

Piedmont Project Statement

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As a faculty member in the Environmental Studies department, my experience was somewhat different than most Piedmont Project participants. I started with a strong substantive knowledge in environmental issues in general (and environmental policy in particular); but less knowledge in the wider liberal arts and more traditional fields of academic study. Thus, for me Piedmont was a broadening experience, encouraging me to think about issues such as context, history, debate, and how they relate to my teaching. This influenced my course by encouraging me to include more context in my “Energy, Resources, and Environmental Change” course. I have added Daniel Yergin’s *The Prize: The Epic Quest for Oil, Money, and Power* as a text that the students will read throughout the semester, and have two days to discuss before exams. This will provide an opportunity to ground energy and climate change policy into its broader context of history and geopolitics. I also hope to draw parallels or links between different historical events and our current dilemmas. For example:

- Can we apply lessons from the transition to oil for our anticipated transition away from oil?
- How does the history of the Middle East in the late 19th and early 20th century influence our actions there today? Middle Eastern perceptions of our actions?
- How does the presence of oil influence economic and political development?
- How has and does oil influence our international policy?

Finally, the Piedmont Project re-affirmed my commitment to continue running required field trips for this course. Because of the extensive time and effort this activity requires from me, I had questioned its value. But now I am determined to continue offering field trips in this course as well as “Environmental Policy.”

*“Oil is like a wild animal. Whoever captures it has it.”
-- J. Paul Getty (1892 - 1976)*

ENVS 220S – ENERGY, RESOURCES, AND ENVIRONMENTAL CHANGE

Fall 2002 – Section 2124

Instructor:	Dr. Tracy Yandle	E-Mail:	tyandle@learnlink.emory.edu
Classroom:	Science-Math West 507	Office:	Science-Math East 514
Class Hours:	T, Th 11:30 – 12:45	Office Hours:	M,W 10:00 – 12:00
Lab Hours:	F 2:30-5:30	Office Phone:	404-727-6314

Course Description/Objectives:

“Energy, Resources, and Environmental Change” is a mid-level course, designed to introduce you to the complexity of issues surrounding energy use and its relationship to environmental issues. This course will focus on the policy questions surrounding the intersection of energy and climate change (AKA – “global warming”). Success in this class will require a mastery of: the basic technical aspects of energy generation and use; the scientific and political issues surrounding climate change; and an ability to perform basic policy analysis. Also, you will develop the following skills – critical thinking, information integration, and effective professional writing – these skills will be demanded by both future classes and the job market.

We will use several learning and teaching approaches including both traditional methods (such as lectures, homework, and tests) as well as non-traditional methods such as student-led classes, in-class simulations, field trips, and other exercises. More details will be provided in the next two weeks. By the end of the semester, you should:

1. Develop a nuanced understanding of the facts and controversies surrounding energy use and climate change.
2. Gain an historical and global perspective on energy and climate change policy
3. Learn professional writing skills and how to effectively participate in group learning.
4. Learn how to be an educated consumer of environmental information in both a scientific and policy context

Seminar Learning:

ENVS 220S is an introductory seminar class. This means that you are required to take on much more of the responsibility for learning, participating, and teaching than you would in a standard class. **If you want to simply be a sponge soaking up knowledge, this is not the class for you!** Because this is a seminar class, you are responsible for both learning AND teaching class material. At the most basic level, this means I expect you to come to class with a full knowledge of the readings and prepared to participate. More specifically, you will be responsible for posing weekly written commentaries on the readings to the Learnlink conference, and at least once during the semester you (as part of a student team) will be responsible for leading a full 50

minute class period. Your independent preparation will be key to your success in this class!

Field Trips:

Field trips are a vital part of ENVS 220. Over the course of the semester, five field trips will be scheduled to a variety of energy generating and energy consuming facilities in and around the Atlanta region. **YOU ARE REQUIRED TO ATTEND AND COMPLETE WRITE-UPS ON Three FIELD TRIPS.** Most field trips will be scheduled for Fridays. Plan on field trips lasting 3+ hours. Field trips take place during lab hours (plus some additional time for transportation). If you are not attending a field trip, or if no field trip is scheduled, there will be no lab session. If you want, you can attend and complete write-ups on additional field trips for extra credit.

