A. Course Description

Credits: 3

Prerequisites: MATH 115 College Algebra
OR
MATH 120 Precalculus

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: Goal LS - Upper Division Liberal Studies, Goal 10 - People/Environment

This course examines the ecology of environmental pollution from biological, paleolimnological and international perspectives. Topics include acidification, eutrophication, metal and organic contamination, species introductions, and climate change. Students develop skill with structured decision making, risk assessment and public presentation. Intended for biology majors, environmental science and other qualified students.

B. Course Effective Dates: 08/14/2011 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Explain and apply scientific knowledge in pollution ecology, both theoretical and experimental, at the upper division level.
2. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
3. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
4. Propose and assess alternative solutions to environmental problems.
5. Articulate and defend the actions they would take on various environmental issues.
6. Read and interpret primary scientific literature in pollution ecology.
7. Recall, explain and apply the concepts, knowledge and vocabulary of pollution ecology at the level necessary for success in graduate study in this field.

E. Learning Outcomes (MN Transfer Curriculum)

Goal LS - Upper Division Liberal Studies

None

Goal 10 - People/Environment

1. Propose and assess alternative solutions to environmental problems.
2. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
3. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
4. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
5. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
6. Articulate and defend the actions they would take on various environmental issues.
G. Special Information

Note: Enrollment limited to Biology, Environmental Science and Life Science Teaching majors only, except by instructor permission. First day attendance required except by instructor permission.