Water Science (WATER)

Courses

WATER 610. Agriculture-Water Nexus in Wisconsin. 3 Credits.
This course uses different forms of agriculture in the context of variable geomorphology, climatology, and hydrology to provide students with a greater understanding of the interconnected processes relevant to agriculture and water management (both quantity and quality) across Wisconsin. Students will be introduced to the nexus of agriculture and water broadly through examples and case studies in Wisconsin. The topics covered will leverage ongoing ag-water quality monitoring and research projects and will engage students with agricultural and water resource management practices used to mitigate the impacts of agriculture on water quality and quantity.
P: CHEM 211 and either GEOSCI 202 or WATER 201
Spring.

WATER 611. Agriculture-Water Nexus Field Experience. 1 Credit.
This course uses different forms of agriculture, variations in physiography, and differences in water resource systems to provide students with a greater understanding of the relationships between agriculture and water. Students and faculty will explore the nexus of agriculture and water through case studies of the water/agriculture connection across Wisconsin. The field course stops will leverage ongoing quality monitoring and research projects and will engage students with agricultural and resource management professionals and producers working to mitigate the impacts of agriculture on water quality/quantity Wisconsin. Course is repeatable for credit if topics differ; may be taken 3 times for a total of 3 credits.
Fall and Spring.

WATER 644. Aqueous Geochemistry. 3 Credits.
This class will explore the theory and application of aqueous geochemistry principles to the study of surface and groundwater systems at low to moderate temperatures. The class will focus on inorganic processes including the hydrologic cycle, chemical weathering, chemical activities in natural waters, thermodynamics, kinetics, acid/base equilibria, carbonate chemistry, acid water systems, heavy metals, and redox reactions.
P: GEOSCI 202, CHEM 211 & CHEM 212
Fall Even.