

### What is Nanoscience?

Nanoscience is the study and use of materials at the molecular or nanometer level. A nanometer is a billionth of a meter, or approximately one one-millionth the size of the period at the end of this sentence. Some work with nanoscience focuses on the development of better materials for everything from computers to medical implants.

#### Why Study Nanoscience?

At Northwest, our nanoscience program is interdisciplinary and offers hands-on laboratory experience in a new, state-of-the-art facility.

Nanoscale science holds great promise for future applications in everyday life. Applications are currently being developed in such fields as energy production, photography, optoelectronics, information storage, and medicine (antimicrobial agents, cell viability, cell detection and pharmaceuticals).

The scientific and technological challenges of the future will not be solved by one discipline of science alone. Nanoscale science offers the opportunity to be cross-trained in biology, chemistry, and physics– leading to innovative problem-solving.

### What does this mean for you?

Nanoscience graduates will be on the cutting-edge of research, and their education will prepare them to take advantage of this growing field and the job opportunities available. Companies hiring those with nanoscience experience include Apple, Coppertone, Dupont, Xerox and Lancôme, just to name a few. Available positions will be in product development and improvement, with products ranging from sunscreens to smaller, lighter "smart" devices to targeted pharmaceuticals to antimicrobial clothing. The average starting salary for a graduate in this field is \$42,000, though there is a wide range.

### What coursework does this field involve?

Northwest's Nanoscale Science program has three different tracks: a Biology Emphasis, a Chemistry Emphasis and a Physics Emphasis. All of our students will take courses in biology (cellular biology and genetics), classical physics, chemistry (general and organic), and two interdisciplinary nanoscience courses, as well as choosing from a variety of upper level discipline-specific nanoscience courses.





# What do I do next?

Visit our research facilities and meet with the nanoscience faculty as part of a campus visit. You may also email the following faculty with questions:

Nanoscale Science – Biology Emphasis, **Dr. Gretchen Thornsberry**, gthorns@nwmissouri.edu

Nanoscale Science – Chemistry Emphasis, **Dr. Michael Hull**, mhull@nwmissouri.edu

Nanoscale Science – Physics Emphasis, **Dr. Himadri Chakraborty**, himadri@nwmissouri.edu

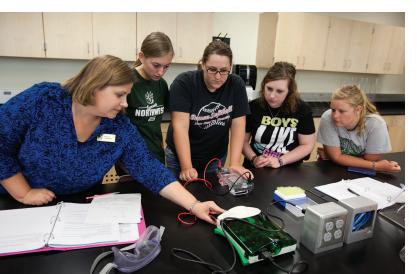
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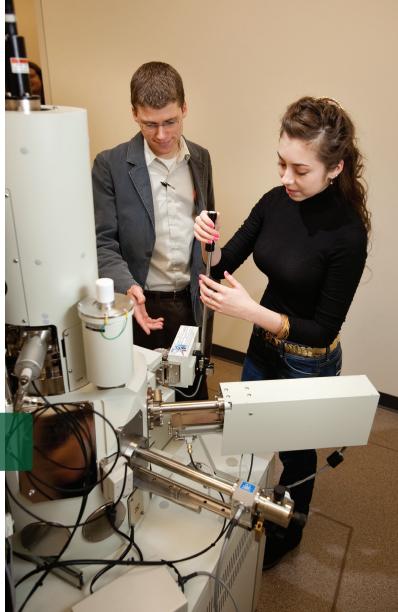
## www.nwmissouri.edu/nano













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