

Abstract Submitted
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NanoLab: a Hands-On Introduction to Nanoscience for Scientists and Engineers MATTHEW JOHNSON, Dept of Physics and Astronomy, University of Oklahoma, LLOYD BUMM, Dept. of Physics and Astronomy, University of Oklahoma — We have developed a sophomore level laboratory course in nanotechnology. We have taken this hands-on approach to introduce students to the concepts used in nanotechnology much earlier than they would see them in the standard curriculum. Although sophomore level students do not generally have the background to understand the full theoretical explanation of all the phenomena, they do take with them a basic understanding that can serve as a framework for appreciating the broader issues when they encounter them in later courses. Topics we have covered are: crystal structure, x-ray diffraction, electron microscopy, electron microprobe, spectrophotometry, extinction, light scattering (Rayleigh & Mie), microfluidics, scanned probe microscopy, and thin-film growth. A report of our experience will be presented.

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