



IDS 100 Section 106
First Year Seminar: **Alternative and Sustainable Energy**
Fall, 2009 at Hope College



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Lab: Vanderwerf 25 and 28 (Usually the best place to find me)

Office Hours: M 9:30-10:20, W 11:00-11:50, R 1:00-1:50, F 11:00-11:50

Class Time: W&F 9:30-10:20

What is a seminar course?

(1) College courses come in different formats. In the Natural and Applied Science Division we have lecture courses, lab courses, independent research, and seminar courses. You are taking a seminar course. The most essential characteristic is what a seminar course is not. It is not a lecture course. The instructor (me) plays the role of coordinator, as the students (you) research and teach the content. In this case the *content* is renewable and sustainable energy. I will be happy to share essential tidbits here and there. For example, I might save you all some time and enhance your ability to quickly absorb the content by standing up and explaining to you the meaning of a kilowatt-hour. But, for the most part, I'm more likely to lead some class discussions, assign and schedule presentations, give feedback and evaluate your work.

(2) The content is not the only component of the first year seminar. We also use this course to begin the process of academic advising at Hope College. Every Hope College student has a faculty advisor to provide guidance through the academic requirements. When you declare a major, you will receive an advisor with background in your academic and/or career area, in which case your advisor will also be able to work with you on your career or graduate school preparation. Until you find an advisor from the Hope faculty, I will be your advisor. By the time you formally declare a major, you should also have an advisor in your major department.

(3) We will use this course to introduce you to collegiate level course work. Your research skills will continually improve from high school, though college and beyond. This course will present, or possibly re-present, some of those skills. Academic research is based on other academic works (not web sites!) and you will have writing assignments that come with sufficiently high standards that "interwebbers" will be forced finally to take research seriously.

Why are you taking this FYS?

First Year Seminar provides an intellectual transition from high school into College. It will prepare students for college-level ways of learning, such as academic research, independent inquiry, and team work. This stretching of your intellectual maturity will occur within the context of our exploration of renewable and sustainable energy.

Overview of this subject

Energy serves industry, commerce, residential areas and transportation. It is divided into primary forms (raw fuels) and secondary forms (basically electricity). The largest use of primary energy is to generate electricity, so we will spend about 2/3 of our effort on electric power generation. The other significant use of primary energy is for transportation which will receive the other 1/3 of our effort, not to mention the effort spent on other essential business of FYS.

This course is not: a course on global warming; a course on energy conservation; a course on social justice; a course on ecological ethics; a course on biodiversity; a course on the global politics of petroleum trade. These could all be very good courses. But this course is about renewable and sustainable energy. Get it?

Text and materials

(1) Renewable Energy: Sustainable Energy Concepts for the Future, by Roland Wengenmayr and Thomas Bührke (Wiley-VCH, April 18, 2008), ISBN 978-3527408047.

(2) Unquenchable: America's Water Crisis and What To Do About It, by Robert Glennon (Island Press, April 17, 2009), ISBN 978-1597264365.

(3) A 3-ring binder or some other system that works for you to keep papers organized.

(4) A notebook (obviously!)

Course Evaluation

Homework	40%
Quizzes	10%
Participation	20%
Presentation	30%

Grading System

The following scale will be used for the cumulative course grade: 93-100%=A, 90-93%=A-, 87-90%=B+, 83-87%=B, 80-83%=B-, 77-80%=C+, 73-77%=C, 70-73%=C-, 67-70%=D+, 60-67%=D, Below 60%=F. (Answer to very odd FAQ: 87.0000% is a B+, NOT a B)

No one will be permitted to retake IDS 100. It is the College's policy that whatever grade you receive will stand on your record.

Course Web Site:

Go to courses.hope.edu. Log in using the same username and password that you use to check your 1.hope.edu email. You can select this course IDS100-06. Please check this website two or three times a week for announcements and new material. As soon as something is placed on this website, it becomes your responsibility.

Research (Homework)

This course only works if you do good library research. Although internet search engines are powerful tools which you are welcome to use, there are other more specialized tools that will get you the information you need faster, and with greater certainty. The Van Wylan library is an up-to-date institution which provides these electronic search tools, and more essentially, the electronic document delivery that will streamline your research effort. Your grade on research will include your success at finding information, finding citable works, properly citing works, and putting the content of these works together to successfully support your thesis. I will withhold points from this component if I can find that the library's tools lead to better documents than those which you found. And I will check. And I won't use Google to do so.

