Bemidji State University

BIOL 3830: Aquatic Plants and Algae

A. COURSE DESCRIPTION
   Credits: 4
   Lecture Hours/Week: *.*
   Lab Hours/Week: *.*
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None
   Survey of the morphology, physiology, taxonomy, systematics, and ecology of algae and aquatic vascular plants. Lecture, laboratory, and field study. Prerequisites: BIOL 1211 and BIOL 1212.

B. COURSE EFFECTIVE DATES: 08/22/2016 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Algae: "Minor" Algal Division
   2. Algae: Cyanobacteria, Chlorophyta, Chromophyta, Rhodophyta
   3. Aquatic Plant Habitats
   4. Aquatic Vascular Plants & Algae
   5. Asexual/Sexual Reproduction
   6. Benthic Algal ecology
   7. Bryophytes
   8. Classification/Alternation of Generations
   9. Emergent: Lake, Sedge Meadows, Peatlands
  10. Evolution of Aquatic Plants
  11. Growth Adaptations
  12. Gymnosperms
  13. Heterophylly
  14. Invasive Species
  15. Medicinal/Food Properties of Select Aquatic Plans
  16. Physicochemical Environments
  17. Phytoplankton Ecology
  18. Phytoplankton
  19. Plant ID
  20. Pteridophytes
  21. Submerged
  22. Use of Taxonomic Keys
D. LEARNING OUTCOMES (General)
1. understand the major taxonomic groups found in aquatic systems.
2. understand ecological relationships among organisms and between organisms and the environment.
3. develop skills in the use of laboratory and field techniques commonly used in biology.
4. evaluate the outcomes of scientific experiments and surveys via mathematical and statistical analysis.
5. understand and explain the mechanism of natural selection.
6. identify the fundamental characteristics of organismal structure and function within the kingdoms of life and within select phyla within those kingdoms.
7. demonstrate the ability to explain the ecological relationship between organisms and their environment.
8. develop the skills and broad knowledge base necessary to make complex decision when assessing aquatic systems.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
None

F. LEARNER OUTCOMES ASSESSMENT
As noted on course syllabus

G. SPECIAL INFORMATION
None noted