

Syllabus for POSC 365/ History 366
Science, Technology, and Government

Tuesday/Thursday 2:45 PM - 4:00 PM Autumn Semester 2006

Clark 309

Office Hours 4:00 – 5:00 Tues/Thurs, Mather House 218

Professor George W. Collins

This course will trace the rise of scientific dominance by the U.S and its subsequent impact on the formulation of government policy. The course will begin by defining what science is and what it isn't. Particular attention will be placed on what are traditionally called the "hard sciences" such as physics, chemistry geology etc. The primary focus will be on developments of the 20th century, particularly following WWII. After reviewing appropriate events of the 18th and 19th century we will deal with the history leading up to the extensive emigration of European scientists to the U.S. Following this historical survey we shall investigate two primary examples of how science has affected public policy. The first will be the decision to develop and use the Atomic Bomb. More than anything else, that project solidified policy-makers' belief that American leadership in the scientific enterprise was central to our position in the world. We then shall examine in some detail how relationships between science and government evolved over the following half-century, leading to the present relationship we are seeing in policy-making about the challenges provided by global warming.

The textbook for the course is *Science, Money, and Politics - Political Triumph and Ethical Erosion* by Daniel S. Greenberg, 2001, The University of Chicago Press. Additional reading will be available through the Library's e-reserve program. This will include items from a wide variety of sources from some histories of the time, news articles, essays, and a science fiction short story by the discoverer of the nuclear chain-reaction. The schedule that follows provides the number of pages for each E-Reserve reading in parentheses. However, occasionally the subject matter is repeated so that the total number of E-RES pages in parentheses is larger than the actual amount of assigned reading.

Grades for the course will be based on an independent project due early in the term, midterm in class essay examination, a final examination, and class participation. The subject of the independent project will be up to the student and is not limited to specific subjects covered in the lecture but will be expected to be related to the scope of the course. The independent project will count **15%**, the midterm examination will count for **20%**, final examination for **45%** and class participation for **20%** of the grade. Note that the 'week' assignments generally correspond to the subjects of two successive lectures.

Session 1	8/29/06	Introduction to the Course , Scope of the Course, Rules of the game, and the nature of the text and suggested readings for the course.
Session 2	8/31/06	Lecture and Discussion: What is Science, Definitions of terms like Science & Technology. Assigned Reading: Greenberg, Intro. & Epilogue, Week 1 E_RES-(9).
Session 3	9/5/06	Lecture and Discussion: Science & Technology in the 18 th & 19 th Century Assigned Reading: Week 2 E-RES-(20)
Session 4	9/7/06	Lecture and Discussion: Science & Technology Leading Up to WWII

Session 5	9/12/06	Assigned Reading: Week 2 E-RES Lecture and Discussion: Who are the scientists? Assigned Reading: Greenberg, Chapters 15, 16. Week 3 E-RES (80)
Session 6	9/14/06	Lecture and Discussion: The Development of Radar and its integration into Government science. Assigned Reading: Week 3 E-RES
Session 7	9/19/06	Lecture and Discussion: The Development of Science Leading to the Manhattan Project Assigned Reading: Week 4 E-RES, (19)
Session 8	9/21/06	Lecture and Discussion: The Decision to Develop the Atomic Bomb Assigned Reading: Week 4 E-RES
Session 9	9/26/06	Lecture and Discussion: The Decisions to Use the Atomic Bomb, and to develop and deploy the H-Bomb Assigned Reading: Week 5 E-RES, (11)
Session 10	9/28/06	Lecture and Discussion: Establishment of the NSF. Assigned Reading: Greenberg Chapters. 1- 4, 24, Week 5 E-RES
Session 11	10/3/06	Lecture and Discussion: The Influence of Events from 1950 to Sputnik, Assigned Reading: Greenberg Chapters 13, 14, 18, 20, Week 6 E-RES (17)
Session 12	10/5/06	Lecture and Discussion: The Impact of Sputnik on Science and Education Assigned Reading: Week 6 E-RES (Independent Project Due)
Session 13	10/10/06	Lecture and Discussion: Developing Science & the Space Race Assigned Reading: Greenberg, Chapters 10, 11, 15, Week 7 E-RES (13)
Session 14	10/12/06	Lecture and Discussion: The Cold War, Nuclear and Military Policy (MAD, 1 st Strike, Satellite and Computer Developments) Assigned Reading: Greenberg Chapter 7, Week 7 E-RES
Session 15	10/17/06	Lecture and Discussion: The Apollo Program to Vietnam and the Mansfield Amendment Assigned Reading: Week 8 E-RES (10)
Session 16	10/19/06	Midterm
Fall Break	10/23-24/06	
Session 17	10/26/06	Lecture and Discussion: The Politicization of Science and its Effects on Public Policy Assigned Reading: Week 9 E-RES (29)
Session 18	10/31/06	Lecture and Discussion: The Effects of the Appearance of AIDS and “Star Wars” on Public Policy Assigned Reading: Greenberg Chapter 18, Week 9 E-RES

- Session 19** **11/2/06** **Lecture and Discussion:** Tobacco Regulation, Shelby Amendment, The Data Quality Act, the Closing of the OTA, and “Sound Science”
Assigned Reading: Greenberg Chapters 27-28, Week 10 E-RES (24)
- Session 20** **11/7/06** **Lecture and Discussion:** The Growth of Science and Technology
Assigned Reading: Greenberg Chapters 12-13, 25. Week 10 E-RES
- Session 21** **11/9/06** **Lecture & Discussion:** Joe White, Government Funding of Science,
Assigned Reading: Greenberg Chapter 27.
- Session 22** **11/14/06** **Lecture & Discussion:** Joe White: How Agencies are funded
Assigned Reading: To Be Announced
- Session 23** **11/16/06** **Lecture and Discussion:** New Science, New Technology and
Dealing with Disasters: Natural & Man Made
Assigned Reading: Week 12 E-RES (13)
- Session 24** **11/21/06** **Lecture and Discussion:** The Basis and Impact of Global Warming
Assigned Reading: Week 12 E-RES
- Thanksgiving 11/23-24/06**
- Session 25** **11/28/06** **Lecture and Discussion:** Public policy and Global Warming
Assigned Reading: Week 13 E-RES (72)
- Session 26** **11/30/06** **Lecture and Discussion:** Decline of Science
Assigned Reading: Greenberg , Chapter 21, Week 13 E-RES
- Session 27** **12/5/06** **Lecture and Discussion:** Future Challenges for Public Policy
Assigned Reading: Greenberg, Chapter 25, Week 14 E-RES (26),
- Session 28** **12/7/06** **Discussion and Review**
- Last Day of Classes 12/8/06**
- Session 29** **12/12/06, 12:30 p.m.** **Final Exam**