# The Promise and Challenges of a New Technology: An Integrative Examination of Nanotechnology

**Spring 2007**
**MWF 9:40 am - 12:30 pm** for all 3 courses

**Component Courses:**

POS 426 - Elements of Public Policy - Science and Technology Policy
ASB/SOC 334 - Technology and Society
CHM 194 - Nanoscience: Concepts and Applications

**9 Credits Total - Fulfills 6-cr. Science and Society Requirement**

**SLNs: 78325 -** registers for all 3 classes with ASB credit for Tech & Society
**80007 -** registers for all 3 classes with SOC credit for Tech & Society

**Faculty:**

**Dr. David Guston**, Professor of Political Science; Director, Center for Nanotechnology in Society at ASU (CNS-ASU); Co-Director of the Consortium for Science, Policy & Outcomes (CSPO)
**Dr. Neal Woodbury**, Professor Chemistry and Biochemistry
**Dr. David Conz**, Postdoctoral Researcher, CNS-ASU; Faculty Associate, School of Human Evolution and Social Change

Students in this advanced Learning Community (LC) will develop the analytic and conceptual tools for thinking about the interplay among technology, society, and policy. The course focuses on the issues emerging in the broad field of nano-scale science and engineering - NSE or nanotechnology - the understanding and control of matter at dimensions of roughly 1-100 nanometers. Nanotechnology has attracted great attention in policy circles and among the general public. Students will learn not only the foundations of NSE from a scientific perspective, but also how policy and social factors both shape and are shaped by the intersection of these elements. Students will assess the societal implications of NSE and consider the competing benefits and costs of NSE research activities and outcomes through classroom exercises and semester-long projects.

By design, faculty from multiple disciplinary perspectives will periodically team-teach simultaneously, exposing students to a richer, more dynamic classroom experience. Expert guest speakers and panels, in concert with the LC faculty, will address the class and engage students in discussions not possible in traditional lecture settings. Specifically, students will participate in four integrated learning experiences, including short-story fiction writing, mock town meetings debating the construction of an NSE research facility in a local neighborhood, mock congressional hearings of a national NSE funding initiative, and an integrative final presentation that must incorporate the political, sociological, and scientific elements of NSE from the perspective of the student's discipline.

This LC will be tightly coupled with the Center for Nanotechnology in Society at ASU, an NSF-funded center to investigate the societal implications of nano-scale science, engineering and technology. Students will participate in the center's activities, including attending seminars by invited guest lecturers, observing or assisting with outreach to community groups, visiting working NSE laboratories at the Biodesign Institute, and even facing the possibility of paid assistantships with CNS-ASU upon completion of the LC.

The Center for Nanotechnology in Society
ARIZONA STATE UNIVERSITY

The Center for Nanotechnology at Arizona State University is part of the Consortium for Science, Policy & Outcomes (CSPO), in the College of Liberal Arts and Sciences. Its research, education and outreach activities are supported by the National Science Foundation under cooperative agreement #0531194.