

COLLEGE OF ARTS AND SCIENCES

Course Syllabus

DEPARTMENT: Agricultural and Industrial Sciences

COURSE NUMBER/TITLE: AGR 496.14 – Turfgrass Culture

CREDIT HOURS: 3 (2-2 Format)

SEMESTER/YEAR: Fall 2007

LOCATION/TIME: THOMASON 217, Wednesday 1-3 lecture; Wednesday 3-5 Lab

INSTRUCTOR: Robert A. Lane, Professor
Thomason 313D, phone 294-1225
e-mail: blane@shsu.edu
Office hours: posted on door. E-mail for alternate appointment

TEXT: All PowerPoint presentations used in lecture will be made available through BlackBoard after the lecture has been presented in class. You should take adequate notes in class to supplement any lecture materials presented in class. I will attempt to post study questions for each unit as they are prepared. Readings from various sources will be assigned, both in class and through announcements on BlackBoard. Students are expected to keep up with all assignments and expected to use the internet to find additional information related to the subjects being discussed in class.

COURSE OBJECTIVES:

1. Students will understand basic plant genetics and principles of sexual and asexual plant propagation.
2. Students will be able to analyze site specific soil characteristics and provide recommendations for surface or subsurface soil modifications, if needed, in specific turf use situations.
3. Students will understand soil fertility principles and fertilizer chemistry such that nutrient deficiencies can be recognized and treated appropriately or prevented.
4. Students will learn to recognize the most common turfgrass disease, nematode and insect problems and suggest cultural, biological, and chemical means for prevention and control.
5. Students will understand the principles of soil water movement and irrigation principles.
6. Students will be able to analyze a variety of problem situations and formulate a plan of action to alleviate the problem or develop new solutions.

COURSE OUTLINE:

- I. Introduction and Review
 - A. Turfgrass Quality
 - B. Common Turf Species

- II. Turf Soils
 - A. Soil Physical, Chemical and Biological Properties
 - B. Soil Organic Matter
 - C. Thatch Biology and its Prevention and Control
 - D. Cultivation Practices and Their Purposes

- III. Turf Establishment and Propagation
 - A. Seeding - Sexual Propagation
 - B. Cloning/Sprigging/Sodding – Asexual Propagation

- IV. Nutrient Management
 - A. Plant Nutrition and Nutrient Deficiencies
 - B. Soil Testing
 - C. Turf Fertilizers and Their Properties
 - D. Environmental Aspects

- V. Water Management in Turf
 - A. Drainage Issues
 - B. Drought Physiology
 - C. Localized Dry Spots
 - D. Irrigation Principles

- VI. Turf Insects and Their Control

- VII. Turf Diseases and Their Prevention/Control

- VIII. Turf Weeds and Their Management

- IX. Grass Physiology and Local Environmental Interactions
 - A. Temperature
 - B. Light
 - C. Traffic

- X. Problem Solving and Group Exercises

Laboratory Topics

- 1. Turf Species Identification and Quality Evaluation
- 2. Turf Soils
- 3. Turfgrass Propagation
- 4. Turf Fertilizers and Application Procedures
- 5. Insect Identification
- 6. Disease Identification
- 7. Weed Identification
- 8. Pesticides – Properties and Proper Application
- 9. Possible Field Trips
 - a. New Caney ISD Athletic Fields

- b. Bentwater Golf Course
- c. Raven Nest Golf Course
- d. Texas A&M University Turf Research Center

COURSE EVALUATION:

This course consists of 2 hours lecture plus 2 hours laboratory per week. Three lecture exams will be given of which one is the final. All will carry equal weight with the lecture average comprising 65% of the course grade. The laboratory portion of the course grade (35%) will be derived from a combination of lab quizzes (15%), lab exercises (15%) and homework assignments (5%). If desired, students will be apprised of their class standing at any time during the semester.

RECOMMENDED OR REQUIRED READINGS:

Reading assignments covering materials on the internet or copies of reference materials handed out in class will be made regularly. Students are expected to keep up with readings and will be held responsible for them on examinations. Several additional publications and/or supplemental reading materials will be made available to students for purchase from Copy Time for which they are to use as study materials.

ATTENDANCE POLICY

My attendance policy will be in accordance to that established by the university. Attendance will be recorded daily. Please do not make a habit of arriving to class late.

ACADEMIC DISHONESTY:

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. For a complete listing of the university policy, see:

<http://www.shsu.edu/administrative/faculty/sectionb.html#dishonesty>

STUDENT ABSENCES ON RELIGIOUS HOLY DAYS POLICY:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Section 51.911 (a) (2) defines a religious holy day as: “a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20....” A student whose absence is excused under this subsection may not be

penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed. For a complete listing of the university policy, see:

http://www.shsu.edu/~vaf_www/aps/documents/861001.pdf

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the University. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance are expected to visit with the Office of Services for Students with Disabilities located in the Counseling Center. They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Counseling Center. For a complete listing of the University policy, see:

http://www.shsu.edu/~vaf_www/aps/811006.html

VISITORS IN THE CLASSROOM:

Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office