

Science Education Colloquium and Interactive Workshop

Hosted by the Center for Advancing Mathematics, Science, and Engineering Education (CAMSEE) and the UC San Diego Education Initiative

Driving STEM Instruction with Data: Active Learning with a Purpose



Diane Ebert-May

Professor, Department of Plant Biology
Michigan State University

Thursday, January 29, 2015

Natural Sciences Building (NSB) Auditorium – 1st Floor
4:00pm - 5:30pm

Register at educationinitiative.ucsd.edu by Wednesday, January 28, 2015

Inform your teaching with data, just as you do your research. We invite faculty, postdocs and graduate students to participate in this workshop about developing and implementing learner-centered instructional materials, teaching strategies, and assessments in both small and large enrollment courses. In this workshop we will use the approach of scientific teaching to actively engage in using instructional methods shown to be effective in helping students learn better than in traditional lectures. By integrating research models into teaching approaches, you will be able to bring into your classrooms the core disciplinary practices desired for all students, such as applying the process of science, using models, reasoning analytically, developing arguments, and creating narratives. **Please bring the materials (e.g., ppt slides) you use in one of your class meetings (lectures) that you would like to work with during the workshop** (If you don't have any materials available, we'll pair you up with someone who does). You will (1) use backward design to construct objectives, assessments, and instruction that are aligned and promote learner-centered instruction; (2) create assessments that enable students to demonstrate higher-level cognitive skills, and (3) practice how to actively engage students in collaborative work and inquiry-based activities in all types of learning environments.

Diane Ebert-May provides international leadership for discipline-based biology education research that integrates life sciences and cognitive science. She promotes professional development, assessment and improvement of faculty, postdoctoral scholars, and graduate students who actively participate in creative research about teaching and learning in the context of their scientific discipline. She teaches plant biology, introductory biology to majors in a large enrollment course, and a graduate /postdoctoral seminar on scientific teaching. Her plant ecology research continues on Niwot Ridge, Colorado, where she has conducted long-term ecological research on alpine tundra plant communities since 1971. She is an AAAS Fellow in the Biological Sciences. Her recent awards include the US Professor of the Year Award for Michigan from the Carnegie Foundation/CASE (2011) and the Education Award from the American Association for Biological Science (2012). She earned her BS from University of Wisconsin, Madison (Botany), MA and PhD University of Colorado (Ecology and Evolutionary Biology). ([Learn more](#))