How to apply

1) Apply directly to the department in which you want to pursue a PhD degree. A complete list of graduate programs in WATER research available at Colorado State University can be found at:

http://I-WATER.ColoState.edu

2) Also apply directly to the I-WATER program. Download and complete our application form and e-mail it to: i-water@engr.colostate.edu

Application review starts in January.

For more information, visit our website:
http://I-WATER.ColoState.edu

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Organizing Concept
Water management decisions generate conflicts between humans, ecosystem needs, and political jurisdictions. There is a critical need for scientists who can address three important questions:

1) how can limited fresh water be distributed equitably in a socially acceptable and sustainable framework;

2) what are the relative ecological and societal benefits and drawbacks of management actions;

3) how can science provide answers for wise water management decisions?

The I-WATER program emphasizes interdisciplinary research by teams of physical scientists, social scientists, and management experts. Our research themes involve integration of hydrologic, atmospheric, ecosystem, and social sciences within the scope of freshwater resources. I-WATER features problem-focused research to bridge basic and applied science by combining fundamental research on scientific problems with application of scientific knowledge to actual resource issues.

Core Courses
I-WATER Fellows will enroll in new interdisciplinary core courses on:
- Quantitative eco-hydrology
- Land surface atmosphere interactions
- The scientific basis for freshwater sustainability
- Water and environmental integrated research

I-WATER Fellows will enroll in gateway courses and participate in interdisciplinary seminars and workshops for integration across disciplines.

Internships
Advanced I-WATER scholars will be encouraged to undertake internships. The internships will typically occur during the third year. Internship opportunities at: U.S. Bureau of Reclamation; U.S. Geological Survey; U.S. Forest Service NCAR; NASA Goddard Space Flight Center; ARS – U.S. Department of Agriculture; Riverside Technology, Inc.; Swiss Federal Institute of Technology, Zürich.

Funding
I-WATER Fellows receive three years of funding, two of which are supported by NSF IGERT funds at $30,000 per year plus tuition and fees, and a travel allowance to attend conferences.

Research Themes
Four major research themes serve as the foundation for I-WATER Program at CSU:

I - Hydrologic, atmospheric, and ecologic systems (HAE): Coupling atmospheric, ecologic, and hydrologic processes
- Understanding the two-way interactions between atmospheric and land-surface processes is critical to understanding climate change, vegetation function, and watershed hydrology

II - Hydrologic, ecologic, and socio-economic systems (HAS): Defining changes in water, nutrients and sediment transports due to variability and change in climate/weather, land cover/land use, and water resources management.
- Understanding ecosystem resilience and human economic activity that bear on the hydrologic cycle at regional scales

III - Hydrologic, atmospheric, and socio-economic systems (HES): Regional, integrated assessment of vulnerability of hydrologic and water resource systems, ecologic, and socio-economic systems to environmental variability and climate change.

The fourth Research Theme arises from the need for integration and synthesis:

IV - WATER: Research integration and synthesis