SUSTAINABLE TURF MANAGEMENT — LAHT 1325

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 class investigates grass biology, morphology, anatomy, and ecology. Students learn to identify common turf, utility, pasture, and native grasses and how these plants fit into their environment. Students learn to design custom seed mixes for lawns, recreational fields, golf courses, prairie and pasture applications. Students will grow a variety of grass species in the greenhouse. Students will also gain knowledge and experience in turf, prairie, and pasture maintenance, common diseases associate with grasses, and new low-input management regimes. Emphasis is placed upon moving away from the traditional high-input lawn and towards a more beneficial lawn in terms of nutrient regulation, biodiversity and being pollinator friendly.

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

C. Outline of Major Content Areas

   As noted on course syllabus

D. Learning Outcomes

1. Comprehend and apply the principles of cool season turfgrass fertilization including: selection of fertilizer materials, fertilizer rate calculation and timing of fertilizer applications. Explain effects of fertilization and correctly apply fertilizers.
2. Comprehend the relationship between soil erosion and nutrient leaching on public waterways, and how turf management eliminates this threat
3. Comprehend turfgrass management strategies that sequester CO2
4. Design low maintenance turfs, including low-frequency mow turfs and low-input synthetic fertilizer and pesticide turfs.
5. Design site specific turfs for pastures and hay meadows for livestock raising
6. Design utility, recreational and residential turfs
7. Develop custom turfgrass seed mixes that are appropriate to site specific environmental attributes and meet owner expectations
8. Develop turfs that include native plants species in their design
9. Explain and apply practices for successful establishment, and renovation of turfgrasses.
10. Explain how cultural, biological and chemical methods can be combined to successfully manage turfgrass and landscape pests with minimal impact to non-target organisms.
11. Identify common and unique turf grass species and explain their application via site specific environmental tolerances and objectives
12. Identify major diseases, insects, weed species associated with turfgrass and develop IPM programs to manage these pests.

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

F. Learner Outcomes Assessment

   As noted on course syllabus

G. Special Information

   None noted