Degree Program:  B.S. in Turfgrass Science

Department: Crop Science

Curriculum Code(s) 11TFGBS

Objectives of the Degree Program:
To provide a basic and applied science education that prepares our graduates for professional careers in the turfgrass industry within North Carolina and around the world

Goals of the Degree Program:
To demonstrate a detailed understanding of turfgrass growth and development, and use this knowledge to develop appropriate management decisions.

To identify biotic and abiotic turfgrass stresses and make environmentally and economically sound recommendations for the management of these stresses.

To communicate proficiently and professionally.

Outcomes of the Degree Program:
Graduates will be able to develop economically and environmentally sound management plans for a wide range of turfgrass enterprises.

Graduates will be able to develop environmentally sound turfgrass pest management programs.

Graduates will be able to write reports and business correspondence in a manner acceptable in their professions.

Graduates will be able to prepare and confidently present oral reports.

Assessment Activity during the 2011-2012 Academic Year:

Outcome 1.Graduates will be able to develop economically and environmentally sound management plans for a wide range of turfgrass enterprises

Assessment for Outcome 1: CS 400 (Turf Cultural Systems), CS 465 (Turf Cultural Systems and Environmental Quality) and CS 470 (Advanced Turf Pest Management) are advanced TFG courses. These courses use case studies to encourage critical thinking skills that apply to turf management options. Grading rubrics for these assignments identify individual student technical competency and collective subject matter deficiencies. Students have direct feedback from these rubrics for self-improvement and data can be used to quantify program strengths and weaknesses.

Sample exam questions:

a) Ponting’s view of “A Green History of the World” alleges that advances in agriculture have led to the environmental dilemmas we currently face. Do you agree with him? List the details necessary to support your answer.

b) How is turfgrass management involved in environmental ethics.
In the name of environmental correctness, landscapes are becoming casualties. "Natural is better" has become a common anthem, while xeriscaping and native plantings are the fashion trends. To conserve water, reduce pesticide use and lower costs, many property managers have forsaken traditional lawns, trees, shrubs and flower beds. Their well-intentioned attempts to return their properties to nature, more often than not, can drive costs higher, use more water and require more labor to maintain a landscape that lacks the desired curb appeal. It is time to challenge misconceptions about landscaping before they become the norm.

The ideal landscape is not always a natural landscape, but it is a "sustainable" one.' Given what we discussed about sustainability, explain what Troutman means.

d) What are the goals for Best Management Practices (BMPs)?

e) Discuss the BMPs for turfgrass management in protecting water quality.
f) Discuss the BMPs for turfgrass management in practicing water conservation.

g) In detail, explain the difference between Land Use BMPs and Source Prevention BMPs.

h) What is IPM? What are the approaches and components of a program?

i) Read and summarize the following journal article from the turfgrass and environmental perspective: Environmental Toxicology and Chemistry, Vol. 21, No. 5, pp. 1076-1084.

Outcome 2. Graduates will be able to write reports and business correspondence in a manner acceptable in their professions.

Outcome 3. Graduates will be able to prepare and confidently present oral reports.

Assessment for Outcomes 2&3: CS 290, 400, and 465, all required courses for TFG students, require written and oral reports. These classes require students to develop and defend in front of their peers, economically and environmentally sound management plans (including fertility, pest management, and environmental impact assessment) for various turfgrass systems. Grading rubrics provide feedback to students and also allow us to evaluate the level of communication competency.

Overall Program Assessment Note: Assessment of all program goals and outcomes involves interaction with our graduates (3 to 5 years post-graduation) and with industry professionals who hire our graduates. The feedback from these individuals will be used to determine where program improvements can be made. We realize this is indirect assessment, but the interaction provides a comprehensive evaluation of program strengths and weaknesses. While grading rubrics in upper level capstone classes can provide evaluation of student competency of various disciplines (thus expected program outcomes), it cannot tell us whether a documented weakness is due to lack of proficiency in the subject or lack of effort from the student.