INR4054_Fa11_Marien_OW_59 (90471)

University of Central Florida

INR4054 Global Politics of Energy

Fall 2011

Course Information

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INSTRUCTORS' OFFICE HOURS	OFFICE LOCATION	OFFICE PHONE NUMBER
Mondays 4:00 p.m. to 5:30 p.m.	UCF Cocoa; BCC bldg 3, room 223	321-433-7912
Tuesdays 1:00 p.m. to 2:30 p.m	UCF Orlando; Philips Hall, room. 313	407-823-0113
Wednesdays 4:00 p.m. to 5:30 p.m.	UCF Cocoa; BCC bldg 3, room 223	321-433-7912
Thursdays 1:00 p.m. to 2:30 p.m	UCF Orlando; Philips Hall, room. 313	407-823-0113

Notes:

Remember that a face to face meeting is the best way to deal with complex issues. The second best way is a phone conversation. Email communication works well for exchanging standardized information, but it is not an ideal method for resolving complex issues.

Phoning outside of office hours is not likely to be effective.

You **must** regularly visit your UCF knights email account. The instructor relies on it to update you on the course process, schedule, requirements, etc.

Course Description

Course Contents

This course examines the main characteristics of the global energy system and the momentous choices currently faced by governments, citizens, business, and consumers across the globe in shaping the future of energy.

It is useful to think of the global energy system as standing at a crossroads between two sharply differentiated options.

One option expands coal usage, nuclear power for electricity generation, and extracts more coal, oil and gas from unconventional places (such as deep sea drilling, coal-to-liquids, tar sands, shale rocks, the Arctic) and from unconventional processes (hydraulic fracturing of natural gas, retreat mining of coal).

We may call this option the *New Frontier of Old Energies*. New sources of old energies are meant to supplement the traditional sources to meet a growing demand for power through familiar energy conversion technologies, infrastructures, engines, etc. This option is alluring for many. People chanting “Drill, Baby Drill” implicitly embrace it. In the United States, it is advocated by the Republican Party, the coal, oil and gas, and nuclear power industries, and many ideologically “conservative” media commentators.

This option, however, comes with considerable economic costs, very serious geo-political challenges, and dramatically intensified impacts on human health and environmental integrity.

An alternative option seeks to foster a gradual shift away from traditional energy forms towards cleaner, renewable, sources (solar and wind power, biofuels, energy efficiencies, energy conservation, etc.). We may call this the *Green Shift* option. This path is alluring for some. Many young people, some Democrats in the U.S. Congress, some “liberal” media commentators, a number of foreign political leaders, anti-globalization activists, and other visionaries advocate for this option in one form or another.

Notwithstanding the allure of green energy, the technological, economic and political challenges to meeting the exploding global demand for energy through renewable energies are also enormous.

This course will examine the difficulties inherent to both options and will scrutinize how global politics influences the energy choices made by governments, citizens, business, and consumers.

Course Process Overview

This course first introduces all students to the same set of data and ideas through readings, documentaries, quizzes and group discussions.

> Some of these discussions are likely to involve faculty and students not affiliated with the University of Central Florida through an idea-exchange mechanism we will call the *Global Energy Education Forum* (GEEF). This forum, currently in construction, will link faculty and students from various countries to exchange views and collaborate in research projects on the politics, economics, cultural and other social aspects of global energy production and consumption. People tend to view energy from a national standpoint. But the energy system is globally integrated and shaped by inter-dependence. All the important challenges in the area of energy (energy security, climate change mitigation, international competition for scarce resources, technological change, economic development, poverty alleviation, etc.) have important global dimensions. The basic goal of the GEEF is to use the internet to bring together faculty and students from different horizons to discuss energy issues and enrich one another's understanding.

Students then research a specific question and publish their research report on an electronic platform (wiki) opened to all class members. Some research reports will be selected to form the subject matter of the final exam.

Thus this course culminates in a research and publication exercise and students contribute to produce some of the course materials.

See the section on *Course Structure* for more information on this.

