ABOUT NANOSCIENCE

Nanoscience concerns the properties of atomic and molecular assemblies under an extraordinarily wide range of conditions and geometries.

Nanoscience is a prime target of both federal and high-tech industrial investment. It is expected to have profound impact on a broad range of technologies such as Nanoelectronics, Biosensors and Nanomedicine over the coming decade.

The Professional Science Master's (PSM) in Nanoscience Program is specifically tailored for working professionals who wish to retrain in Nanoscience and Nanotechnology as well as for students with traditional bachelor and master's degrees.

Students may complete the program on either an accelerated 12-month track or a part-time 24-month track. This is a fast-track program towards a career in Nanoscience, Nanotechnology and related areas.

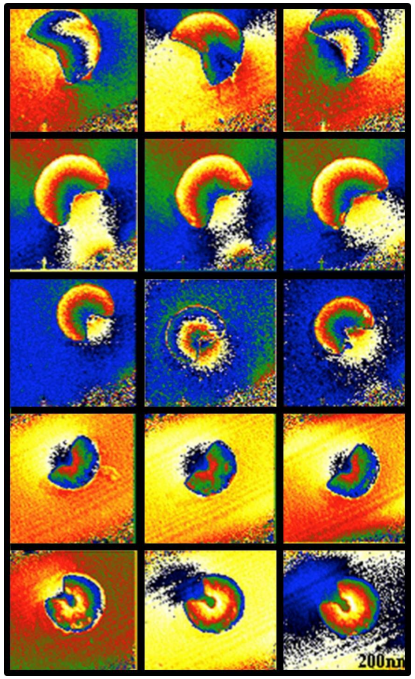
Cover Image Courtesy Dr. M. R. McCartney:
Holographic phase images in and around nm-scale Cobalt thin film magnets of different shapes.

Department of Physics
PO Box 871504
Tempe, AZ 85287-1504

http://nanoscience.asu.edu/
E-mail: nanoscience@asu.edu

ARIZONA STATE UNIVERSITY

Professional Science Master's in Nanoscience



An interdisciplinary degree program
offered through the
Department of Physics
in conjunction with the
Department of Chemistry & Biochemistry

PROGRAM OVERVIEW

The PSM in Nanoscience Program consists of interdisciplinary courses that provide a knowledge base required for full appreciation of research and innovation in Nanoscience and Nanotechnology. Commercial innovation is emphasized, including applications in Optics, Semiconductor Electronics and Optoelectronics, Sensors, Nanomedicine and Healthcare.

The PSM in Nanoscience Program consists of 30 credit hours including required core courses (15 credit hours) and an Applied Project in lieu of a traditional thesis. This intensive learning experience takes place in an immersive, professional atmosphere. Students select the remaining 15 credit hours from a list of elective courses spanning multiple disciplines (physics, chemistry, biochemistry, materials science, chemical/electrical engineering, biotechnology) under guidance from their advisor. Elective courses are loosely grouped into three program options detailed on PSM in Nanoscience Program website http://nanoscience.asu.edu/:

1) Nanomaterials & Nanoelectronics
2) Biophysics & Bionanotechnology
3) Biophysics, Biochemistry & Sensors

Since the program is unique, it is registered with the Western Regional Graduate Program that allows students from most western states (**Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming**) to pay in-state tuition rates.

ADMISSION REQUIREMENTS

- Bachelor's degree in physics, chemistry or related field* from a regionally-accredited institution.
  **Materials Science, Chemical, Electrical Engineering, etc.*
- Official ASU graduate application.
- Official transcripts of all undergraduate and graduate coursework.
- Statement of purpose outlining research interests and reasons for applying.
- Two letters of recommendation from individuals familiar with the applicant's work and/or studies relevant to the program.
- Graduate Record Examination scores are not required, but will be taken into consideration if submitted.

Students must meet all ASU Graduate College admission criteria: http://graduate.asu.edu/admissions

PROGRAM OF STUDY

CORE COURSES (15 CREDIT HOURS)

NAN 571 Quantum Physics for Nanoscience (3 credits, fall)	Reviews modern physics, chemistry and mathematics. Methods and examples from physics, chemistry, nanoscience and nanotechnology.
NAN 591 Professional Seminar (4 credits total; 2 credits fall, 2 credits spring)	Students discuss their elective experiences with their peers, guided by PSM faculty, visiting speakers and industrialists.
NAN 505 Nanoscience and Society (2 credits, spring)	Integrates nanoscience, nanotechnology and societal issues, taught by faculty and research staff from the Center for Nanotechnology in Society.
NAN 506 Innovation and IP Management (2 credits, summer)	Intellectual property management in the context of innovation and technology transfer, taught by faculty specializing in intellectual property issues.
NAN 593 Applied Project (6 credits total; 3 credits spring, 3 credits summer)	Preparation of an applied project under the supervision of a faculty member. The applied project is presented at a special capstone conference at the end of the fall semester.

Note: Students are required to take either NAN 505 or NAN 506