Fieldtrips are scheduled for the following days and times. Please sign up for a minimum of three as soon as possible:

Date	Approx. Times	Location:	Description
TBA	12:15 -- 4:00	Plant McDonnough	Coal-Fired Power Plant
TBA	12:30 – 4:00	Colonial Pipeline Power Springs	Gasoline Pipeline and Tank Farm
TBA	12:15 – 4:00	Morgan Falls Dam	Hydroelectric Power Plant
TBA	12:00 – 5:00	Atlanta Gas & Light	Natural Gas Tank Farm and Demonstration
TBA	1:00 – 4:00	Math & Science Building	Energy-efficient construction at Emory University

Electronic Classroom:

This course will make use of on Emory's LearnLink class conferencing and information sharing system. provides a wide range of resources that will help you with this course. Materials that will be particularly useful include:

- ◆ Reading Commentaries – Each week, you will post at least one commentary on the assigned readings to Learnlink. These commentaries are due by 9:00 am of class day. Either me or the student-leaders for that day's class will incorporate your comments and questions into the class discussion.
- ◆ Conferencing – Provides an opportunity to work with your classmates and me outside of regular classroom hours. Post and answer questions, work collaboratively to solve problems.
- ◆ Class Notes – When I use a large number of overheads in class, I will post the Powerpoint file to LearnLink. This will not be a substitute for attending class. Rather, they will help you organize your notes and actively participate in class.
- ◆ Assignments – This section will contain information on assignments.
- ◆ Tests/Final Exam – Information to help you prepare for the tests will be posted.

Textbooks:

It is very difficult to find a textbook that provides good coverage of both energy issues. To address this, two textbooks are required, and these will be supplemented with additional reading. The textbooks (available at the Emory University Bookstore) are: **Energy: Science, Policy, and**

the Pursuit of Sustainability (Island Press, 2002) and Climate Change Policy: A Survey (Island Press, 2002). The Prize: The Epic Quest for Oil, Money, & Power (Free Press, 1993) There will also be additional required readings on articles and papers outside of the textbooks. These are available through the e-reserve in the Library. These outside readings are a vital part of the class. You are REQUIRED to complete all readings (including those not in the textbook) before class on the day listed on the syllabus. I assume that as responsible university students, completing readings will not be a problem. However, I reserve the right to conduct unannounced minute papers or quizzes on the readings.

Current Events:

Energy and Environmental Policy are rapidly changing fields. Indeed, it is nearly impossible for textbooks to stay entirely up to date. So, if you wish to understand this field, you must stay on top of the news and current events. Exam questions and assignments will require a working knowledge of the news, as it pertains to energy policy and climate change. There are several ways you can stay up to date. These include:

1. Regularly read a high quality and nationally oriented newspaper such as *The Washington Post*, *New York Times*, *Wall Street Journal*, or *Chicago Tribune*.
2. Regularly watch national news programs such as the half hour shows on the main networks or the NewsHour on PBS.
3. Regularly listen to in-depth radio news programs such as “Morning Edition” or “All Things Considered” on NPR. Or for a more international perspective, listen to the BBC World Service news broadcasts over the World Wide Web.
4. Regularly read a high quality weekly news magazine such *The Economist* or *The Washington Post National*.

Course Policies:

I really don't like writing this section any more than you enjoy reading it. College is a time of discovery and living life to its fullest. It is also supposed to be a time of work and shared learning. Unfortunately, some students occasionally forget the balance. Therefore, the following policies apply to this course.

1. **Late or Missed Tests or Assignments:** Except for reading commentaries (which are due by 8:00am), you are expected to hand in all assignments in class or by 5:00pm via e-mail on the due date. In case of a schedule conflict or any personal issues affecting your ability to hand in an assignment, it is your responsibility to contact me and arrange an extension. You must arrange the extension before the assignment or test is due. Unexcused late assignments will be penalized at 1/3 of letter grade per day. For example, if an assignment is due on Monday September 30, but is handed in on Wednesday October 3, it is two days late, so a B+ would become a B-. If that same assignment (due on Monday September 30) was handed in on Monday October 7, it would be seven days late, so a B+ would become a D.
2. **Attendance:** Attendance is not required. However, it is essential to good performance. Graded assignments will take place during class, and this is a seminar. So, missing classes will definitely have an effect on your final grade. Also if it becomes apparent that too many students are concentrating too heavily on other pursuits rather than attending class, I will begin to take attendance. Remember: participation is part of the final grade, and to participate actively in class, you must be regularly attending.
3. **Lateness:** Clearly, I prefer that you arrive on time, and habitual lateness will be

penalized. But, if there is an occasional situation where the choice is between coming late or not coming at all, please come to class.

