

# **FOR 720: Theoretical Foundations of Natural Resources and Environmental Policy**

## **Syllabus and Schedule – Spring 2005**

**Instructor:** Dr. Robert W. Malmshemer – 305 Bray Hall (mailbox: 320 Bray Hall)  
Email: [rwmalmsh@esf.edu](mailto:rwmalmsh@esf.edu) Phone: 470-6909

**Class Time and Location:** 11:00 – 12:20 Tuesdays and Thursdays in 321 Bray Hall.

**Office Hours:** 8:30 – 10:30 Wednesdays and by appointment.

**Course Description:** FOR 720 is an advanced investigation of: 1) methods, foundations, and logical structure of science, 2) the application of scientific theory to social science and policy, and 3) the political science, economic, and behavioral foundations of natural resources and environmental policy. The course is intended for advanced masters and Ph.D. students.

**Major Concepts or Methodologies:** Through extensive discussions of readings and research papers students analyze and learn:

1. Theoretical foundations of the use of reason and the scientific method in advancing human knowledge and understanding;
2. Major political science, economic, and behavioral science foundations of natural resources and environmental policy; and
3. How these concepts can serve as the foundation for thesis and dissertation literature reviews.

**Course Objective:** After completing this course the student will be able to:

1. Describe the methods, foundations, and logical structure of science;
2. Describe theories (and sub-theories) of the policy process and public administration; and
3. Apply these theories to natural resources and environment policy issues.

**Prerequisites:** A graduate course in public policy, natural resources policy, or environmental policy. If students have questions about their ability to complete the course goals and objectives successfully, they should see me.

**Relationship to Other Courses:** This course builds upon basic natural resources and environmental policy concepts developed in other courses especially FOR 564: Soil and Water Conservation Policy, FOR 665: Natural Resources and Environmental Policy, and FOR 670: Resource Economics. The course complements FOR 694: Writing for Scientific Publication, and FOR 695: Research Methods of Natural Resources.

**Course Structure:** The course is divided into two sections:

1. *Introduction:* Introduction to the course and Environmental and Natural Resource Policy contributions to political science, public administration, law, and other core disciplines,
2. *Science:* Analysis of the differences between science and pseudoscience, the differences and similarities between the natural and social sciences, explanation and law, theory and observation, and confirmation and acceptance.
3. *Theoretical Foundations:* Examination of theories and sub-theories of the policy process and public administration.

**Required Textbooks:** All books are available at the Orange Bookstore in Marshall Square Mall.

1. Frederickson, George, and Kevin Smith. 2003. *The Public Administration Theory Primer*. Boulder, CO: Westview Press.
2. Klemke, E.D, Robert Hollinger, and David Wyss Rudge, eds. 1998. *Introductory Readings in the Philosophy of Science*. 3rd ed. Amherst, NY: Prometheus Books.
3. Sabatier, Paul. 1999. *Theories of the Policy Process*. Boulder, CO: Westview Press.

**E-Mail Requirement:** It is a course requirement that *all* students have an **.syr.edu** e-mail account and that they check their **.syr.edu** e-mail account *regularly* for class announcements.

**Grades:** This course uses a contract grading system. Grades are based on the number of points students accumulate by the end of the semester:

A = 111 or more points	B+ = 95 to 81 points	C = 70 to 61 points
A- = 110 to 96 points	B = 80 to 71 points	F = 61 points or less

Students may accumulate points by completing projects in one or more of three areas and may lose points for failure to attend class:

1. **The Structure of Scientific Revolutions Projects.** If you want to do one of the two second projects, you must do the first project.
  - a. Read Thomas Kuhn's *The Structure of Scientific Revolutions*, 3<sup>rd</sup> ed. (University of Chicago Press, 1996) and write a six (6) to eight (8) page book review that describes the book and critically analyzes it. See book reviews in *Science*, *Perspectives on Politics*, etc. for examples. Note: no more than one-half of the review should describe the book; most of the review should critically analyze the book. This project is due at **noon on Friday, March 4, 2005**. (25 points)
  - b. *After* completing your critical analysis of *The Structure of Scientific Revolutions*, 3<sup>rd</sup> , do **one** of the following (These projects are due at **noon on Thursday, March 24, 2005**):
    - i. Read Thomas Kuhn's *The Road since Structures: Philosophical Essays, 1970-1993, with an Autobiographical Interview* (University of Chicago Press, 1993) and describe in a five (5) to seven (7) page paper how Kuhn's ideas evolved since *The Structure of Scientific Revolutions* was first published in 1962 (20 points) .
    - ii. Choose a social science discipline and write a five (5) to seven (7) page paper reviewing whether (and why) commentators believe the discipline currently fits Kuhn's definition of "normal science" (25 points).
    - iii. Choose and read one of the books in the "Selected Bibliography for Part 2" section of Klemke, Hollinger, and Rudge's *Introductory Readings in the Philosophy of Science* (pages 192-3). Write an six (6) to eight (8) page book review that describes the book and critically analyzes it. See book reviews in *Science*, *Perspectives on Politics*, etc. for examples. Note: no more than one-half of the review should describe the book; most of the review should critically analyze the book (25 points)
2. **Literature Reviews** – These projects are due at **noon on Tuesday, April 26, 2005**. You may do one **or** both projects.
  - a. Conduct a literature review to locate peer-reviewed environmental and natural resources policy **research** articles that use **one** of the theories (or subtheories) from Sabatier's *Theories of the Policy Process* or Frederickson and Smith's *The Public Administration Theory Primer*. Write an annotated bibliography (approximately one page per article)

