GeoTEd: NSF Award Helps Community Colleges Train Geospatial Technicians for Employment in Cutting-edge, High Growth Industry

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The rapid growth of location-based applications and services has increased demand for technicians with skills in the acquisition and analysis of spatial data. According to the U.S. Department of Labor, employment in geospatial technology is expected to increase 35 percent by 2020.

To help meet this demand, a partnership consisting of four Virginia community colleges, the Virginia Space Grant Consortium, and the Virginia Geospatial Extension Program based in Virginia Tech’s College of Natural Resources and Environment has been awarded a grant of $899,870 by the National Science Foundation’s (NSF) Advanced Technological Education Program to support community colleges in their effort to prepare geospatial technicians.

The participating community colleges include Virginia Western Community College, Thomas Nelson Community College, Southwest Virginia Community College, and J. Sargeant Reynolds Community College.

The Expanding Geospatial Technician Education Through Virginia’s Community Colleges (GeoTEd) project is a three-year effort that will continue a statewide partnership to create academic pathways and train faculty in the use of geospatial technologies.

“This grant and this partnership continue to pay big dividends for the people of Virginia and we are excited about that,” said Glenn DuBois, chancellor of the Virginia Community College System.

“You cannot talk about education today without hearing the word, ‘STEM’, (science, technology, engineering and mathematics). Well, this is what STEM looks like. Our shared focus on STEM means we are helping people prepare for exciting careers, and we are positioning Virginia as a leader in a growing industry.”

“The geospatial industry is causing a social and economic transformation that is impacting almost every sector of the society,” explained John McGee, geospatial...
Extension specialist in Virginia Tech's Department of Forest Resources and Environmental Conservation. “Virginia’s geospatial industry has long been considered to be one of the nation’s most vibrant, and the demand for geospatially literate employees continues to grow,” he continued. “This project engages stakeholders from many different sectors to ensure that the region is well poised to support the geospatial technology workforce demand of the future.”

The project, administered by the Virginia Space Grant Consortium, will establish academic pathways in geospatial technologies (such as geographic information systems, global positioning systems, and remote sensing) at partnering community colleges. These academic pathways will serve as model programs for other community colleges in Virginia and the nation. “The Virginia Space Grant Consortium is honored to administer this geospatial education effort on behalf of the Virginia Community College Systems and partners,” said Chris Carter, Deputy Director of the Virginia Space Grant Consortium. “We are proud of the collaboration and outcomes of the partnership’s previous projects and look forward to three more years of successfully preparing the geospatial technology workforce.”

The GeoTEd project curriculum is based on the needs of business and industry in the Commonwealth and aligns with the National Geospatial Technology Competency Model (developed by the Department of Labor and the National GeoTech Center). “Our students are developing geospatial knowledge and abilities that will give them a competitive advantage in the workplace. We are excited to be working with project partners to provide students with nationally aligned curriculum and expanding opportunities for their continued education at senior institutions.” said David Webb, Geospatial Program Head at Virginia Western Community College.

Virginia Tech will host the regional Geospatial Technology Institute, which provides hands-on training in geospatial technologies to 25 faculty members from Virginia’s community colleges as well as from Kentucky, Maryland, North Carolina, Tennessee, and West Virginia. Participating faculty will attend a two one-week session over two years; they will then receive mentoring, and follow-up support from project partners.

Other components of the project include the development of distance education courses in geospatial technology, mobile applications, the Virginia Community College Geospatial Web portal, and career awareness information. The Virginia Space Grant Consortium’s GEOTREK12 program will also provide professional development to 45 high school teachers from the service regions of the partnering community colleges.

The project has strong partnerships with the public and private sectors that employ geospatial technicians, including the Virginia Association of Mapping and Land Information Systems (VAMLIS). According to Jamie Christensen with WorldView Solutions, a consulting firm headquartered in Richmond, Va., “The Virginia Community College System not only provides a solid technical background in geospatial technology for students but can also allow practitioners to acquire the central skills needed to be successful in the industry.”