4. **Class Participation:** Class time will be important not only for lectures but also for working together with your classmates on problems. Good participation will definitely help your final grade, and poor participation will definitely hurt.

Honor Code Reminder:

You can review the Emory honor code at <http://www.emory.edu/COLLEGE/students/honor.html>

Be sure you understand what is plagiarism. Most of you already realize that you *must* use quotation marks when directly quoting a text, and you must let the reader know who and where the quote came from. However, even when you paraphrase a quote or use someone else's ideas you must also give them name your source (e.g. cite the source). Not doing so also constitutes plagiarism. In addition, you must be careful when taking notes from web sources so that you do not inadvertently plagiarize web sites. We will provide information on proper documentation of sources in the term paper assignment. If you have any questions about the difference between plagiarism and paraphrasing, please see me or Emory University Writing Center. For a quick discussion of plagiarism, see <http://www.emory.edu/ENGLISH/WC/plagiarism.html>

What about working together on assignments? I have no problem with you discussing assignments with your peers *as long as you submit your own original work*. However, I strongly urge you not to share notes or other written materials with each other. Doing so makes it very easy to slide into plagiarizing each other's material. This is an honor code violation and will be dealt with appropriately.

It is expected that you will submit your own original work.

Grading:

As you can see from the course calendar, there are two tests, five short assignments, three field trip write-ups, a final project, and a final exam. You are also graded on class participation. The assignments will be weighed as follows:

Reading Commentaries: 30% of total grade

Readings are assigned for each day of class. Once a week, you must write a commentary on the assigned readings. Your commentaries must be posted to LearnLink by 9:00 am on the day the assigned readings are due. This deadline is to give me time to read your commentaries before class.

In your commentary, you should briefly (no more than half the commentary) re-cap the main points of the authors. For the rest of the assignment, comment on what you read. Here are some suggestions – you do not need to address each question in each commentary. What questions did it raise for you? Did you agree or disagree with the author(s)? Why? How is the author(s)' opinion similar or different to previous authors or our class discussion? Did the reading challenge your thinking? How? What about this article would you like to discuss in class?

Short Assignments: 20% of the total grade

Two of the most important skills in environmental studies are critical thinking and professional writing. Both these skills require practice. To give you practice, over the

course of the semester you will write three short (1-2 pages) assignments. These assignments will be based on the readings as well as a small amount of independent research, and will require you to analyze the readings and take a position on climate change or energy policy. You will be graded on the quality of your research and analysis, as well as how well you present your argument in your writing. More details about these short assignments will be provided in class and posted to the LearnLink site. If you have a problem with these assignments, come see me immediately! The sooner we start working on a problem, the easier it is to address.

Short assignments are due on: September TBA, October TBA, and November TBA

Field Trips 20% of the total grade

The best way to gain an in-depth appreciation of the complexity surrounding energy and environmental issues is to go out and see some of the sites involved. This helps you gain some first-person experience – the feel and smell of an issue – that cannot be appreciated by simply reading articles and books. To provide these experiences, you are required to attend and complete a 1-2 page write-up on four of the five scheduled field trips. Questions for write-ups will be at the field trips.

Write-ups are due the first day of class after the field trip.

Tests 20% of the total grade

During the semester, there will be two tests administered. They will focus on the materials discussed in class and in the readings. In order to do well on these tests, you will need to understand both the substance of the materials (e.g., factual questions) as well as their application (e.g., writing an analysis). More details about the tests will be provided in class and on LearnLink.

Tests will be held on: October TBA and December TBA

Participation and Effort: 10% of overall grade

Hard work and participation are important. I expect you to come to class prepared, and to participate fully in the learning process. Examples of activities that influence your participation grade are: quality of contribution to class discussion, any collected in-class materials, participation in in-class exercises and any minute papers. The best way to do well in this section is consistent and contentious effort throughout the semester.

