

PRELIMINARY SCHEDULE

The schedule shown below is subject to change during the course of the semester, as we make adjustments that fit the desires of the class and the schedules of the faculty and outside participants. You can consider the first eight weeks pretty well set. We will fill in the topics and speakers for the classes after spring break as we line up participants. The web site will contain the most current calendar.

Date	Topic	Assignment Schedule (read <i>before</i> class)
Week 1		
1/9	Course Introduction/ Nano intro	First paper assignment distributed
1/11	Scientific Fundamentals I (Jaszczak)	Read Ratner, Chs. 1 & 2; start first paper
Week 2		
1/16	Societal Implications I: Ethics (Dr. Bruce Seely)	Read Ratner Ch. 11.
1/18	Scientific Fundamentals II (Jaszczak)	Read Ratner, Chapter 3; Distribute 2 nd paper assignment ("Nano in the marketplace")
Week 3		
1/23	Scientific Fundamentals III <i>Discussion on short papers 1&2</i>	2 nd short –paper due (Nano in the marketplace)
1/25	Photonics (Dr. Miguel Levy) <i>possible active research project</i>	
Week 4		
1/30	Carbon Nanotubes & lab tour (Dr. Yoke Khin Yap)	(Distribute editorial by R. Roy.)
2/1	Economic and Social Implications (Seely)	Read Ratner, Chap. 11 Read editorial by R. Roy Distribute Research Project Assignment
Week 5		
2/6	Materials Research Lab Tours & Demo (FESEM and FIB) M&M 6 th floor. Meet in front of M&M636.	Read Ratner, Ch. 4
2/8	Engineering at the Nanoscale: (Dr. Craig Friedrich)	Distribute 3 rd paper assignment: societal implications Read Ratner Ch. 9
Week 6		
2/13	Show Film: <i>Gattaca</i> (part 1)	Use question sheet to keep notes for discussions next week
2/15	Show Film: <i>Gattaca</i> (part 2)	

Date	Topic	Assignment Schedule (read <i>before</i> class)
Week 7		
2/20	General Discussion of Societal Implications	<i>3rd short paper due</i> <i>Distribute 4th short paper assignment</i> <i>(Nano in the News)</i>
2/22	<i>Tentative</i> Lecture: Nano in the Business World (Dr. Frank Underdown, Nano entrepreneur)	Read Ratner, chap. 10 Hand out Drexler-Smalley debate article
Week 8		
2/27	Discuss Drexler-Smalley Debate	<i>Read handout: Chemical And Engineering News</i>
3/1	Nano in the News Project discussion	<i>4th short paper due</i>
SPRING BREAK		
Weeks 9-13		
	Focus on Nano Applications Over the next 4 weeks, several speakers will present information on their research and their sense of the opportunities for development in several key areas. Several, but not all, of the presentations will be keyed to chapters in Ratner. Two speakers will be on videotape. Potential Topics: Nano and Biology, Sensors and Electronics, Nano and materials science, Biomedical Engineering, Nano and chemistry.	
3/13	Dr. Jed Macosko (Video) Study in Nanomachinery	<i>READ</i> Ratner, Chapter 6;
3/15	Dr. Greg Odegard MTU ME-EM	
3/20	J. Jaszczak STM demonstration	
3/22	Dr. Ryan Gilbert MTU-Biomedical Engineering Dept.	<i>Distribute final project assignment</i>
3/27	Rosalyn Bern- Nano Ethics video	
3/29	short class discussion	
3/30	Physics Colloquium Dr. W. Windl (Ohio State) computer simulation of carbon nanotube devices	<i>Fisher 139</i> <i>4:00 – 5:00 p.m.</i> <i>refreshments will be served</i>
4/3		
4/5	Dr. Paul Bergstrom MTU ECE Dept.	
4/10	Dr. Haiying Liu Chemistry	
4/12	Student Presentations Start!	
4/17	Student Presentations	
4/19	B. Seely- ethics paper discussion	<i>Research Papers Due</i>

Date	Topic	Assignment Schedule (read <i>before</i> class)
	Final class survey	<i>Ethics paper due</i>
Finals Week	NO FINAL, but class will meet to have a final discussion designed to summarize nanotechnology and its place, prospects, and consequences.	