

SEEC: Student Enrollment and Engagement through Connections

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The Student Enrollment and Engagement through Connections (SEEC) project is a collaboration between Iowa State University and Des Moines Area Community College (DMACC). The project's goal is to increase the number of engineering graduates at Iowa State by 100 per year, to approximately 900 graduates annually. Included within this goal are increases in the percentages of women and minority graduates in engineering at Iowa State and the number of pre-engineering students at DMACC. The number of new engineering majors shaping Iowa State's 2012 graduating class is 1,446; thus we expect to achieve the target of 900 engineering graduates in the class of 2012.

Project objectives are designed within the areas of learning communities, curriculum, advising, networking, and evaluation. Activities are planned in each of these areas using a logic model approach that identifies resources, outputs, outcomes, and impact. Highlights resulting from this process include the creation of a transfer-friendly environment, a community of practice through partnerships, and an increase in awareness of engineering through inclusive messaging and network development.

Transfer students are supported prior to entering Iowa State through the Engineering Admissions Partnership Program (E-APP), which includes curriculum planning and advising by Iowa State engineering advisors, peer mentoring, and access to the E-APP Web-based group network. Scholarship opportunities have been promoted to engineering transfer students. Upon arrival at Iowa State, these students can join learning communities designed especially for their needs. Fall 2009 transfer enrollment was 252 students, up from 215 in 2008 and 206 in 2007.

Partnerships are developing to leverage recruitment and retention resources across the college and university, including the NSF S-STEM project, academic departments, the Program for Women in Science and Engineering, ISU Learning Communities, ISU Admissions, and the Office of Community College Research and Policy. The Engineering Talent in Every County (E:TEC) initiative combines a scholarship program with a new recruitment kit to provide ISU Extension youth professionals with resources and training to increase engineering awareness across the state. DMACC, in collaboration with ISU, has created its own introductory engineering orientation course and revised their advising system for pre-engineering students.

The college's recruiting materials have been redesigned to incorporate new messaging—that engineers create a better world and that students can be creative. The copy reflects the National Academy of Engineering's *Changing the Conversation* recommendations. Additionally, DMACC has identified, developed and implemented a comprehensive communication plan that familiarizes high school students, parents, faculty, and staff with career opportunities and educational pathways in engineering.

Looking forward, we recognize that our biggest challenge relative to the original targets is likely to be enhancing the recruitment of women to reach 20% (% women in 2008 and 2009 are, respectively, 14.6 and 15.0). The new recruitment materials and network-building initiatives, including the E:TEC program, specifically will help us address this challenge.

We recognize that there is considerable opportunity to leverage the best practices of the learning communities to retain students at the second- and third-year levels, which ultimately will contribute to higher graduation rates.