



Delaware Water Resources Center (DWRC) interns

experience a complete research or education project. Students, in cooperation with faculty advisors, identify a topic of interest, develop the approach to accomplish their objectives, conduct the project, analyze the results, and share their findings and accomplishments with the academic and water resource communities. **DWRC** financial support helps students to apply classroom education in “hands on” projects addressing contemporary regional water quality concerns. Water Resources interns embark on a program of self-discovery permitting informed choices about future undergraduate research, graduate education opportunities, and careers in water science, policy, and management.



Delaware Water Resources Center

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Photos by Danielle Quigley

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<http://ag.udel.edu/dwrc/>

Undergraduate Internships In Water Resources 2009



Delaware Water Resources Center
at the University of Delaware

Delaware Water Resources Center (DWRC) Undergraduate Internships in Water Resources provide a unique opportunity for undergraduate students and faculty to become directly involved in research and education projects addressing water resource related issues of critical importance to Delaware and the Mid-Atlantic region.

Eligibility

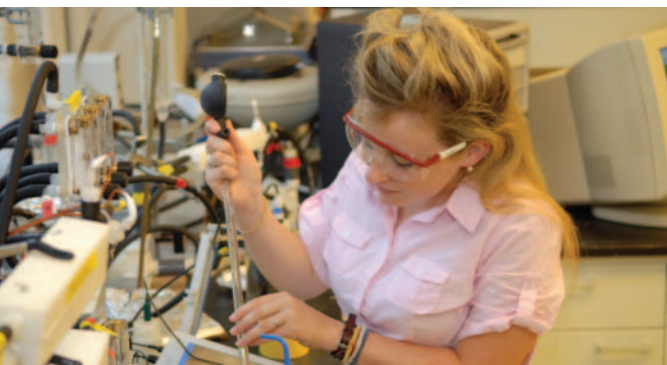
All undergraduate students enrolled at an institution of higher learning in Delaware may apply, except for those graduating at the end of the spring semester. All students must have the active support of a faculty advisor and a minimum GPA of 3.0.

Program Details and Deadlines

The **DWRC** provides \$3500 in financial support for each undergraduate internship. Students typically work ten weeks full-time during the summer and additional hours during the fall and winter. Academic credit for internships is also possible but must be coordinated with the student's faculty advisor. Interns must submit a written report on their project and participate in a poster session at the UD spring undergraduate research conference. The application deadline for 2009 DWRC internships is March 27, 2009. For details on past projects, current faculty advisors, application materials to submit, and requirements for reports and posters, visit the **DWRC** website:

<http://ag.udel.edu/dwrc/>

Students are encouraged to contact Maria Pautler (mpautler@udel.edu, 302-831-0847) at the **DWRC** to express interest and to receive assistance identifying a project and advisor.



The DWRC Internship Program

All DWRC interns conduct a project consistent with the **DWRC's** research and educational interests (listed at right) with the support of a faculty advisor from one of our **co-sponsor organizations**:

University of Delaware (UD) Water Resources Agency (<http://www.wr.udel.edu/>) offers a co-sponsored internship focusing on water resource policy.

UD College of Agriculture and Natural Resources: (<http://ag.udel.edu/>). A total of three co-sponsored internships are offered. Two projects are available in the departments of *Animal and Food Sciences*, *Entomology and Wildlife Ecology*, *Bioresources Engineering*, *Food and Resource Economics*, or *Plant and Soil Sciences*. The *Department of Plant and Soil Sciences* offers an additional **DWRC** internship that specifically relates soils, plants, and land management to water use and quality.

UD College of Arts and Science: (<http://www.art-sci.udel.edu/>). Students can conduct internship projects in chemistry, economics, geography, geology, political science, or other subjects closely related to water resources.

UD College of Engineering: (<http://www.engr.udel.edu/>). Internships can be developed in areas such as *Chemical Engineering*, *Civil & Environmental Engineering*, or *Mechanical Engineering*.

UD College of Marine and Earth Studies: (<http://www.ocean.udel.edu/>). Internships are available in *Marine Biology and Biochemistry*, *Marine Policy*, *Oceanography*, or *Physical Ocean Science & Engineering*.

UD Institute of Soil and Environmental Quality (<http://ag.udel.edu/iseq/>) provides an internship for students interested in understanding how soil science relates to the environmental aspects of water resource management.

Delaware State University (<http://cars.desu.edu/>) faculty support internships in the areas of agriculture, natural resources, aquaculture, and aquatic ecology.

Delaware Geological Survey (<http://www.udel.edu/dgs/>) offers a co-sponsored internship specifically focusing on hydrogeology. Students can develop an internship project with researchers working on topics such as ground water supply and water quality.

Delaware Department of Natural Resources and Environmental Control (<http://www.dnrec.delaware.gov/Pages/default.aspx>) offers a co-sponsored internship in soil and water conservation.

Topics in water resources research and education of interest to the DWRC:

- Water pollutants - their sources, fate, cycling, and transport
- Water supply, demand, and conservation
- Groundwater identification and protection
- Nutrient management and water quality
- Management and control of storm water runoff
- Treatment and re-use of wastewaters
- Protection and restoration of wetlands
- Pathogens, public health, and water quality
- Water resources topics in marine studies
- Water resources policy issues

How to Apply for a DWRC Internship

Select your topic: **DWRC** internships are for students from a wide variety of backgrounds and research interests. Titles of past projects can be found at <http://ag.udel.edu/dwrc/publications/DWRCinternshipspotlightbrochure.pdf> and include:

The Link Between Land Use and Stream Health (Institute for Public Administration, Water Resources Agency); Implementation of Riparian Buffers (Political Science); Chemistry of Phosphorus in the Erodible Fraction of Delaware Soils (Agriculture & Natural Resources); Factors Affecting West Nile Virus Transmission from Storm Water Retention Ponds and Constructed Wetlands (Agriculture & Natural Resources); Consumer Attitudes Toward Bottled Water (Consumer Studies); A Nutrient Management Education Program for Delaware Youth (UD Cooperative Extension); Characterization of Viral Communities in Estuaries (Marine Studies); Accelerated Pollutant Biodegradation (Civil & Environmental Engineering); Regulating Wetlands in a Changing Legal Environment (Food & Resource Economics); Rain Gardens for Water-Friendly Landscape Design (Plant and Soil Sciences); Design and Field Testing of Advanced Remote Surveillance Systems for Delaware's Shallow Depth Coastal Estuaries (Engineering and DNREC); Hydrogeology of the Unconfined Aquifer in Sussex County (Delaware Geological Survey); and Assessing the Feasibility of Using Fish Assemblages as Biological Indicators of Water Quality in Delaware Streams (Delaware State University).

Find a Faculty Advisor and Apply to the DWRC: Faculty contacts and their research interests are also listed on the **DWRC** website, under "Courses and Faculty". Call the **DWRC** (302-831-0847) to discuss water-related topics not found on the website. Students should contact potential faculty advisors to discuss and identify a project topic of mutual interest and then submit their application to the **DWRC** by the deadline (**March 27, 2009**). Faculty may not advise more than two interns concurrently and must provide matching funds consistent with **DWRC** guidelines, usually by committing a percentage of their time to the intern's project.