

Dr. Barbara Olds

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9th Dec. 2009, 8:30 AM – 4:00 PM (Room 8-037)

10th Dec. 2009, 8:30 AM – 12:00 PM (Room 2-237)

Intellectual Development and Learning Styles: Active and Cooperative Learning

Session 1: Intellectual Development and Learning Styles

Do you sometimes wonder why some students don't "get it" when you ask them to read something in a textbook, but seem to understand fully when you ask them to do a hands-on experiment? Or why some students are very uncomfortable with ambiguity while others seem to thrive on it? In this workshop, we will discuss learning styles based on the Kolb Learning Styles Model, which divides learning styles into four types depending on how people perceive and process knowledge. Based on the Kolb model, we will then explore how to design curriculum that addresses all four types of learning preferences and thus helps us reach all of our students. We will also introduce the concept of intellectual development using the models developed by Perry and King & Kitchener. These models help us to understand the intellectual maturity of our students based on a scale that moves from dualism to an ability to commit to the best solution in context.

Session 2: Active and Cooperative Learning

Do you sometimes notice students' attention lagging after a half hour or so of lecture? Do you see the energy level in your class rise when you ask students to engage in an activity that requires them to do something? This workshop will build on the considerable body of research that shows that students learn better if they are engaged in the learning process in the classroom. We will define active and cooperative learning, introduce a number of active learning exercises that can be used even in lecture classes, and practice active and cooperative learning throughout the workshop.

Session 3: Rigorous Research in Engineering Education

This workshop will focus on deepening participants' understanding of engineering education research (EER) and building their capabilities to conduct EER. The workshop is NOT about "how to teach;" nor is it a grant writing workshop or plea for all faculty to become education researchers. The goal is for participants to leave the workshop able to identify principal features of EER, frame research questions and methodologies, gain familiarity with relevant resources, and become aware of global EER communities and networks.

Barbara M. Olds is Associate Provost for Educational Innovation and Professor of Liberal Arts and International Studies at the Colorado School of Mines. She returned to CSM in 2006 after spending three years at the National Science Foundation where she served as the Division Director for the Division of Research, Evaluation and Communication (REC) in the Education and Human Resources Directorate. She remains a consultant to the EHR Directorate. During the 2006-2007 academic year Barbara was a visiting professor in Purdue University's Engineering Education Department. Her research interests are primarily in understanding and assessing engineering student learning. She has participated in a number of curriculum innovation projects and has been active in the engineering education research and assessment communities. She is a Fellow of the American Society for Engineering Education and was a Fulbright lecturer/researcher in Sweden in 1999.

**For additional information, please contact Dr. Youssef Abdel-Magid,
Coordinator - Centre of Teaching Excellence (CTE) on Ext.: 75506**