GEOG 470 ENERGY ENVIRONMENT & SOCIETY

*Online 2020*

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**Description**: This course will examine fundamentals of energy studies, the historical linkages between energy conversions and societal development, the modern energy system, fossil fuel combustion and climate change, emerging solar-based energy systems and other alternative energy sources, and the political economy of energy use and energy transitions at various scales.

**Assigned Readings**:

-Vaclav Smil (2017). Energy: a Beginner’s Guide. OneWorld, (Second Ed.).

-Naomi Klein (2015). This Changes Everything: Capitalism vs. The Climate.  Simon & Schuster.

-Online readings and other activities are posted on next page of this syllabus, and are subject to change. Activities for each week will be posted by Monday on Moodle. Moodle is the final authority on what is to be done for each week; the activities listed in this syllabus are only a general and tentative guide.

**Required purchase of an electricity use device for project:**

An electricity usage device is needed, and can be purchased at [Amazon](https://www.amazon.com/P3-P4400-Electricity-Usage-Monitor/dp/B00009MDBU/ref=sr_1_3?ie=UTF8&qid=1546576115&sr=8-3&keywords=kill-a-watt+meter) for < $20. The unit you will need is: (P3 P4400 Kill A Watt Electricity Usage Monitor).

**Required documentaries to be viewed:**

Students should budget up to $20 for documentaries that will be required viewing in the class. The first one, just so that you know, will be Chasing Coral (Netflix) to be viewed in week one.

**Course Outcomes:**

\* Analyze interrelationships between humans and the environment (Inquiry & Analysis)

\* Students understand climate change impacts, causes, and solutions, particularly those relating to energy systems

**Requirements:** Graded activities for the class include weekly quizzes, participation in forums, a final exam, and a project. Worksheets may also be assigned at instructor's discretion. No makeup quizzes will be given, though the lowest score will be dropped. Dropping the lowest score allows a student to completely miss a quiz without overall grade consequence. Please do not miss a quiz at your discretion, and then later have unforeseen circumstances prevent you from taking another one. If you miss a quiz and petition for a retake, I will refer you back to this syllabus. Open note quizzes will be over all the previous weeks' activities.

**Project**: A person energy assessment will be done by each student. The first part, an electricity worksheet, will be assigned week 2 or 3. Later, an energy assessment consisting of diet, transportation, and other activities will be combined with your electricity worksheet to form the basis for the final project.

**Grading:**

Approximate weighting of requirements: quizzes 40%, final exam 20%, final project 25%, discussion/ participation 15%. Quiz scores will post automatically to Moodle for your viewing; scores for your other activities may not be posted to Moodle. Grading scale: A 90-100, B 80-90, C 70-80, D 60-70, F <60

Any student needing an accommodation for any type of disability should talk me during office hours or e-mail me the first week of the course and should contact the Office of Disability Services (838-8250v/tty).

Regarding e-mail: I will check my e-mail daily for messages, except sometimes not on Saturdays

**TENTATIVE COURSE OUTLINE\***

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|  | Topic(s) | Assigned Reading (always check Moodle for weekly specific questions and access) |
|  |  |  |
| January 6-12  Quiz 8-9:30 p.m. Sunday | intro concepts | Smil Chapter 1;  <https://www.bloomberg.com/graphics/2015-whats-warming-the-world/>  Chasing Coral Documentary |
| January 13-19  Quiz 8-9:30 p.m. Sunday | energy in the biosphere; Intro. to political economy of climate change | Smil Chapter 2;  basic energy notes;  Klein, Introduction;  Documentary TBA |
| January 20-26  Quiz 8-9:30 p.m. Sunday | original solar-powered societies;  electricity worksheet assigned;  political economy of climate change | Smil Chapter 3;    To begin thinking about electricity worksheet and personal energy project in general, read [this](http://ngm.nationalgeographic.com/2009/03/energy-conservation/miller-text.html);  Klein, Chapter 1 The Right is Right |
| Jan 27 – Feb 2  **electricity wksht. due Saturday, Feb 2, 10 p.m.**  Quiz 8-9:30 p.m. Sunday | burning buried sunshine: fossil fuel man;  hazards of fossil fuel extraction;  modern society & energy | Smil Chapter 4;  Klein Chapter 2 Hot Money;  Frontline Documentary Deepwater Horizon |
| February 3-9  Quiz 8-9:30 p.m. Sunday | energy in everyday life; simultaneous rise of dirtier fossil fuels and renewables | Smil Chapter 5;  Klein Chapter 3 Public and Paid For;  Fracking and/or Tar Sands documentary;  TBA |
| February 10-16  Quiz 8-9:30 p.m. Sunday | extractivism  democracy, divestment, degradation, and hunger; | Smil Chapter 6;  Klein, Chapter 5 Beyond Extractivism;  TBA |
| Feb. 17-23  Quiz 8-9:30 p.m. Sunday | case for a modern solar-based society;  popular resistance to new fossil fuel projects in the climate change era;  what about nuclear? | Klein, Chapter 9 Blockadia;  Klein, Chapter 10 Love Will Save this Place;  Fukishima Documentary (PBS Frontline) |
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| Feb. 24-Mar 2  Quiz 8-9:30 p.m. Sunday | colonialism and indigenous rights;  solar, wind, storage, and electric autos; | Klein Chapter 11 You and What Army?  TBA |
| March 2-8  Quiz 8-9:30 p.m. Sunday  **project due March 10** | solar, wind, storage (con’t.)  electric autos | Klein Chapter 12 Sharing the Sky;  TBA |
| March 9-16  **Final** (see below) | anthropocene futures | TBA |
| March 15  **Sunday 7-9:30 p.m. final exam** | Comprehensive written exam will consist mostly of essay and short answer questions |  |

**\***reading list and all other details are subject to changes, including additions. This syllabus is a rough guide only to the readings and other activities.