COURSE PURPOSE: Regulation touches nearly every aspect of our professional and personal lives, including areas such as environment, energy, transportation, communications, and health/safety. It involves multiple stakeholders with conflicting objectives; competing justifications and approaches; conflicts about the roles of public judgments and scientific and technical expertise in the face of profound causal uncertainties; the balancing of costs/risks with benefits; and the mixture of many types of knowledge in pursuit of effective and efficient solutions. Georgia Tech students who intend to become leaders in business, government, and law would benefit in their careers from a thorough understanding of how complex problems such as these can be addressed – and the regulatory realm would benefit from having more inputs from professionals with such an understanding.

This course will begin by examining general theories of regulation and the economic, legal, and political justifications that have been used to explain, justify, or criticize regulatory policies. Students will learn about the regulatory process and how professionals (scientists, engineers, managers, policy analysts, etc.), citizens, and interest groups can shape regulatory policies. We also will examine legal constraints on regulation, including administrative law and procedures, accountability, and adversarial decision-making.

Because many regulatory issues have important science and technology implications, particularly related to the assessment and management of risk, we will examine the difficulties in risk; the roles of statutory, legal, and perceptual constraints in shaping risk regulation; the implications of risk measurement and management techniques for regulatory policy; the processes by which risk is balanced with social and economic goals; and the communication of risk-relevant information. Students will conduct research on the case of nanotechnology as an example of an emerging area of regulation, using lessons learned from other types and eras of regulation to help us anticipate the regulation of nano risks.

LEARNING OBJECTIVES: After successfully completing this course, students will:
- have a clear understanding of the political, economic, and legal rationales for regulation,
- understand the concepts of markets, market failures and non-market failures as applied to regulatory policies,
- have a developed awareness of the role of administrative law in shaping regulatory procedures and decisions,
- understand the interactions among the three branches of government and the regulatory agencies,
- be aware of the strengths and weaknesses of experts and the public as participants in regulatory policy,
- appreciate the roles of risk and uncertainty in complex decision making, and
- be ready to accommodate diverse values, types of knowledge, and interests in understanding policy disputes.

COURSE REQUIREMENTS: There are no prerequisites for this course other than a POL 1101-level understanding of American government. We will read and discuss topics related to law, history, economics, and politics but I do not assume that you have a background in those areas. Nevertheless, I expect students to have an open and inquisitive mind about other approaches to understanding policy. A fundamental requirement for this course is: if you are confused about something, ask me.

Class discussions will synthesize and extrapolate from assigned readings. All students should complete the assigned readings before the class for which they are listed. Students will be expected to share relevant personal observations and experiences with their colleagues; those who remain silent during class will be unable to receive an A in the course. Participation is also based on attendance; a late arrival is counted as an absence. 9:30am is not too early.

4803 students will sign up for one or more class meeting dates for which they will be responsible for providing an abbreviated form of class minutes: students will note the major learning points gleaned from class discussions, as well as “muddy points” about which there is some confusion or incompleteness. These notes will be emailed to the professor by 6pm of the day preceding the next class meeting. 8803 students will select at least two of the readings required for graduate students and provide a professional 5-10 minute presentation and discussion of their major points.

For all students there will be three short papers (<8 pages) during the semester in which students use assigned and other readings, as well as class discussions, to analyze aspects of current regulatory issues. For example, the Office
of Management and Budget recently issued guidelines ("A-4") to federal agencies "to assist analysts in the regulatory agencies by defining good regulatory analysis"; in one assignment, students will examine the normative value assumptions in the A-4 guidelines, the scientific challenges in providing the data and theories it recommends, and the responses of various political stakeholders. In another assignment students will work in teams to analyze and recommend particular aspects of appropriate regulatory responses to the postulated risks from nanotechnology. The third assignment will be in response to student interests. There will be an in-class midterm and a take-home final exam that ask students to synthesize and extend ideas presented in the readings and in class discussions. Graduate students will also develop an undergraduate course syllabus with reading materials, course outline, etc., relating to an area of regulation of particular interest.

**GRADES (4803):**
- Short papers (3) 15% each
- Midterm exam 20%
- Final exam 25%
- Participation 10%

**GRADES (8803):**
- Short papers (3) 10% each
- Midterm exam 20%
- Final exam 25%
- Course development 20%
- Participation 5%

**READINGS:**
- Additional assigned readings will be available on the web or through T-Square/Buzzport

The reading load for 4803 students averages 95 pages per week from the texts and from web and Buzzport documents. The weekly reading load will vary somewhat, so plan ahead.

