ECOLOGICAL RESTORATION — LAHT 1720

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

Introduction to Ecological Restoration. Students will be introduced to the fundamentals of Ecological Restoration including gaining knowledge and experience in knowing the difference between native and non-native vegetation, conducting site assessments, designing site preparation and installation plans, designing custom seed mixes, understanding plant communities, and understanding different applications including prairie, wetland, savanna, lake, and forest restoration.

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

C. Outline of Major Content Areas

1. Current definition/s and the emergence of restoration in North America
2. Develop a restoration plan for an off-site customer, including historic interpretation, current site conditions, site preparation, species list, installation and maintenance plans
3. Develop site specific seed mix
4. Discuss large scale case studies from around North America (e.g. Everglades, Chesapeake Bay, Great Lakes Restoration, and Upper Mississippi River Basin)
5. Ecological terminology and theory applicable to restoration
6. Field Trip
7. Gain knowledge in small scale restoration including: pollinator gardens, rain gardens, etc.
8. Gain knowledge of Native Plant Communities
9. Importance of restoration to human survival/livability
10. Land manager speakers, DNR, Dakota County Parks., etc
11. Learn about theme and variation of restoration, including: permaculture, silvo-pasture, low maintenance lawns.
12. Learn different types of restoration including: shoreline, lake restoration, Savanna, and Forest restoration
13. Natural History: Modeling former ecosystem structure and function
14. Practical experience campus restoration project
15. Student group presentations to class
16. Tools of the trade
17. Vocational speakers, field trip to Prairie Restoration Inc. Cannon Falls Office

D. Learning Outcomes

1. Conduct a site analysis and organize data into a written coherent management plan that addresses site preparation, installation and management
2. Experience several different types of restoration (e.g. shoreland, savanna, riparian, etc.)
3. Gain a better understanding of Midwest natural history
4. Gain knowledge practice in using ecological theory to write better management plans
5. Gain skills in group work including writing reports, plan and presentations.
6. Identify 50 native plants (herbaceous, grasses, shrubs and trees)
7. Know and describe the differences between native and non-native vegetation
8. Know and describe the differences between restoration, reclamation, ecological engineering, and permaculture.
9. Know several local restoration projects and employment

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

F. Learner Outcomes Assessment

As noted on course syllabus

G. Special Information

None noted