Geography of Energy
GEOG 38333 and GEOG 70514

Hunter College, CUNY
Department of Geography
Fall semester 2018
Tuesdays and Fridays 11:10 am-12:25 pm, room 1022
The course is: Web-enhanced (**W**)
Requirements are either/or so: GEOL 105 OR GEOG 226 OR permission from the instructor

Instructor: Peter J. Marcotullio
Office: 1003e HN
Office hours: Tuesdays 2:00 – 5:00 pm

Description
This course provides you with 1) A description of the key physical, infrastructural and economic features of the contemporary global energy system; 2) An interdisciplinary approach to the economic, social, environmental, and policy issues raised by our current energy usage; and, 3) The future prospects of the global energy system with the emphasis on sustainability.

Expected outcomes
By the end of the semester, you will have knowledge of the global distribution and movement of primary energy resources, the different conversions these sources undergo to end use and the social implications of our energy use trends, the environmental impacts of energy use and the challenges to making the system sustainable. Specifically, you will able be to:

1) Analyze the historical evolution of our global energy system;
2) Identify and describe locations of major primary energy resources and trading trends at the global scale and of several different nations;
3) Discuss, compare and critique the social, economic and environmental implications of different energy sources of different countries and regions;
4) Elaborate on the plausibility of potential remedies for making our energy end uses more sustainable

Student evaluations
Undergraduate students will be evaluated based upon:

1) Participation in class discussions. Please come to class prepared to discuss the readings (attendance and participation count for 10% of the final grade);
2) A mid-term quiz (15%)
3) A final quiz (15%)
4) A final project (30%) A research paper (2000-2500 words) on an urban energy system. The paper will focus on a city of your choice. You will identify and

describe it's energy system in terms of: a) major energy infrastructure (within city thermos-electric power plants, transmission and distribution systems, fuel types for transportation, residential, commercial, industry, renewable energy capacity and generation trends. You may pick any country *except* the USA;

5) A group presentation (30%) on the regional (Asia, North America, South America, Africa, Europe, Australia-New Zealand) set of energy trading trends (since 1980) of a particular primary energy source (oil, natural gas, coal & peat, nuclear fuel, electricity, etc.). Emphasis will be on both total imports and source regions (PPT presentation and short summary paper - 1,000 words and GIS map).

Graduate student evaluations are based upon:

1. All criteria for undergraduates, but:
   - Individual paper projects must compare the two different cities from two different nations (i.e., cities in USA and China or the UK and Russia). Graduate papers can be 3000-4000 words
   - Group paper projects must compare trends in three regions (i.e., EU, North American and Asian)

Required texts

- Bob Everett, Godfrey Boyle, Stephen Peake, and Janet Ramage (Eds.) (2011) *Energy Systems and Sustainability: Power for a Sustainable Future* Second Edition, Oxford: Oxford University Press, 672 pages, Paperback, Amazon new $83.47 (softcover)

Credit/No Credit policy

The Credit/No Credit system based on the non-letter grades of **CR/NC**. Students may elect the CR/NC system up until 15 minutes before the beginning of the final exam.
CR/NC grades are not averaged into the GPA; course requirements are the same as in the traditional grading system. If this system is chosen, students will be given the following CR/NC grade equivalents:

Credit (CR) → Grade of A, B, or C
No Credit (NC) → Grade of D or F (cannot replace/override WU, IN, or FIN)

Students requesting grading according to this system must satisfy evaluation requirements, including participation, complete all the assignments and take the final examination.

Hunter College Statement on Academic Integrity

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. Plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations.

ADA Policy

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.

Hunter College Policy on Sexual Misconduct

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationship. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, on contacting the College's Public Safety Office (212-772-4444)
b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) of Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link:
http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf

Essential class policies

There are no incompletes given for the course with the exception of a proven medical emergency. No late exams are accepted. You will receive a grade of "0" on any exam not taken if you do not have a documented medical excuse for missing the exam. I take attendance as I believe that class participation is an important part of your grades. If you email me during the week, you can expect a return email within 36 hours. I may not answer during the weekends. Please do not bring iPods or earphones to class and do not use your cell phones or laptop computers except to take notes. Please do not bring food to class.

Syllabus change policy

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice. Any changes to the syllabus will be posted on Blackboard as well as discussed in class.

Course Schedule (tentative)

The course will follow the textbook as outlined by the chapter plan below. Each chapter in the main text (*Energy Systems and Sustainability: Power for a Sustainable* Future) will be covered within approximately one week by two lectures (with some exceptions).

Week of	*Lecture focus and readings*
27 August	Introduction to the course
	Chapter 1 Introducing energy systems and sustainability
3 September	Chapter 2 Primary Energy
3 September (Mon)	**Labor Day, College is closed**
10 September	Chapter 4 Forms of energy
	Finish in one day!
10-11 Sept. (Mon-Tues)	**No classes scheduled**
17 September	Chapter 3 What do we use for energy?
	Only one day so may go into the next week!
18-19 Sept (Tues-Wed)	**No classes scheduled**
24 September	Chapter 5 Coal
1 October	Chapter 6 Heat to motive power
8 October	Chapter 7 Oil and gas
8 October (Mon)	**College is closed**
15 October	Chapter 8 Oil and gas engines
22 October	Chapter 9 Electricity
	Mid-term exam, Chapter 1-7, 12:45 to 1:45 PM
29 October	Chapter 10 Nuclear power
5 November	Chapter 11 The future of nuclear power
12 November	Chapter 12 Costing energy
19 November	Chapter 13 Penalties: Assessing the impacts of energy use
	Finish in one day!
22-25 November	**No class: Thanksgiving**
3 December	**Group Presentations 1, 2:45-3:45 PM**
	Chapter 14 Remedies: Towards a sustainable energy future
10 December	**Group Presentations 2, 2:45-3:45 PM**
13 December (Thurs-Fri)	**Reading days and Final exams begin**
17 December	**Final exam, Chapters 8-14, whenever scheduled**
	Final Papers due!
28 December	**Grade due to registrar!**