On the course outline, items marked with an asterisk (*) are **required reading for all students.**

Readings marked with a + are **required for 8803 students.**

Other items listed without a * or + are recommended. In your readings and research for this course you should find additional sources that are especially useful; please bring them to my attention.

**THE RULES:**
Remember that you are always bound by the Georgia Tech Honor Code. If you have any questions about what is permitted and forbidden, ask first! This applies particularly to cut-and-paste work in your written papers.

My office hours are Tuesday 2-3 and Thursday 11-12. I cannot guarantee that I will always be available during those periods, but I am usually near my office. If you need/want to talk with me, email is the best way to ensure or arrange a meeting.
COURSE OUTLINE:

This outline describes the order in which topics and readings will be covered, with tentative dates. We expect several guest speakers and other events to affect the dates on which we will begin each topic. A course schedule will be posted to T-Square/Buzzport and occasionally updated. Changes will be announced in class and by email.

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I. BACKGROUND

August 23
1. What is regulation?
   * Kerwin, Rulemaking, ch. 1

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II. MARKETS AND TECHNOLOGY

September 4, 6
3. Markets, market failures, and regulatory responses
   * Breyer, Regulation and Its Reform, ch. 1, pp. 15-35 (BUZZPORT)
September 11, 13, 18 (Guest speaker one meeting)

4. Technology, command-and-control, hegemonic agencies, incentives, and alternatives to regulation

* Environmental Protection Agency, *The United States Experience with Economic Incentives for Pollution Control*, 2001. Summary and ch. 3 (pp. 13-30) (BUZZPORT)


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III. PROCESS

September 20, 25, 27

5. Administrative law and procedures: legal constraints and powers of regulatory agencies

* Kerwin, *Rulemaking*, chs. 2, 3
* Examine at least one Notice of Meeting, one Proposed Rule, and one Rule in a recent Federal Register, at www.archives.gov/federal-register/the-federal-register/. Bring a short written description of each to class.
* Explore the OMB-OIRA website at www.whitehouse.gov/omb/inforeg/regpol.html

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October 2, 4, 11 (October 9: Fall Break)

6. Political control of regulators: the roles of the executive, legislative, and judicial branches

* Kerwin, *Rulemaking*, chs. 4, 5, 6 (President, Congress, bureaucracy, public, interest groups)
* Sunstein, *Risk and Reason*, ch. 8
- Explore OMB Watch www.ombwatch.org/regs
October 16, 18, 23 (Guest Speaker one meeting)

7. Experts and the public: who participates, who decides?

* Kerwin, Rulemaking, ch. 5
- explore “The Pump Handle” (public health and the environment) http://thepumphandle.wordpress.com/

October 25

8. Comparing costs and benefits


October 20, November 1

9. Understanding risk and uncertainty

* Sunstein, chs. 1, 2, 3, 6
+ Sunstein, ch. 7
+ David E. Adelman, “Two Models for Scientific Transparency in Environmental Law,” in Wendy Wagner and
November 6, 8, 13 (Guest speaker one meeting)

10. The politics of risk regulation

* Sunstein, chs. 4, 5

Chapter 4: “Techniques for Communicating Uncertainty to Agency Decisionmakers,” (pp. 171-202)
Chapter 5: “Presentation of Uncertainty Information to High-Level EPA Decisionmakers,” (pp. 203-212)
* Sunstein, chs. 8, 9, 10

November 22 – Thanksgiving Holiday

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V. NEW REGULATION: NANOTECHNOLOGY

November 15, 20, 27, 29

11. Regulating the unknown: nanotechnology

*(other materials to be added)*

* EPA, “Final Nanotechnology White Paper,” prepared for the U.S. Environmental Protection Agency by members of the Nanotechnology Workgroup, February 15, 2007 ([www.epa.gov/osa/nanotech.htm](http://www.epa.gov/osa/nanotech.htm)) (WEB)
  - “NRDC Advances Regulation of Nanotechnology to Protect Human Health” ([www.nrdc.org/media/2007/070515.asp](http://www.nrdc.org/media/2007/070515.asp)) (WEB)

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VI. GROUP PRESENTATIONS

December 4, 6

12. Group presentations