

PH.D. IN WATERSHED SCIENCE

Sustainable management of freshwater resources is an increasingly important and complex challenge in Colorado and worldwide, and we need scientists who can address complex water issues. The watershed science program focuses on how water moves through the landscape, what factors affect its quality, and how to manage water resources. Students in the Ph.D. in Watershed Science program work closely with research scientists in the classroom, laboratory, and field on both basic and applied watershed science research. Students are exposed to cutting-edge field, data analysis, and modeling techniques through flexible programs of study and access to a breadth of water-related courses throughout the university. Students also have opportunities to participate in seminars and field courses.

The Ph.D. in Watershed Science requires 72 credits, most of which are research credits. Coursework includes in-depth classes in the student's area of research, as well as classes that expand into other disciplines. Each student develops an individualized program of study with the guidance and approval of the student's graduate committee. Students in the Ph.D. program develop new contributions to the literature of the watershed science discipline.

[Students interested in graduate work should refer to the Graduate and Professional Bulletin.](#)

Learning Objectives

Upon successful completion, students will have valuable skills in the following areas:

1. **Systems understanding:** Identify and distinguish systems components and their interactions to explain, illustrate and analyze system understanding.
2. **Watershed science content and principals:** Apply complex watershed science principals to complex problems to develop sustainable solutions.
3. **Problem solving:** Work in teams and communicate effectively using a diverse set of analytical and applied tools.
4. **Interdisciplinary understanding:** Work in an interdisciplinary environment and demonstrate respect for alternative points of view.
5. **Research:** Contribute new research and understanding of watershed processes and issues to the published literature of the discipline.