A. Course Description

Credits: 3

Prerequisites: CHEM 111 General Chemistry I AND GEOL 118 Environmental Geology

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: None

Water use and management lie at the core of human civilization and of environmental quality. The first half of this course investigates the physical, chemical, and geological aspects of hydrology that determine the availability of water resources around the globe. The remainder of the course investigates the management of water resources in municipal and agricultural settings, wastewater management and treatment, water protection legislation, and water management case studies. The current and expected future impacts of climate change on water resources will be considered throughout the course.

B. Course Effective Dates: 12/15/2016 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Discuss the basic principles of hydrological science and their influence on the availability of water resources around the globe.
2. Engage in critical thinking about the effects of federal, regional, and local policy on water resources
3. Understand the role of applied and empirical science in informing water management policy
4. Analyze examples of effective water management practices and the factors that contribute to their success
5. Analyze examples of unsuccessful water management practices and the factors that contribute to failure
6. Interpret data concerning the impact of recent climate change, and evaluate the anticipated impacts of future climate change on local and regional hydrology in the Upper Midwest and in other key regions of the world.

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information

None