The syllabus synopsis: At the end of the first week of classes you are to submit a one or more page long (400 word minimum) summary of the syllabus for a course other than this one. Please photocopy or print out the syllabus and attach it behind your synopsis. The synopsis should summarize the topic of the course, the nature of the course (e.g. writing, problem solving, etc.), the types of assignments, grading information, and key due dates, and anything else that seems important. I encourage you to choose the most confusing and foreboding syllabus possible (besides this one).

The Reaction Paper: The purpose and organization of a reaction paper will vary from course to course. In this course, you will write three reaction papers. The body of the paper should include 600 to 900 words, although there is no penalty for being longer. You may include figures and tables if necessary. You must include at least one properly constructed reference in an endnote. The first reference will be the actual assigned reading. The basic structure of the reaction paper is

1. Summary of technology covered in the assigned reading (about 1 paragraph)
2. Critical review
 - a. arguments for and against the technology.
 - b. any economic, social, political and environmental factors that seem to be worth mentioning
3. Comparison to at least one other technology – This is really free format and entirely up to you. I hope to see this handled 17 different ways. **For example, “...**

The CIS Press Release: Any organization that sponsors a conference issues a press release prior to the conference summarizing the events and speakers. The language is also intended to make the conference appear worth attending. The length should be between 250 to 400 words. There should be a title which has the look and sound of a newspaper article's title.

The Plagiarism Essay: A reflective statement on your understanding of plagiarism, how and why it occurs, and why it is wrong. 250 word minimum. For ideas on this subject and for the official college policy on plagiarism see www.hope.edu/lib/plagiarism before attempting this assignment. Now you have the added challenge of writing your essay without plagiarizing this web site.

Quizzes

Honestly, these are here to keep you on your toes. Pop quizzes will be given to see if you did the reading. I will occasionally even provide the quiz questions, or similar questions, in advance, just to make sure that everyone has a good opportunity to “Ace” this component.

Participation

I do reserve the right to use my judgment on the quality of your participation. Disruptive and other inappropriate conduct may result in a participation deduction. Review the “Virtues of Public Discourse” statement that has been adopted by Hope College should you have any questions about the word “inappropriate.” Participation credit is also lost through poor attendance: 2% out of the total 20% for each absence beyond the first absence. (That means each absence beyond the first one results in 2% off your total course grade.) Good participation also hangs on your contribution to class discussions, both during your group’s presentation and at all other times. If you feel uncomfortable speaking up in class, talk to me about it. I want to know that.

Presentation

You will work in a group of three or four doing an in-depth study of one form of sustainable energy. Your objective is to understand the technology, assess the extent of its availability, analyze its economic impact, flesh out biased political forces for or against it, and ultimately determine if it is both renewable and sustainable. Your work will culminate in a 20 minute visual presentation (e.g. Power Point). **A bibliography with at least four NON-WEB resources is to be turned in with the presentation.** One of those resources should be a paper from a research journal. Web resources require credibility. Ask me about it as the need arises. I suggest showing me the bibliography before it is complete so I can give you feedback on it. The bibliography score will be 20% of the presentation. There will be no paper associated with this project, which means the presentation needs to be really good. Really good!

If I notice an individual slacking at the expense of their group, there will be a point(s) penalty for that individual.

Tests & Final Exam

You’re going to like this...

Advising

During or prior to the period of September 7-15, you must sign up for a 15 minute block of time for advising. This will help me to prepare for the November advising meeting by getting to know you and your academic interests.

During the period of November 2-5, you must sign up for a 20 minute block of time for advising. This will be in preparation of Spring ’10 semester registration, which occurs November 9-13.

Disabilities

If you require accommodation for any kind of disability please contact me during the first week of the semester. Several useful services are also available from the Office of Disability Services (395-7805) and the Academic Support Center (395-7830).

Some Tempting Opportunities for Academic Dishonesty in this Course:

Plagiarism – Do you really think I don't have the technology to check for this?

Submitting a seminar report for a seminar you didn't attend – Right, that one's original!

Not doing the reading, then talking in class like you did. – Gottcha! Pop quiz!

Employing a classmate to do your work – Don't you dare let me find out about this.

The consequences for cheating range from a zero on the assignment to an F in this unrepeatable course. Even the slightest infraction will result in a report.

