

60f Teaching Nanotechnology in Chicagoland: Northwestern University's Nsf Nanotechnology Science and Engineering Center (Nsec)

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The Northwestern University-Nanoscale Science and Engineering Center (NWU-NSEC) brings together recognized leaders in nanotechnology research and education from Northwestern University, University of Chicago, University of Illinois/Urbana-Champaign, and Argonne National Laboratory. The Center uses its synergistic collaborative interactions and unique nanopatterning tools and synthetic methods to make advances in nanopatterning and ultrasensitive detection of important biological molecules. The mission of the NWU-NSEC is to foster a lifelong interest in science and technology by teaching people of all ages about the nano-world. To achieve this goal, the NWU-NSEC has launched innovative programs that will ultimately link scientists and their discoveries to students of all ages and the community at large. Our educational outreach programs include: a summer research experience for undergraduates program (REU) and a two phase research experience for high school science teachers (RET) with curriculum development, nanostructures modules for middle and high-school students, community outreach programs such as a “Nano Day” for scouts, and the development of an interactive exhibit at the Museum of Science and Industry (a museum drawing 2 million visitors a year). This talk will discuss these programs and the positive impact they have on the greater Chicago area. Additionally, for the benefit of Northwestern undergraduate and graduate students, we have developed several new courses that cover various aspects of the field of nanomaterials, bionanotechnology, and interfacial phenomena and self-assembly.