

Science and Technology Studies 201, Section 84405

Nanotechnology and Society

Meets: M, W, F (9:55 – 10:45) in Rm 234, Education Building, Spring '05

Credits: 3

Instructor: Charlie Tahan, Physics Department, Wisconsin-Madison

Office: 1202 Sterling Hall (Physics) or 6321 Social Sciences

Office Hours: 11-12pm MWF in 6321 Social Sciences

Course Website: <http://tahan.com/charlie/nanosociety/course201/>

Essay Assignments

Essay #1: Due Monday, January 31, 2005

Essay #1

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Due: Monday, January 31

You are interviewing for a job at McKinsey, a prestigious consulting firm that hires only the best. During your interview you mention that you have some experience thinking about the societal implications of technology, specifically nanotechnology. Seeing a possible avenue for future growth, your interviewer asks you to go home and write a two to three-page executive summary (double spaced) defining nanotechnology (which she, a non-scientist, can understand) and postulating on specific areas where McKinsey may be able to do nano-consulting in the future. You must really impress her to get the job.

Include references and pay attention to writing style and clarity. She will almost certainly ask someone in the company who knows nanotechnology to review your work, so be sure of your facts. Consider why nanotechnology may be a good area for McKinsey to build some expertise in.

Essay #2: Due Monday, March 7, 2005

Essay #2

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Due: Monday, March 7

Does nanotechnology have politics?

Make your case, for or against, using the articles by Langdon Winner (Forms of Life, Artifacts), Leo Marx, Kline and Pinch, and Cousins and Woodhouse, as well as the science related resources we've used in class (Understanding Nano,

government reports, etc.). Touch on as many viewpoints as you can while making the essay readable. 2 double spaced pages.

Essay #3: Due Friday, April 22, 2005

Essay #3

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Due: Fri., April 22

Is the field of nanotechnology a revolution or just evolution?

Make your case, for or against, using the articles we discussed in class as well as any others you might find. If nanotech is a revolution, what kind of revolution is it? Industrial? Or something else? Try to compare nanotechnology to some historical revolution. Also address the question of how the military may encourage or impede such progress and if it is with nanotech. Answer these questions from a USA perspective. How is nanotechnology different from other advancements in the US in the past? (2.5 – 3 double spaced pages)

Essay #4

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Due: Wed., May 4

Testimony before the congressional subcommittee on the first review of the National Nanotechnology Initiative

Goals:

- Explore issues of nanotechnology and society from different perspectives.
- Review and sum up what we've learned in the past semester.

Your assignment is to write a brief testimony to congress (approximately 2 pages, 3-5 minutes spoken) where you address the following points attempting to persuade congress to legislate in your favor.

- Government investment in nanotechnology research: should the government continue funding of nanotechnology? In what specific areas (from your point of view)? How should the money be funneled, through which agencies?
- Public participation in the evolution and funding of nanotechnology: Should the public be brought into the nanotechnology development process? How? Should there be public panels as L. Winner suggests? Should there be a national or international regulatory agency or should the individual regulatory agencies handle the specifics as they do now?

You will represent one of the following groups (I'll assign you one in class):

1. The congressman themselves
2. Military brass from the Pentagon
3. Scientists from the American Association for the Advancement of Science (AAAS)
4. Representatives from the ETC (look at their report) and the Sierra Club
5. Lobbyists representing the Nanotechnology Business Alliance
6. Invited social scientists/science and tech. historians

Be true to the group you represent (and the real reports and readings we've read) and not to your personal opinions. But feel free to add your own ideas. Try and use what we've gone over in class to support your points.

In class on wed. you will meet as groups and share your points with the rest of the class as a review before turning in your paper.