Extra Credit

Extra credit can be earned by attending extra field trips then do the write-ups on extra field trips. **WARNING:** The points available from extra credit are modest. If a grade is on the edge (e.g., between a B and a B+), the extra credit may be enough to make a difference in the final grade. Extra credit will not be enough to create a dramatic change (e.g., a C- to a B or an F to a C-).

Grades will be assigned on a strict percentage basis, and there will be no curve. This means you are competing against yourself, and your best performance – your classmates' success.

Course Schedule:

As you can see, this is a very tight schedule. We cover a lot of material in a relatively short time. This schedule may be changed if mutually agreed upon by you and me.

Date	Topic	Assignments
Aug 26 (Thursday)	Welcome, Intro Climate Change	
Aug 31 (Tuesday)	Energy Science, Predictions	<u>Energy</u> Chapters 1&2, Lomborg Ch. 11 (e-reserve), Yergen Ch.1
Sept 2 (Thursday)	Climate Change Science	Assignment #1: CO2 Production Due <u>Climate</u> Ch. 1, Yergen Ch. 1
Sept 7 (Tuesday)	Climate Change Science – Skeptics View	Lomborg Ch. 24 (e-reserve), Yergen Ch. 2
Sept 9 (Thursday)	US Energy Profile	2001 Flexible Energy Report (e-reserve), Yergen Ch. 2
Sept 14 (Tuesday)	US Energy Policy	<u>Energy</u> Ch. 5, Yergen Ch. 6
Sept 16 (Thursday)	US Energy Policy	<u>Economist</u> oil articles (e-reserve), Yergen Ch. 6
Sept 21 (Tuesday)	US Energy Sources – Coal & Nuclear	Rosenbaum Ch. 8 (e-reserve) Hoffman (e-reserve), Yergen Ch. 9
Sept 23 (Thursday)	US Energy Sources – Coal & Nuclear	Assignment #2: State Profiles Due Radetzki (e-reserve), Barke & Jenkins-Smith (e-reserve), Yergen Ch. 9
Sept 28 (Tuesday)	US Climate Change Policy	<u>Climate</u> Ch. 7,8, Yergen Ch. 11
Sept 30 (Thursday)	US Climate Change Policy	Cooper (e-reserve), Yergen Ch. 11
Oct 5 (Tuesday)	History of Oil	Reading TBA
Oct 7 (Thursday)	Exam Review	Yergen Ch. 15
Oct 12 (Tuesday)	Fall Break	Fall Break
Oct 14 (Thursday)	Test #1	Test #1
Oct 19 (Tuesday)	Kyoto Protocol	Hempell (e-reserve), Yergen Ch. 19
Oct 21 (Thursday)	Kyoto Protocol	Schelling (e-reserve), Yergen Ch. 19
Oct 26 (Tuesday)	International Responses to Climate Change	<u>Climate</u> Ch. 4,5, Yergen Ch. 24
Oct 28 (Thursday)	International Responses to Climate Change	<u>Climate</u> Ch. 11, Yergen Ch. 24
Nov 2 (Tuesday)	Problems Addressing Climate Change	<u>Climate</u> Ch. 9, 13, Yergen Ch. 27
Nov 4 (Thursday)	Problems Addressing Climate Change	<u>Climate</u> Ch. 10, Yergen Ch. 27
Nov 9 (Tuesday)	Climate Change – Developing World View	<u>Climate</u> Ch. 14, Yergen Ch. 28

Date	Topic	Assignments
Nov 11 (Thursday)	Climate Change – Developing World View	<u>Climate</u> Ch. 15, Yergen Ch. 28
Nov 16 (Tuesday)	UN Climate Change Debate	Short Assignment #3 Country Profile Due Debate preparation
Nov 18 (Thursday)	UN Climate Change Debate	Debate preparation
Nov 23 (Tuesday)	Open Topic	Debate Write-Up Due Readings To Be Announced
Nov 25 (Thursday)	Thanksgiving – Eat, Drink, and Be Merry!	
Nov 30 (Tuesday)	History of Oil II	Yergen Ch. 33, 35
Dec 2 (Thursday)	Crystal Ball Gazing	Yergen, Epilogue, TBA
Dec 7 (Tuesday)	Exam Review	
Dec 9 (Thursday)	Test #2	Test #2