COMMON COURSE OUTLINE: Course discipline/number/title: HORT 2350: Integrated Plant/Pest Management

A. CATALOG DESCRIPTION
   1. Credits: 2
   2. Hours/Week: 1 hour lecture per week, 2 hours lab per week
   3. Prerequisites (Course discipline/number): ENGL 0980, MATH 0093
   4. Co-requisites (Course discipline/number): None
   5. MnTC Goals (if any): NA

   This course covers an introduction to identification and control of pests affecting the turf and landscape industry. A basic understanding of entomology, plant pathology, physiological, nutrition, mechanical, cultural, biological, and environmental factors affecting plants.

B. DATE LAST REVISED (Month, year): February, 2010

C. OUTLINE OF MAJOR CONTENT AREAS:
   This course covers an introduction to identification and control of pests affecting the turf and landscape industry. A basic understanding of entomology, plant pathology, physiological, mechanical, cultural, biological, and environmental factors affecting plants.

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
   1. Define “pests”.
   2. Define ecosystem.
   3. Define community.
   4. Define population.
   5. Name living (biotic parts) of a turf and landscape ecosystem.
   6. Name living (abiotic) parts of a turf and landscape ecosystem.
   7. Define single component affect of an ecosystem.
   8. List activities people perform when managing ecosystems.
   9. List examples of pests.
   10. Define “target pest”.
   11. Define carnivore.
   12. Define carrying capacity.
   13. Define competition.
   15. Define limiting factors.
   17. Define pesticide.
   18. Define predation.
   19. Define producer.
   20. Define species.
   22. Define integrated pest/plant management (IPM).
   23. Define pesticide toxicity.
   24. Define role of Environmental Protection Agency (EPA).
   25. Describe safe methods of pesticide storage.
   26. Describe the fate of pesticides in the environment.
   27. Determine the different types of pesticides and formulations.
   28. Explain “cultural practices”.
   29. Explain biological pest controls.
   30. Explain methods of measuring toxicity.
   31. Identify fungus pests.
   32. Identify insect pests.
   33. Illustrate pest “cycles”.
   34. List examples of limiting factors.
   35. List pesticide handling protective clothing.
D. LEARNING OUTCOMES (GENERAL): Continued. . . The student will be able to:

36. List the principles of integrated pest/plant management.
37. Define “integrated”.
38. Analyze a city park ecosystem.
39. Analyze a cornfield ecosystem.
40. Analyze a golf course ecosystem.
41. Analyze a greenhouse ecosystem.
42. Analyze a home yard ecosystem.
43. Analyze a nursery ecosystem.
44. Analyze a pond ecosystem.
45. Analyze a vegetable garden ecosystem.
46. Analyze pesticide labels.
47. Examine pesticide regulations and the Minnesota Department of Agriculture.
48. Determine local, state, and federal pesticide regulations.
49. Explain pesticide applicator licensing.
50. Identify symptoms of pesticide poisoning.
51. Perform IPM inspections.
52. Show the effect of plant or animal limiting factors on population growth.
53. Prepare an Integrated Pest/Plant Management Plan.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
1. Tests
2. Quizzes
3. Lab work
4. Other miscellaneous assignment
5. Class participation

G. RCTC CORE OUTCOME(S) ADDRESSED:
- Communication
- Critical Thinking
- Global Awareness/Diversity
- Civic Responsibility
- Personal/Professional Accountability
- Aesthetic Response

H. SPECIAL INFORMATION (If any): None