describing the research question, methods, results, theoretical advancement, and how the article relates to the theory (described in Sabatier or Frederickson and Smith). You must also provide a complete copy of the article with your annotated bibliography. Points will be allocated:

- i. Six (6) articles reviewed = 15 points;
  - ii. Seven (7) articles reviewed = 20 points;
  - iii. Eight (8) articles reviewed = 25 points; and
  - iv. Nine (9) articles reviewed = 30 points.
- b. Conduct a literature review to locate peer-reviewed environmental and natural resources policy **research** articles that use **one** of theory (or subtheory) **not** described in Sabatier's *Theories of the Policy Process* or Frederickson and Smith's *The Public Administration Theory Primer*. Write a three (3) to five (5) page paper describing the theory **and** write an annotated bibliography (approximately one page per article) describing the research question, methods, results, theoretical advancement, and how the article relates to the theory. You must also provide a complete copy of the article with your annotated bibliography. Points will be allocated:
- i. Four (4) articles reviewed = 20 points;
  - ii. Five (5) articles reviewed = 25 points;
  - iii. Six (6) articles reviewed = 30 points;
  - iv. Seven (7) articles reviewed = 35 points; and
  - v. Eight (8) articles reviewed = 40 points.

3. **Application of theories to environmental and natural resources policy problem** – This project are due at noon on Tuesday, April 26, 2005.

- a. Choose two or more theories (or subtheories) described in Sabatier's *Theories of the Policy Process* or Frederickson and Smith's *The Public Administration Theory Primer*. For each theory (or subtheory) write paper: 1) summarizing the theory, 2) describing an environmental or natural resource issue, 3) applying the theory to the issue, and 4) describing the advantages and disadvantages of the application. Points will be assigned:
- i. Two theories (four (4) to six (6) page paper) = 10 points,
  - ii. Three theories (six (6) to eight (8) page paper) = 20 points,
  - iii. Four theories (eight (8) to ten (10) page paper) = 30 points,
  - iv. Five theories (ten (10) to twelve (12) page paper) = 40 points,

4. Since this course relies on class discussions to advance student's knowledge, attendance is critical. Students who have three or more unexcused absence s (absences not due to illness, conference attendance, etc.) will lose points:

- a. Students who miss three (3) classes will lose five (5) points;
- b. Students who miss four (4) classes will lose ten (10) points;
- c. Students who miss five (5) classes will lose fifteen (15) points;
- d. Students who miss six (6) classes will lose twenty (20) points; and
- e. Students who miss seven (7) or more classes will lose forty (40) points.

**Standards for papers.** Papers **must** meet minimum standards appropriate for advanced graduate standards (see next paragraph). Papers failing to meet these minimal standards will be returned to the student. The student will then have five (5) days to rework the paper. Students will lose ten (10) points for **each** returned paper. If the student fails to hand in the paper after five (5) days, it will no longer accepted. Note: The professor **not** review drafts of paper.

Unless otherwise noted, all papers **must** be double-spaced with one inch margins and use 12 point Times or Times New Roman fonts. All papers must meet minimum standards for advanced graduate papers (see *The Chicago Manual of Style*). Papers **must**: 1) **be clear, concise and appropriate for an advanced graduate course**, 2) use headings and subheadings, 3) use standardized citations for **all** cited literature,<sup>1</sup> and 4) include page numbers. Student's names should appear on the first page of all papers; do **not** put cover sheets on papers. All page number requirements in this syllabus do **not** include the literature cited section of the paper.

