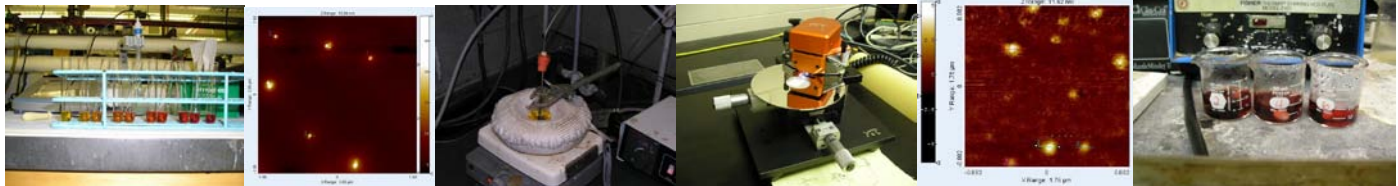


## Intro. to Nanotechnology Design (ENGR 103)

Sp. 2010: Lectures TR 12:30-1:45; Labs TBA

Prof. Lawrence Hornak, lawrence.hornak@mail.wvu.edu



Revolutionary nanoscience-based technologies promise to reshape the future of humankind. Graduate studies, jobs and business opportunities await those trained in nanoscience. Yet, these technologies require skills missing from traditional undergraduate programs. To prepare a skilled workforce, WVU has established a **Nanosystems Undergraduate Emphasis Area**, consisting of an introductory course, sophomore, junior and senior seminars, and culminating in a capstone research experience. Women and other under-represented groups are especially encouraged to register.

- Interact one-on-one with a multidisciplinary team of WVU scientists conducting cutting-edge research (see WVNano Initiative (<http://www.wvu.edu/~wvnano/>)).
- Train on state-of-the-art research laboratory facilities that “see” at the nanoscale.
- Understand, analyze, and design nanoscale devices and systems.
- Appreciate their societal and ethical implications.
- Prepare for research in this cutting-edge science, opportunities for paid research at WVU.
- **Can replace ENG 102, Honors credit also available**

### Student quotes from past courses:

“This course is a comprehensive overview of modern science. You will be taught leading edge topics in various disciplines. This is the most valuable course I have ever taken.”

Without the course content on social and ethical issues, “I would have missed learning about how nanotechnology must be treated and created when designed. Without societal and ethical issues being discussed the course would be about the science of just how, and not why.”

Regarding the multidisciplinary teaching team: “It was wonderful to get so many viewpoints from masters of different sciences. It helped to promote learning even beyond my major’s curriculum.”

**Given limited seats, students should email Prof Hornak the following info at lawrence.hornak@mail.wvu.edu:** Name, 700 number, intended major, GPA (current or expected), credit hours in progress and completed, Math course/level completed or in progress, and statement of interest in the class



Other instructors: Boyd Edwards, Physics; Darran Cairns, Engineering; Kasi Jackson, Women’s Studies; Letha Sooter, Biology; Robin Hensel, Engineering Other affiliated faculty: Dimitris Korakakis, Engineering; Peter Gannett, Basic Pharmaceutical Sciences