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A Cutting-Edge Education: Incorporating Nano into the Undergraduate Curricula.

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The Interdisciplinary Education Group (IEG) of the Materials Research Science and Engineering Center (MRSEC) on Nanostructured Interfaces at the University of Wisconsin-Madison (UW) develops and uses hands-on, interactive education and outreach materials to engage a variety of audiences in learning about nanotechnology and advanced materials. Many of the education products created are inspired by UW MRSEC research; and faculty, staff, and students regularly contribute to the IEG's work to share nanotechnology with a broader audience. The UW MRSEC has developed numerous teaching modules, labs, and education resources devoted to nanotechnology concepts, and many of these materials have been integrated into key introductory and advanced undergraduate courses at UW and other institutions, including small liberal arts colleges and community colleges. This effort has taken place through both the creation of new courses and the modification of existing courses to include cutting-edge content based on current research and emerging applications in nanotechnology. In this talk, I will present some of the new instructional materials we have developed based on advances in nanoscale science and technology, the implementation and integration of these materials into undergraduate curricula, and an overview of the UW MRSEC education efforts.