Panel - Tales from the Field – Cross-College Curriculum Development

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Abstract - Funded by grants from the National Science Foundation (DUE 0817461 and 0817498), the first cohort of engineering and engineering technology colleges gathered in the summer of 2010 to work with Purdue University and Alverno College faculty on curriculum development for student learning outcomes, including Engineer of 2020 attributes. The overarching goals of this panel are to (1) present the progress of the first cohort of cross-college curriculum development projects and (2) provide an environment where audience members can engage with the panelists about the challenges and successes of their project implementation. This project has received multi-year funding, thus audience members will also discover how to become a member of the third cohort.

Index Terms: Curriculum development, student-learning outcomes, Engineer of 2020

SESSION DESCRIPTION

Funded by grants from the National Science Foundation, the first cohort of engineering and engineering technology colleges gathered in the summer of 2010 to work with faculty from Alverno College and Purdue University to develop curriculum for student learning outcomes, including Engineer of 2020 attributes. Institutions in the consortium have been working with prior NSF grants in workshops and/or consultations during recent years and are actively engaged in fostering student-learning outcomes on their campuses. The consortium is exploring a range of practices desired by member institutions as they search for ways to further develop curriculum that fosters, improves, and optimizes student learning, retention, and degree completion.

Each consortium institution is working on a multi-year project of their choice. One outcome of this session will be a discussion of the projects and the progress to date the teams have made. Panelists will describe not only the goals and intentions of their projects, but also the day-to-day challenges and successes they have encountered as they implement research-based practices in a scholarly, well-assessed manner.

While all of the institutions and team leaders are active members of the engineering and engineering technology learning scholarship community, some of the team members recruited by the consortium institutions are relative newcomers to scholarly teaching. This mix of backgrounds and levels of experience create an especially useful environment for the second outcome: dialogue between the audience and panelists regarding how one goes about using education research to transform the engineering education experience as well as the process of developing faculty expertise in the area of evidence-based curriculum.

Panelists for this session will be:
- Ruth Streveler, Purdue University, PI of this NSF-funded project will discuss the broad purpose of this program.
- Tim Riordan, Alverno College, PI of the Alverno College portion of this collaborative project, will briefly discuss the history and purpose of the project.
- Panelists representing three institutional teams who have participated in the project will discuss the challenges and outcomes (to date) of their institutions’ participation the project:
  - Odesma Dalrymple, Arizona State University
  - Eric Johnson, Valparaiso University
  - Stuart Kellogg, South Dakota School of Mines and Technology

ANTICIPATED AUDIENCE

The intended audience is CSET faculty, future faculty (graduate students), and administrators who are interested in developing projects to enhance student learning through evidence-based curriculum. In addition, audience members who are relatively new to this field themselves will have the opportunity to engage with panelists who are currently working to become more scholarly in their pedagogical practices about what the transformation takes and how to build this expertise while still succeeding in the other elements of the faculty workload. Audience members who are experienced scholars of teaching and learning will learn from the panelists some of the needs and challenges so that the audience members may help their faculty at home continue on (or take the first step in) their journey toward scholarly teaching.

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