All papers **must** be turned in time. Late papers will be penalized five (5) points per day, commencing at the end of class on the day the paper is due. Late assignments **must** be delivered to 305 Bray Hall or placed in Dr. Malsheimer's mailbox in 320 Bray Hall.

**Accommodations for Students with Disabilities:** If you have an identified disability and will need accommodations, you should first contact Mr. Slocum in the Office of Student Life in 110 Bray Hall. He will discuss the ESF's disability policy with you and work with you to access supportive services. If you have a learning disability, the College will require you to provide supportive documentation and will develop an approved accommodation sheet for you. I can not provide accommodations until you provide me with the accommodation sheet **and** we meet to discuss its applicability to this course. I will not provide accommodations retroactively. If you have any questions about disabilities, please contact me and/or Mr. Slocum as soon as possible. All conversations will be confidential.

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<sup>1</sup>Plagiarism will **not** be tolerated. All papers **must** contain original thoughts or contain complete **and** correct citations to other's work. Note: If you quot someone's work, you **must** provide the page number for the quotation.

## Course Schedule

<b>Class</b>	<b>Topic</b>	<b>Reading</b>
1	Introduction: Course	Tufte Handout
2	Introduction: ENR Policy and Theoretical Contributions	McSpadden, & Brick Handouts
3	Science: Science and Pseudoscience	KHR Part 1: 1&2
4	Science: Science and Pseudoscience (Con't)	KHR Part 1: 3, 4 & 5
5	Science: Natural and Social Science	KHR Part 2: 6&7
6	Science: Natural and Social Science	KHR Part 2: 8, 9 & 10
7	Science: Explanation & Law	KHR Part 3: 11, 12 & 14
8	Science: Theory and Observation	KHR Part 4: 17, 18 & 19
9	Science: Confirmation and Acceptance	KHR Part 5: 24 & 25
10	Introduction to ENR Theories	Platt, Chamberlain & Francis Handouts
11	Policy Process: Introduction and Stages	Sabatier: Chapters 1&2
12	Policy Process: Institutional Rational Choice	Sabatier: Chapter 3
13	Policy Process: Ambiguity, Time, and Multiple Streams	Sabatier: Chapter 4
14	Policy Process: Punctuated Equilibrium Theory	Sabatier: Chapter 5
15	Policy Process: Advocacy Coalition Framework	Sabatier: Chapter 6
16	Policy Process: Innovation and Diffusion	Sabatier: Chapter 7
17	Policy Process: Large-N Comparisons	Sabatier: Chapter 8
18	Policy Process: Conclusion	Sabatier: Chapters 9&10
19	Public Administration: Introduction and Theories	F&S: Chapters 1&2
20	Public Administration: Bureaucratic Politics	F&S: Chapter 3
21	Public Administration: Institutionalism	F&S: Chapter 4
22	Public Administration: Public Management	F&S: Chapter 5
23	Public Administration: Postmodern Theory	F&S: Chapter 6
24	Public Administration: Decision Theory	F&S: Chapter 7
25	Public Administration: Rational Choice	F&S: Chapter 8
26	Public Administration: Conclusion	F&S: Chapters 9&10
27	Course Conclusion and Evaluation	

## Readings

- Brick, Phillip. 2004. The Greening of Political Science: Growth Pains and New Directions. *Perspectives on Politics* 2(2):337-346.
- Chamberlin, T.C. 1965. The Method of Multiple Working Hypotheses. *Science* 148:754-759.
- Francis, John. 1980. Natural Resources, Contending Theoretical Perspectives, and the Problem of Prescription: An Essay. *Natural Resources Journal* 30:263-282.
- Frederickson, George, and Kevin Smith. 2003. *The Public Administration Theory Primer*. Boulder, CO: Westview Press.
- Klemke, E.D, Robert Hollinger, and David Wyss Rudge, eds. 1998. *Introductory Readings in the Philosophy of Science*. 3rd ed. Amherst, NY: Prometheus Books.
- McSpadden, Lettie. 1997. "The Courts and Environmental Policy." In *Environmental Politics & Policy: Theories and Evidence*. 2<sup>nd</sup> edition, James Lester, editor. Durham, NC: Duke University Press. Pages 242-274.
- Platt, John. 1964. Strong Inference. *Science*: 146:347-353.
- Sabatier, Paul. 1999. *Theories of the Policy Process*. Boulder, CO: Westview Press.
- Tufte, Edward. 1997. *Visual Explanations: Images and Quantities, Evidence and Narrative*. Cheshire, CT: Graphic Press. Pages 27-37 (part of Chapter Two: Visual and Statistical Thinking: Displays of Evidence for Making Decisions).