Students must select a topic/group at the very start of the semester. Submit your preference to the instructor by Friday August 26 at 5:00 pm in Webcourses → Assignments → Group Preferences. State a first, second and third preference. The instructor will assign you to a group soon thereafter. In general, students are assigned to topic/groups of their choice.

See the section on *Course Topics/Groups to Choose From* for more information on this.

Course Process Details

Week #1-10: Students will get acquainted with fundamental issues in the global politics of energy. Every student read the same materials and discusses it weekly in the context of a small group and occasionally with non-UCF faculty and students through an idea-exchange mechanism we will call the *Global Energy Education Forum*.

Week #11-14: Students research a specialized topic and publish their research results to the rest of the class on an electronic platform (wiki). Students put together an individual contribution to the group report and receive an individual grade for their

performance. The subject of each individual contribution, however, is coordinated with the group and the instructor. There should be no useless overlap between individual contributions and (as much as possible) all relevant issues should be covered by the group report.

Week #15-16: Selected contributions are assigned to the final exam. Students complete the course by studying these selected contributions and taking the final exam.

Course Structure

The course has three phases of uneven length.

Phase 1 Week #1-10 (Aug. 22 to Oct. 28 2011): Students first become acquainted with basic issues in the global politics of energy.

Phase 2 Week #11-14 (Oct. 31 to Nov. 23 2011): Students then produce a specialized group research report and publish it to the rest of the class on a wiki platform.

Phase 3 Week # 15-16 (Nov. 28 to Dec. 9): Students study for and take a final exam covering a subset of the contributions contained in the specialized group research reports.

- ### PHASE 1: An Overview of Energy Issues

This segment is meant to introduce students to basic issues in the politics of global energy.

During this period, students view documentaries and read materials, take quizzes and participate in weekly Group Discussion Boards. Students will also occasionally participate in the *Global Energy Education Forum*.

At this stage, every student view and read the same material regardless of topic preferences and group affiliation.

Every week, students take a brief quiz (available Monday through Wednesday), and then discuss the assigned material (readings and documentaries) in their respective Group Discussion Board (Monday through Thursday). In each Group a note taker summarizes the group's discussion and posts his or her summary in the Class Wide Discussion Board on Fridays. The summaries are graded by the instructor at random. Group members take turn in writing the summaries. Specific instructions for good

performance in the Group and Class Wide Discussion Boards will be communicated to students in due time.

- ### PHASE 2: Researching and Publishing a Group Report on a Specialized Area

During the second phase (week #10 to 14) of the course, students focus their research in their area of specialization (announced by their group's name). Students have chosen their group/topic at the start of the semester.

Students coordinate their research with their group mates and the instructor, and create a research report bringing new and solid information to the rest of the class. Assembling new, relevant and solid information is the goal here.

Contributions to Group Reports are authored by individual or paired students. Contributions contain original text supplemented by relevant images, photos, graphs, video clips, etc.

Instructor's expectations for contributions to Group Report will be communicated in due time.

The research report is assembled by the Group Editor and published for the benefit of the entire class on a wiki platform.

Thus, in this course students research and write for their classmates, not only for themselves or for the instructor.

- ### PHASE 3: Taking the Final Exam

Each group selects **one** contribution within its ranks and suggests it to the instructor for assignment for examination. Groups suggest the contributions that, in their opinion, best complement the common material explored during the first phase of the course. The instructor has the final word on the selected contributions subject to exam.

The instructor then administers a final exam covering the various selected contributions to the Group Reports.

Note 1: This course is structured as an online activity. Face to face meetings between group members are **not** needed or expected. In the past, some groups have met face to face to plan their work, but most have not and have done well.

Note 2: The instructor has regular office hours for students who would find meeting with the instructor useful. See Course Information. If you would like to talk to the instructor face to face but cannot come during office hours, it is suggested that you reach him by phone. A phone conversation is usually a more effective means of communication than email exchange.

Course Goals and Objectives

- ### Course Goals

1. Understand the arguments for and against continued reliance on traditional sources of energy (coal, oil, natural gas, nuclear power) and for developing new sources and new techniques for extracting these traditional energy forms.
2. Understand the arguments for and against seeking a greener global energy system and the many challenges such an energy system must overcome to satisfy the growing needs of the world's population.
3. Understand the processes and forces involved in shaping past global energy shifts.
4. Develop the research, analytical, evaluative and writing skills of participants.
5. Develop students' ability to work productively in small groups, thereby developing valuable skills for professional and administrative work roles.

