Hydrologic Sciences Graduate Program Application

Please complete the following form and email to: hydrogrd@colorado.edu or send it to: Kaelin Cawley at INSTAAR, 450 UCB, Boulder, CO 80309-0450.

Also attach:
1) a letter of intent describing your research interests including which aspect of hydrologic sciences (physical, chemical or biological) you wish to pursue and
2) a copy (official or unofficial) of your undergraduate and graduate transcripts.

Today’s Date ___________________  Intended Graduation Date ___________________

Name ___________________________  Student ID Number _____-_____-_______

Email Address ____________________  Phone Number ______________________

Home Department ___________________  Faculty Advisor ____________________

Undergraduate Prerequisites:
All students entering the program are expected to have had taken a standard year-long sequence of courses in calculus and physics, plus upper division courses in differential equations and fluid mechanics.

The math prerequisite can be satisfied by taking APPM 2360: Introduction to Differential Equations and Linear Algebra. The fluid mechanics prerequisite can be satisfied by taking one of several courses, including CVEN 3313: Theoretical Fluid Mechanics, GEOL 5110: Geomechanics, ATOC/ASTR 5400: Introduction to Fluid Mechanics, or GEOL 5700: Sediment Transport Mechanics. These supplementary courses may count toward your overall graduate degree, but only count as prerequisites toward the graduate certificate in hydrology.

You are encouraged to contact the Graduate Program Coordinator about your application to the program if you have deficiencies in either of these areas. Please indicate your plan to meet these prerequisites as part of your application, which will be considered by the Hydrologic Sciences Steering Committee along with your planned coursework and thesis research.

Please indicate when and where you have taken these pre-requisites or when you plan to take them:

Semester and Year Course number and University / College

Fluid or Geo mechanics/Sediment Transport: ____________________ ____________________

Differential Equations/Linear Algebra: ____________________ ____________________

*You are required to take 2 Core Courses and 3 electives from the pre-approved list that follows this form**. If you feel another course would be appropriate to your studies, you may include that course here and explain why you are requesting that course in your letter of intent.

Please list the courses to be taken for the certificate program and when they were taken or are planned.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Semester</th>
<th>Year</th>
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<tbody>
<tr>
<td></td>
<td>Hydrologic Sciences Core Courses</td>
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<tr>
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<td>Hydrologic Sciences Elective Courses</td>
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** A list of courses is attached to this application, but also visit: http://hydrosciences.colorado.edu/academics/courses.php

Master of Science Students, please provide your thesis topic and the Hydrologic Sciences Faculty member that will be serving on your committee, if you have one.

Thesis Topic: ____________________

Faculty Committee Member: ____________________

PhD Students, please provide your dissertation topic and the 2 Hydrologic Sciences Faculty members that will be serving on your committee, also indicate if you are applying for the certificate or the PhD in Hydrologic Sciences

Dissertation Topic: ____________________

Faculty Committee Members: ____________________ and ____________________

Certificate ____________ or PhD Program ____________

Student’s Signature ____________________  Faculty Advisor’s Signature ____________________

For more information, visit http://hydrosciences.colorado.edu or email hydrogrd@colorado.edu
List** of Courses for the Hydrologic Sciences Graduate Certificate and PhD Programs

Prerequisites (1 of each needed)

Differential Equations:
Intro to Diff. Equations and Linear Algebra  APPM 2360
Fluids:
Sediment Transport Mechanics  GEOL 5700
Theoretical Fluid Mechanics  CVEN 3313
Geomechanics  GEOL 5110
Intro to Fluid Mechanics  ASTR/ATOC 5400

Core Courses (2 needed)

Environmental Fluid Dynamics  CVEN 5313
Intro to Fluid Mechanics  ASTR/ATOC 5400
Hydrology  CVEN 5333
Groundwater Hydrology  CVEN 5353
Adv. Hydrogeology & Modeling  GEOL 5080
Snow Hydrology  GEOG 5321
Surface Water Hydrology  GEOG 5241
Atmospheric Processes and Climate  ATOC 5600
Terrestrial Hydrology  GEOL 5700

Additional Courses (3 needed)

Watershed Biogeochemistry  GEOG 5241
Environmental Eng. Chemistry  CVEN 5404
Global Biogeochemical Cycles  GEOL 5840
Advanced Aquatic Chemistry  CVEN 6404
Aqueous and Environ. Geochem.  GEOL 5280
Geomechanics  GEOL 5110
Glaciers and Permafrost  GEOG 5100
Fluvial Geomorphology  GEOG 5251
Sediment Transport Mechanics  GEOL 5700
Transport & Dispersion  CVEN 5343
Applied Groundwater Modeling  CVEN 5383
Stream Ecology  EBIO 5020
Limnology  EBIO 5030
Applied Stream Ecology  CVEN 5323
GIS Programming  GEOG 5303
Modeling Hydrologic Systems  CVEN 5363
Numerical Methods in Civil Eng.  CVEN 5537
Quantitative Methods  CVEN 5454
Oceanography  GEOL 5060
Paleocean. and Paleoclimate  GEOL 5430
Marine Chemistry and Ocean.  GEOL 5270
Remote Sensing of the Environ.  GEOG 5093/GEOL 5093
Quantitative Methods  GEOG 5023
Aquatic Surface Particles  CVEN 6414
Porous Flow & Transport  CVEN 6383
Intro. to Atmospheric Dynamics  ATOC 5050
Desert Meteorology and Climate  ATOC 5750
Mountain Meteorology  ATOC 7500
The Arctic Climate System  GEOG 5271

Please check our website for course updates:  http://hydrosciences.colorado.edu/academics/courses.php