In the Loop

NSF funds iCons and HCC interdisciplinary renewable energy labs

The campus' Integrated Concentration in Science (iCons) program and Holyoke Community College (HCC) have teamed up to build state-of-the-art renewable energy laboratory courses at both institutions thanks to $250,000 in National Science Foundation (NSF) funding. These new courses will provide undergraduate students the opportunity to participate in innovative, multi-disciplinary, student-driven research in renewable energy.

iCons and HCC will use the NSF award to purchase equipment and develop teaching strategies for their parallel renewable energy laboratory courses. Faculty members at UMass Amherst and HCC will combine their expertise in integrative education with an emphasis on current societal problems to create the renewable energy laboratory courses. The creation of these lab courses will require new laboratory training techniques and development of applied projects in renewable energy topics.

For iCons, this award allows the build-out of iCons III, the laboratory course for students in the 3rd year of the four-year iCons concentration. The iCons program is a new national model of integrative education whose mission is to produce the next generation of leaders in science and technology with the attitudes, knowledge, and skills needed to solve the inherently multidisciplinary problems facing our world.

iCons achieves this mission by enhancing a student's knowledge in their chosen major by providing opportunities for multidisciplinary student teams to work on current societal problems such as renewable energy.

iCons director Scott Auerbach (above) notes that the program dovetails nicely with Gov. Deval Patrick's interest in deepening connections between community colleges and four-year institutions.

For HCC, this award allows for a similar laboratory course that will be part of HCC's Sustainable Studies A.S. Program. HCC has been working with team-taught integrated instruction for nearly 20 years through its Learning Communities framework, and has recently instituted a new Clean Energy concentration in its Sustainability Studies Program.

The funding comes from the NSF Division of Undergraduate Education, through its Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES) program.

The NSF-TUES program seeks to improve the quality of science, technology, engineering, and mathematics (STEM) education for all undergraduate students by supporting efforts to create, adapt, and disseminate new learning materials and teaching strategies.

This new UMass/HCC partnership will produce students with leadership and laboratory experience in clean energy problems, able to cross disciplinary boundaries in search of effective solutions. The partnership is novel in that it focuses on aligning academic innovations with mutual benefit to both institutions.

For further information, please visit the iCons website or contact iCons Director Scott Auerbach.

More Information

iCons

NSF Grant Abstract - Student-Designed Labs in Renewable Energy

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