- ### Course Objectives

During this course, the students will learn:

1. To state the pros and cons of developing the global energy system along the familiar lines of coal, oil, and nuclear power with particular reference to the following issues: affordability, output density, availability of resources and the risk of an imminent peak in global oil production, safety, reliability, implications on international relations and national security, air and water quality, and climate change.

2. To state the advantage and challenges of developing the global energy system along an alternative path of environmentally friendly energy sources with particular reference to the following issues: affordability, output density, availability of resources, safety, reliability, air and water quality, and climate change.

3. a. To describe the social, political, and economic forces involved in shaping the historical global energy shift from biomass to coal.
   b. To describe the social, political, and economic forces involved in shaping the historical global energy shift from coal to oil.
   c. To describe the social, political and economic forces aborting a green energy shift during the 1970s oil shocks.

4. To find relevant and empirically valid information, to analyze and evaluate this information and to summarize it in a coherent and engaging way.

5. To divide group tasks in clear and functional ways, to communicate ideas effectively, to pay close attention to other students' ideas and viewpoints, to demonstrate responsibility toward the group, to meet deadlines, and to integrate one's ideas in a larger ensemble.

Course Materials

Tom Friedman
Hot, Flat and Crowded 2.0: Why We Need a Green Revolution and How It Can Renew America.
New York: Farrar, Strauss and Giroux, **Expanded and updated edition only**, 2009, ISBN: 978-0312428921. (Avoid the 2008 edition.)

Bruce Podobnik
Global Energy Shifts: Fostering Sustainability in a Turbulent Age
Philadelphia: Temple University Press, 2006, ISBN: 9781592132942.

Course Pack, Dr. Daniel Marien
Global Politics of Energy
Available at both the UCF Orlando Bookstore and the BCC Cocoa Bookstore.

Assessments

WHAT	WHEN	POINT VALUE
RAT Quizzes	Weekly (weeks #2-10)	20
Participation in Group Discussion Board	Weekly (weeks #2-10)	20
Participation in the Global	To be announced	10

Energy Education Forum		
Three Weekly Interim Research Reports	Week # 11-13; submitted in Webcourses@UCF → Assignments → Interim Research Reports	Not graded, but compulsory (six points subtraction for non submission). Follow form circulated for this purpose.
Individual or Paired Contribution to Group Report	Week #14; submitted as email attachments to Group Editor, fellow group members and instructor by 11/23 at noon. Submit to instructor in Webcourses@UCF → Assignments → Contribution to Group Report.	40
Self Evaluation of Personal Contribution to Group Discussions	Submitted by 12/5 in Webcourses@UCF → Assignments → Self-evaluation.	Not graded, but compulsory (five points subtraction for non submission). Follow form circulated for this purpose.
Final Exam	12/5-9	10

Notes:

Twenty percent of the final course grade is a collective or group grade (participation in the Group Discussion Board).

Eighty percent of the grade is based on individual performance (unless the student opts for authoring a paired contribution to the Group Report with a group mate; this choice is yours).

Students who have not submitted a contribution to the group report will automatically fail the course regardless of their performance in the other forms of assessment.

Course Schedule

- ### SCHEDULE OVERVIEW

Weeks #1-10:
Part One: Getting Acquainted with Global Energy Issues through common core readings, group discussions and participation in the Global Forum discussions on the relevant platforms in Webcourses@UCF.

Weeks #11-14:
Part Two: Researching and Publishing Your Individual Contribution to your Group Report on the course's wiki (not to be confused with Webcourses@UCF).

Weeks #15-16:
Part Three: Studying and Taking the Final Exam on the Selected Contributions to Group Reports.

