

## UD, NCC vo-tech district announce NSF project

### HIGHLIGHTS

UD, NCC vo-tech district announce NSF project

Future Blue Hens flock to Ag campus

Career Fair a hit with candidates, recruiters

Prof attends reception for Chinese president

UD students honored for service in Mississippi

UD student takes top organic chemistry honor

Study assays opinion on offshore wind power

Jastak-Burgess Hall honors UD benefactors

DeLeon honored by American Society of Andrology

Filmmaker focuses on tolerance at Unity Day address

Hundreds join Unity Day fete on The Green

Police arrest two in robberies of students

Police investigate Embassy Suites robbery

UD in the News, April 21

National Campus Bestsellers, April 21

Newark Police release surveillance image

Artists' talk opens photo exhibit

International Night spotlights diversity

Police investigate three incidents in Newark

UD student named 2006 Truman Scholar

Author Ron Chernow to speak at Commencement

5:38 p.m., April 25, 2006--The University of Delaware and the New Castle County Vocational Technical School District have announced the receipt of a \$1.7 million National Science Foundation grant to improve science education.

The proposal seeks to improve science education in vocational technical high schools in northern Delaware through collaborative learning and coteaching in biology, computer science, chemistry and biochemistry, engineering, earth science, and physics and astronomy.

Each year, nine UD graduate fellows will work one-on-one with nine district science teachers, according to George Watson, senior associate dean of UD's College of Arts and Sciences and principal investigator, who said he hopes the project will eventually serve as a national model for science education in vocational technical high schools.

As one of the project's senior personnel, Amelia Quillen, science specialist for the New Castle County Vocational Technical School District, will work with UD personnel to coordinate and to implement the grant's activities. Kathryn Scantlebury, UD associate professor of chemistry and biochemistry, is a co-principal investigator and will serve as project manager.

"This project provides the opportunity for science, technology, engineering and mathematics (STEM) graduate students to develop an understanding of the current issues impacting science education by working with high school science teachers and students," Scantlebury said. "We appreciate the enthusiastic support of New Castle County Vocational Technical School District's science teachers and district personnel and we look forward to working with them on the project."

The project will extend ongoing elements of UD graduate education and partnerships with the district to develop a model program for STEM graduate students at the University.

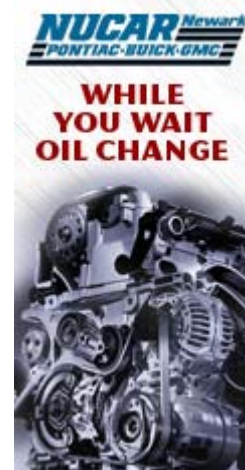
"This is a fantastic opportunity for our teachers to enhance instruction by working with people who possess great amounts of expertise in their fields," Quillen said. "We'll investigate which instructional technologies are most effective, for example, by assessing how well students transfer their learning and apply it in other settings."

Watson said the project will focus on three main components: problem-based learning, coteaching and lesson study and quantitative reasoning skills in the sciences.

UD is a national leader in problem-based learning, a cooperative and creative learning experience in which students work in groups to seek solutions to real world problems. In the project, UD fellows will collaborate with teachers to develop and teach problem-based learning activities that support student



UD faculty and grad students involved in the project include (from left): George Watson, senior associate dean of UD's College of Arts and Sciences and principal investigator; John Madsen, associate professor of geology; Genevieve Griffiths; Brian Danysh; Katherine Skalak; Kathryn Scantlebury, associate professor of chemistry and biochemistry and co-principal investigator; Anissa Brown; Thomas Madura; Deborah Allen, associate professor of biological sciences; and Marguerite McDonald.



[More news on UDaily](#)

[Subscribe to UDaily's email services](#)



UDaily is produced by the  
Office of Public Relations  
150 South College Ave.  
Newark, DE 19716-2701  
(302) 831-2791

understanding of challenging, standards-based science concepts.

Coteaching, in which fellows will join with classroom teachers in presenting lessons, will provide the graduate students the opportunity to develop an in-depth insight, understanding and appreciation for the complexities and nuances of teaching science in public schools. Lesson study creates a school-based community of learners focused on improving classroom practice using evidence of student understanding as a guide.

Also, fellows will work with teachers to implement curricula that aim to strengthen students' ability to use quantitative reasoning to make predictions and judgments in science-related applications.

The project has broader implications, providing fellows and teachers with opportunities to know and reflect on current issues in education generally, and science education specifically, with underrepresented students.

As well, it will create a learning community for both fellows and teachers to develop content and pedagogical content knowledge and communication skills and provide a model for partnering STEM graduate students, teachers and university faculty to address critical issues in science education in vocational technical high schools.

Other co-principal investigators include Deborah E. Allen, associate professor of biological sciences, and John A. Madsen, associate professor of geology. Other senior personnel involved in the project are Richard S. Donham, associate policy scientist at UD's Mathematics and Science Education Resource Center, and Jane Butler Kahle, Condit Endowed Professor at Miami University.

UD graduate students named as fellows for the first year of the project are Marguerite McDonald in chemistry and biochemistry, Katherine Skalak in geology, Thomas Madura and John Shaw in physics and astronomy, and Anissa Brown, Brian Danysh, Genevieve Griffiths and Rose Deeter O'Connor, all in biological sciences.

Article by Neil Thomas  
Photo by Tyler Jacobson



[E-mail this article](#)



[Subscribe to UDaily](#)



[Subscribe to crime alert e-mail notification](#)