

Prepared by the Department of Natural Sciences & Life Fitness  
Date of Departmental Approval: February 5, 2007  
Date approved by Curriculum and Programs: November 14, 2007

Effective: Fall 2007

**1. Course Number: HOR104**  
**Course Title: Turf Management**

**2. Description:** An introduction to the establishment and maintenance of turfgrass. Turfgrass and weed identification, cultural practices and maintenance will be included. Insect and disease life cycles and control will be reviewed. Integrated pest management (IPM) will be emphasized.

**3. Student Learning Outcomes: (instructional objectives; intellectual skills):**

Upon successful completion of this course, students are able to do the following:

- Identify and describe cool season turfgrasses and their cultural requirements.
- Describe the functions and deficiency symptoms of the major nutrients essential for turf growth.
- Explain turfgrass growth and development and turf grass botany.
- Describe soil texture, structure, and pH.
- Recognize common turf problems.
- Describe fertilizers and fertilizing, lime and liming.
- Identify common turf insects and their lifecycle.
- Identify at least fifty common weeds and their life cycles and control.
- Identify common diseases of turfgrass and their lifecycle.
- Establish turf from seed and sod.
- Discuss turf pest management.
- Review the importance of aerating and dethatching turf.
- Explain proper turf mowing
- Explain proper turf irrigation.
- Prepare a turf maintenance program.

**4. Credits:** Three credits

**5. Satisfies General Education Requirement:** No

**6. Prerequisite:** None

**7. Semester(s) Offered:** Fall

**8. Suggested General Guidelines for Evaluation:** Course grading procedures are detailed on student handout. In summary, grades will be based on quizzes, mid term and final exams, a weed herbarium and final project.

**9. General Topical Outline (Optional):**

Weed Biology and Identification

- A. Identification of annual and perennial grass weeds
- B. Identification of annual and perennial broadleaf weeds
- C. Weed Management
- D. Herbicides

Turfgrass Classification

- A. Turfgrass anatomy
- B. Turfgrass growth and development
- C. Identification and classification of commonly used turfgrasses

The Turfgrass Environment

- A. Physical and chemical properties of soil
- B. Light requirements

### C. Water requirements

#### Turfgrass Maintenance

- A. Turf nutrition and fertilization
- B. Soil pH and limestone – requirements and rates
- C. Mowing, aerating and thatching
- D. Irrigation

#### Establishment of Turfgrasses

- A. Site preparation
- B. Planting procedures – seeding and sodding
- C. Renovation

#### Turf Insects

- A. Biology of turf insects
- B. Identification of turf insects
- C. Insect management

#### Turf Diseases

- A. Biology of turf diseases
- B. Identification of turf diseases
- C. Disease management