- ## SCHEDULE IN DETAIL

PART ONE

Getting Acquainted with Global Energy Issues

Week #1, 8/22-26: Getting Organized

- **Students read the Course Outline and document titled *Course Topics/Groups to Choose From* and communicate their choice of topic/group to the instructor by Friday August 26 at 5:00 pm. State a first, second and third preference. Submit your preferences in Webcourses → Assignments → Group Preferences. The instructor will assign you to a group soon thereafter. In general, students are assigned to topic/groups of their choice.**
- **Receive** your Group Assignment via email by Saturday 8/27 at 6:00 pm.
- **Students procure the reading materials.**
- **Students start reading the materials.**

Week #2, 8/29-9/2: Introducing the Course's issues

- **View** the documentary film *A Crude Awakening: The Oil Crash*
  - available at: http://www.oilcrashmovie.com/
  - **Note:** all documentary assignments are subject to availability and last minute changes.
- **Read** Friedman, chapters 1-2.
- **Read** Podobnik, chapter 1
- **Study** Statistical Tables 901 and 902 from the Statistical Abstract of the U.S. circulated by the instructor.

- **Take the RAT Quiz** (between 8/29 and 8/31) covering the materials assigned for weeks #1-2.
- **Participate** in your Group's Discussion Board (between 8/29 and 9/1) by answering the instructor's questions for this week. The instructor announces in due time the questions in the Announcement function of Webcourses@UCF and via email (from a list drawn from "myucf." Make sure you email address in myucf is working).
- **The Group Secretary** (a rotating position) summarizes the group's answers and posts them **in the relevant Class Wide Discussion Board** by Friday 5:00 pm under this title:
    - Group Name_Summary.
    - **EX.: "Biofuels Summary."**
    - The Secretary may use copy and paste functions in this task.

Week #3, 9/5-9: Health and Environment Impacts of Traditional Energy – Part 1

- **View** the documentary film *Crude: The Real Price of Oil*
    - available at: TBA
- **Read** Friedman, chapters 3-4
- **Read** Tamminen, chapters 1-2 (course pack)
- **Read** Goodell, chapter 1 (course pack)

- **Take the RAT Quiz** (Monday through Wednesday) covering the materials assigned for week #3.
- **Participate** in your Group's Discussion Board (Monday thought Thursday) by answering the instructor's questions for week #3.
- **The Group Secretary** (a rotating position) summarizes the group's answers and posts them **in the relevant Class Wide Discussion Board** by Friday 5:00 pm following the format specified above.

Week #4, 9/12-16: Health and Environment Impacts of Traditional Energy – Part 2

- **View** the documentary TV program *Hot Politics* by Frontline (PBS)
    - Available at: http://www.pbs.org/wgbh/pages/frontline/video/flv/main.html?pkg=2510&seg=1&mod=1
- **Read** Friedman, chapter 5-7

- **RAT Quiz.**
- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion

on Class Wide Discussion Board.

Week #5, 9/19-23: Energy and Social Conflict

- **View** two documentary films
  - *Oil on Ice,* available at: http://www.oilonice.org/
  - *Tar Sands*, available at: (TBC) http://www.clearwatermedia.com/projects/recent-projects/tar-sands-canada-for-sale.html?Step=2&VK=53
- **Read** Friedman, chapters 8-9.
- **Read** Podobnik, chapters 2-3.
- **Study** the Statistical tables (TBC) contained in International Energy Agency, *Key World Energy Statistics, 2009*, download for free at:
  - http://www.iea.org/publications/free_new_Desc.asp?PUBS_ID=1199

- **RAT Quiz.**
- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion on Class Wide Discussion Board.

Week #6, 9/26-30: Crisis and Conflict in Energy

- **View** the documentary film *Hugo Chavez*
  - Available at: http://www.pbs.org/wgbh/pages/frontline/hugochavez/
- **Read** Podobnik, chapters 4-5
- **Read** Friedman, chapter 10.
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- **RAT Quiz.**
- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion on Class Wide Discussion Board.

Week #7, 10/3-7: Hidebound America versus Pioneering China?

- **View** the documentary film *Car of the Future: Engineering for the Environment* NOVA, WGBH (PBS).
  - Available at: http://www.pbs.org/wgbh/nova/car/program.html

- **Read** Friedman, chapter 11-13.
- **Read** Nye (course pack)

- **RAT Quiz.**
- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion on Class Wide Discussion Board.

