Promoting Cross-Disciplinary Communication in Nanotechnology

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Abstract: Nanotechnology is a quickly growing field comprised of researchers from many disciplines who investigate nanoscale materials and phenomena. Because many well-established disciplines merge together to form the field of nanotechnology, a crucial aspect of nanotechnology education is promoting cross-disciplinary thinking and collaboration. We present a model that proposes a novel approach to multidisciplinary learning in nanotechnology. While existing educational solutions attempt to expose students to content from all of the nanotechnology disciplines, we focus on the development of visual communication skills as a means to promoting cross-disciplinary thinking and communication. We have developed a graduate course that combines the instruction of visual communication design principles with a studio component that allows students to create science graphics and reflect on how design choices relate to disciplinary goals and cross-disciplinary communication. We discuss the benefit of this course in the larger nanotechnology educational curriculum.