Climate change and sustainability – GEOL095

Fall Semester 2014/2015

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Office hours: M&W 10.45-11:45 and by appointment;

Meeting Time: MWF 9:35-10:35; Credits: 3

Welcome to the TAP class on Climate Change and sustainability!

This course: Sustainability is emerging as a central theme concerning our environment, whether it be from the perspective of science, economics, or society. Via lectures, debates, group work, and shared writing, this course will explore different dimensions of sustainability and their link to one of the most important environmental issues, global climate change.

Information literacy: Both sustainability and global climate change are topics that are broadly discussed, but where does the information, fueling these discussions, actually come from and how reliable is it? As part of this course we will explore and evaluate reliability and intention of different information sources on these controversially discussed topics.

This is a writing intensive course: in sciences, writing is used in a variety of ways, e.g. to develop ideas, structure thoughts, describe visual displays of data, interpret and discuss scientific findings. Because science writing is often linked to data and its visualization (maps, graphs, plots), we will work with data, make graphs and describe and interpret them. As a final assignment you will prepare a poster for a mini conference on sustainability and global climate change that you will present as a group.

Goals:

At the end of this course you will be able to evaluate intention and reliability of information sources on global climate change from multiple sources.

You will be able to display the relationship between GCC and sustainability concepts visually and give a written description and interpretation of data.

This is a non-traditional course since I’ll be spending comparatively less time lecturing but you’ll be spending relatively more time discussing and working with (and thinking about) texts and data during class meeting times. Because of this structure it is important that you do not miss class since it will be difficult to catch up by yourself.

Make it to class: you can miss class twice, more missed classes will impact you grade either through missed minute papers and/or a low grade in class contribution, see below). If you miss classes more than 6 times you may fail the class.
**Group work:** During class practice times I encourage group work. Take advantage of your peer’s knowledge and ideas during these times but make sure you have your own learning in mind. Contribute actively to group discussions, everybody brings something to the table!

**Reading:** both books are on course reserve and a copy of the first reading will be on blackboard.

1) Henson, Robert: Rough guide to climate change
2) Dessler, Andrew Emory. Science and politics of global climate change: a guide to the debate

**Assessment and grading:** I will assess your learning through a variety of ways, including assignments, participation during discussions, minute papers and surveys.

- You will be asked to complete 4 assignments: 1) describing figures, 2) interpreting figures, 3) information flyer, 4) final poster. The poster will be a group project.
- You will complete minute papers on assigned reading.
- Your participation in class will be assessed.

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<tr>
<th>Assignments 1-3</th>
<th>(15%) 45%</th>
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<tr>
<td>Final</td>
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<tr>
<td>Minute papers</td>
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<td>Class contribution</td>
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**Rules:**
- You can miss class twice, more missed classes may impact you grade. If you miss classes more than 6 times you will fail the class.
- Please turn in your assignments in time; it will decrease your grade by 10% if you turn it in late. You can expect me to turn homework back the following Friday.
- Please complete your reading, we will have minute papers that are graded.
- Please mute cell phones during class and don’t text.
- Adhere to the Code of Academic Integrity (no plagiarism, fabrication, collusion, and cheating). Deliberate offense against the code will be forwarded to the Center for Student Ethics and Standards (see [http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf](http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf) for more information).

**Student learning accommodations:**

- Any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with you to create reasonable and appropriate accommodations via an accommodation letter to their professors as early as possible each semester. Contact ACCESS: A170 Living/Learning Center - 802-656-7753 - access@uvm.edu.

**Schedule (subject to changes):**

**Week 1:**
Introduction, learning styles
Sustainability definitions, sustainability link to “cooked” by M. Pollan

**Week 2:**
What is climate, what is global climate change (GCC)?
Where do we get our information on GCC? Library tutorial.
Week 3:
Fossil fuels
How do we read visualized data on fossil fuels and GCC (figures)?

Week 4:
Natural causes vs. human causes of GCC

Assignment due: description of scientific data

Week 5:
Linking GCC and sustainability in the literature
How can we visualize our data on GCC and sustainability?

Week 6:
How is GCC measured? Why does the general public perceive disagreement amongst scientists?

Week 7:
How is GCC measured? Why does the general public perceive disagreement amongst scientists?

Week 8:
Scientific method and why we disagree

Assignment due: description and interpretation of scientific data

Week 9:
Climate change communication, smarten things up?

Week 10:
Mitigation of GCC and sustainability concepts at UVM

Week 11:
Mitigation of GCC and sustainability concepts

Assignment due (groups): Information flyer on GCC and sustainability

Week 12:
GCC and sustainability in VT

Week 13:
Thanks giving

Week 14:
GCC and sustainability in VT, presenting scientific data as a poster

Week 15 (12/08/2014): Final group assignment: Mini-conference, poster on Sustainability and GCC in VT