Week #8, 10/10-14: Opportunity Redux?

- **View** two documentaries *Vive les Nukes!* and *Solar Power: Saved by the Sun*
- *Vive les Nukes!* at: http://www.cbsnews.com/video/watch/?id=2661956n&tag=related;photovideo
- *Solar Power: Saved by the Sun*, from NOVA, WGBH, (PBS)
    - Available at: http://www.pbs.org/wgbh/nova/solar/
- **Read** Podobnik, chapter 6
- **Read** Friedman, chapter 14-15.

- **RAT Quiz.**
- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion on Class Wide Discussion Board.

Week #9, 10/17-21: Is California Showing the Way?

- **View** the documentary film *The Big Energy Gamble*
    - At: http://www.pbs.org/wgbh/nova/energy/program.html
- **Read** Friedman chapters 16-17.

- **RAT Quiz.**
- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion on Class Wide Discussion Board.

Week #10, 10/24-28: A Green Energy Shift?

- **Read** Friedman, chapters 18-19.
- **Read** Podobnik, chapter 7

- **RAT Quiz.**

- **Participate** in your Group Discussion Board.
- **The Group Secretary** (a rotating position) posts summary of group Discussion on Class Wide Discussion Board.

PART 2

Researching and Publishing Your Report

Week #11, 10/31-11/4: Research and Group Planning

- **Work** with your group to research and prepare the Group Report on your specialized topic. The Group Report will be published on the course wiki.
- **Submit** your Interim Research Report form in Webcourses@UCF → Assignments → Interim Reports by Friday, 6:00 pm.

Week #12, 11/7-11: Research and Group Planning

- **Work** with your group to research and prepare the Group Report on your specialized topic. The Group Report will be published on the course wiki.
- **Submit** your Interim Research Report form in Webcourses@UCF → Assignments → Interim Reports by Friday, 6:00 pm.

Week #13, 11/14-18: Research and Group Planning

- **Work** with your group to research and prepare the Group Report on your specialized topic. The Group Report will be published on the course wiki.
- **Submit** your Interim Research Report form in Webcourses@UCF → Assignments → Interim Reports by Friday, 6:00 pm.

Week #14, 11/21-27: Research and Group Planning

- **Work** with your group to finalize the Group Report on your specialized topic.
- **Individual Contributions** must be submitted to the Group Editor, the course instructor, and to all other group members via email by 11/23, noon.

- **Final Group Report must be assembled and properly edited by Group Editor** by 11/27, noon and published in the Group's Presentation Space on the course wiki platform**.**
- **Each group** selects one individual contribution to be made subject to exam by 11/27, noon.

PART 3

Studying Other Reports for the Final Exam

Week #15, 11/28-12/2: Study Week

- **Study** the selected individual contributions to the Group Report subject to exam.

Week #16, 12/5-9: Final Exam

- **Exam on the selected contributions to the Group Reports** subject to exam.
- Time-limited exam, open access to materials.

Course Topics/Groups to Choose From

Introduction

Start the semester by perusing the list of *Topics/Groups to Choose From* below.

This will help you select a group for the semester. Then submit your request to the instructor at danielmarien@yahoo.com by Friday August 26 at 5:00 pm.

Your effective group assignment will be communicated to you soon thereafter.

The list of topics is given below. Read it carefully and select a group based on your interest.

Note, the discussion below oftentimes articulates one or two overall guiding questions and several specific questions. The specific questions spell out various aspects of the overall guiding question(s). When dividing the work, the wiki team divides the specific questions. Therefore, all group members work on some aspects of the general questions. You do not answer the general question separately from the specific questions. You answer the general question by answering the specific questions.

Topics/Groups to Choose From

1. Transportation

2. Buildings

3. Solar Power

4. Wind Power

5. Bio-Fuels

6. Nuclear Power

7. Unconventional Sources of Traditional Energy

8. Areas of International Friction

9. Energy Issues in Developing Countries

10. Energy Issues in Less Developed Countries

11. Corporate Accountability

12. Energy Politics and Policy in the United States