaluation: Performance will be based on total points earned. A = 450 to 500 points, B = 400 to 449
points, C = 350 to 399 points, D = 300 to 349 points, & F = below 300 points earned.

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NAME: ___________________________
Please put a check mark beside the topic you would prefer to prepare your project/term paper on:

Project Choices:

____ Traditional Field Nursery / Pot in Pot / Containerized Plants (finished product)

____ Greenhouse Operations / Tropicals / Florists

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Requirements:

Text:
12 point, Times New Roman font only
Double spaced laser printed
12 page minimum
Diskette submitted with final version
Class presentation from slides, overheads, PowerPoint, not to exceed 30 minutes.
NAME: ______________________________________

PHONE AND E-MAIL: ______________________________________

ANTICIPATED GRADUATION DATE: ______

HOMETOWN: ______________________________________

CHECK YOUR DEGREE OPTION:

_______ Landscape Design

_______ Nursery Crop Production

_______ Fruit and Vegetable Production

PREVIOUS CLASS HISTORY:

- HAVE YOU PASSED (OR ARE YOU CURRENTLY ENROLLED IN) GROWTH AND DEVELOPMENT OF HORTICULTURAL PLANTS?

______________________________

- HAVE YOU PASSED (OR ARE YOU CURRENTLY ENROLLED IN) PLANT PROPAGATION?

______________________________

- HAVE YOU WORKED AT A NURSERY BEFORE? IF SO, WHEN & WHERE:

______________________________

- HAVE YOU HAD AN INTERNSHIP? IF SO, WHEN & WHERE:

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WHAT DO YOU EXPECT TO LEARN IN THIS COURSE?

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