

GRADUATE CERTIFICATE IN WATER RESOURCES

The Water Resources Certificate provides the practical knowledge and applied skills needed to address real-world water issues from local governance and community water planning to broader state, national, and international policy contexts.

Available fully online, the Certificate integrates case studies and exercises drawn from water challenges across Colorado, the United States, and beyond, ensuring graduates are prepared to make an immediate impact in this essential field.

Please visit the CSU Online website (<https://www.online.colostate.edu/certificates/water-resources/>) to learn more about this certificate.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (<https://colostate-curr.courseleaf.com/general-catalog/graduate-bulletin/>).

Learning Objectives

Upon successful completion, students will be able to:

1. **Apply Watershed and Hydrologic Principles:** Analyze and apply core concepts of watershed function, hydrologic processes, and the interactions between surface and groundwater systems within a sustainability framework.
2. **Evaluate Water Policy and Legal Frameworks:** Interpret and assess key water laws, rights, and governance structures in Colorado, across the U.S., and internationally, with attention to equity, sustainability, and adaptive management.
3. **Analyze Water Data Using Quantitative Tools:** Collect, interpret, and communicate water-related data using spreadsheets, statistical software, and geographic information systems (GIS) to inform decision-making and planning.
4. Formulate integrated water planning strategies by evaluating the scientific, legal, and social dimensions of diverse water resource challenges.

Requirements Effective Fall 2026

Additional coursework may be required due to prerequisites.

Code	Title	Credits
WR 512	Water Law for Non-Lawyers	3
WR 513	Water Sustainability in the Western US	3
WR 514	GIS and Data Analysis in Water Resources	3
Choose one of the following courses:		3
NR 505	Concepts in GIS	
WR 511	Water Resource Development	
WR 574	Advanced Snow Hydrology	
Program Total Credits:		12

*This certificate may have courses in common with other graduate certificates. A student may earn more than one certificate, but a given course may be counted only in one certificate.