

AC 2007-2933: TEACHING BASIC NANOFABRICATION PROCESSING USING CORE FACILITIES

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Teaching Basic Nanofabrication Processing Using Core Facilities

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Nanofabrication is “manipulating and assembling materials atom by atom” and it is used to create materials, devices, and systems with new and unique properties. This involves the application of nanofabrication processing equipment. It behooves industrial technology programs to prepare students in IT programs with skills necessary to supervise and manage the workforce of any organization that desire to implement nanofabrication technology.

Given the need to prepare IT program graduates with skills necessary to function in the capacity of a technologist, manager or supervisor in any organization that desire to implement nanofabrication technology, the department of technology has proposed nanofabrication manufacturing technology program at both the baccalaureate and graduate levels. Hands-on activities will be enhanced through the utilization of the core facilities in the College of Science, Engineering and Technology where researches have currently begun. This approach is necessary to help prepare and put our graduates at the forefront of employment in the new industrial revolution. This learning opportunity is opened to all members of the university (Faculty, staff and students). This presentation addresses the application of the core facilities to teach basic hands-on aspects of basic nanofabrication processing equipment and materials handling procedures at Jackson State University.

Nanofabrication as the new industrial revolution has come to stay. Partnership among scholars from various departments in the university has enabled knowledge sharing with effective cost saving in training and preparing the future workforce for the exciting field of nanotechnology. The NMT academic programs to be offered at Jackson State University (baccalaureate and masters degree) are pathways to an education in nanotechnology. Importantly, given the fact that the equipment needed in any nanotechnology facility is expensive, the utilization of core facilities could ser as the appropriate starting point.