PLANT AND SOIL ECOLOGY — LAHT 1050

A. Course Description

- **Credits:** 3.00
- **Lecture Hours/Week:** 3.00
- **Lab Hours/Week:** 0.00
- **OJT Hours/Week:** 0
- **Prerequisites:** None
- **Corequisites:** None
- **MnTC Goals:** None

This course covers the study of the biology of higher plants, including morphology, physiology, and taxonomy. Emphasis is placed on knowledge relevant to practitioners of the landscape horticulture field.

B. Course Effective Dates: 8/21/17 – Present

C. Outline of Major Content Areas

As noted on course syllabus

D. Learning Outcomes

1. Describe flower morphology
2. Describe fruit morphology
3. Describe leaf, stem and root morphology
4. Describe plant adaptations
5. Describe plant breeding genetics
6. Describe plant cell structure
7. Describe pollination and fertilization
8. Describe seed dispersal
9. Describe seed structure and germination
10. Explain mineral nutrition in plants
11. Explain photosynthesis
12. Explain plant hardiness
13. Explain requirements for plant growth
14. Explain respiration
15. Explain vascular functions
16. Explain water relations in plants
17. Gain experience in soil sampling and testing
18. List plant growth regulators and photoperiod responses
19. Soil Origin and Development
20. Soil classification
21. Soil organisms and carbon cycling
22. Summarize history of plant science
23. Summarize plant taxonomy and classification
24. The importance of Soil
25. The importance of organic matter in soil
26. Understand the importance of soil fertility
27. Understand the importance of soil fertility and the use of fertilizers
28. Understand the physical properties of soil
29. Understand the soil and water relationships

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

F. Learner Outcomes Assessment
   As noted on course syllabus

G. Special Information
   None noted