

MAJOR IN WATERSHED SCIENCE AND SUSTAINABILITY, WATERSHED SCIENCE CONCENTRATION

The Watershed Science concentration focuses on the physical, chemical, social, and biological factors that affect the quantity, quality, and movement of water. The concentration includes field, laboratory, and classroom experiences. Students build a strong foundation in the physical and natural sciences before advancing to upper-division coursework in snow hydrology, land use and water quality, and watershed problem analysis. Graduates leave with high-level expertise to effectively manage watersheds across diverse sectors.

Learning Objectives

Upon completing this concentration, students will be able to:

1. Apply core principles of watershed science and sustainability, spanning climate processes, hydrology, water quality, and water management, to real-world challenges.
2. Assess how land use and water use decisions shape hydrologic processes and water quality outcomes.
3. Collect, analyze, and interpret complex meteorological, hydrological, and water quality datasets to drive informed management decisions.
4. Diagnose watershed problems and sustainability challenges using geospatial analysis, field investigation, sensor data, and predictive modeling.
5. Communicate technical findings and solutions with clarity and confidence.