Late Policy on Homework

10% off per 24 hours (including weekends)

Withdrawing

The deadline for withdrawing from a course or converting to P/F is November 6. You cannot repeat IDS-100. Thus, I will not sign any drop slips for this course.

Comments about email

Please use your *firstname.lastname@hope.edu* email to communicate with your Hope faculty. Check your email daily for announcements. You are responsible for any announcement sent out by me to the class. Also, I would like to encourage you to consider using face-to-face communication to provide feedback to your professors rather than email, as email "venting" so often results in regrettable one-way miscommunications.

Course Assessment

Hope College expects all students to assess each course in an effort to continuously improve student learning. At the end of the semester, you will be asked to assess how well this course met its stated goals. Your responses will be kept anonymous, but I will take the collective results seriously in thinking about how to provide Hope students the best possible education. Your responses matter. You are urged to participate in this important process.

Extra Credit Policy

Welcome to college! Your grade in this course is determined by your performance on course requirements. These requirements are divided into homework, presentations, quizzes and participation. You have enough work to do just to perform well on the course requirements. If that performance is not going well, adding more work won't help. Therefore, there is no extra credit in this college course.

Schedule

Day	Date	Topics	Reading*	Homework Due*
1	Aug 29	Introduction		
3	Sept 2	Brainstorm energy sources. Categorization into “renewable” and “renewable and sustainable”.	W&B pp.1-13	List of energy sources – old and new (ungraded)
4	Sept 4	Introduction to the Critical Issues Symposium	Glennon Chapter 1	•One magazine article for your topic • Syllabus synopsis
5	Sept 9	Energy fundamentals from “Physics 101”: Kilowatts and Kilowatt-hours	Glennon Chapter 2	Find one research paper for your topic
6	Sept 11	Library Research; Library Room 202		Energy audit of your dorm room
7	Sept 16	Class discussion: Reading from Glennon; Hydroelectricity	Glennon Chapter 3	To be announced on Sept 9
8	Sept 18	Class discussion: Hydroelectricity	W&B pp. 22-25	
9	Sept 23	Environmental Impact of Dams	Glennon Chapter 6	
10	Sept 25	Team lead discussion #1: Wind power	W&B pp.14-21	CIS press release
11	Sept 30	Tour of Composite wind blade manufacturer, Energetx, 725 East 40 th Street, Holland.		
12	Oct 2	Energy fundamentals from “Physics 102”: semiconductors, heat and nuclear	W&B pp. 34-41	
	Oct 6	Critical Issues Symposium Convocation, 7:00 pm. Attendance is required.		
13	Oct 7	Critical Issues Symposium. All day attendance is mandatory.		
14	Oct 9	Team lead discussion #2: Solar	W&B pp. 42-53	Reaction paper to hydroelectricity
	Oct 13	Holland WEST meeting at the DeGraaf Nature Center, 600 Graftschaap Rd.	6:00 pm	(subject to change)
15	Oct 14	Sustainable business – Earl’s Meats, 5685 143 rd Avenue		
16	Oct 16	The Liberal Arts Reflective Essay		Plagiarism essay

* This is NOT an inclusive list of homework and reading assignments. More assignments may be announced in class. Writing assignments are in **BOLD**.

Day	Date	Topics	Reading*	Homework Due*
	Oct 21	Monday schedule in effect – Don't come to this class!		
17	Oct 23	Team lead discussion #3: Geothermal	W&B pp. 54-60	
18	Oct 28	TBA		
19	Oct 30	Registration and degree evaluation, Dr. Reynolds. Martha Miller Room 240.		Last day to submit a seminar report
20	Nov 4	Team lead discussion #4: Biofuels	W&B pp. 61-67	L.A.R.E. outline
21	Nov 6	The Hope College Biodiesel Project <ul style="list-style-type: none"> • Abigail Philips • Prof. Michael Misovich 		Reaction paper to wind, solar, OR geo
22	Nov 11	Team lead discussion #5: Hydrogen fuel and hydrogen fuel cells	W&B 83-88, 96-103	
23	Nov 13	TBA		
24	Nov 18	Team 1 & 2 presentations		Bibliography
25	Nov 20	Team 3 & 4 presentations		Find one article on power transmission
26	Nov 25	Team 5 presentation. Class discussion of the six options we explored.		Find a paper or article on carbon capture and sequestration
	Nov 27	Thanksgiving Break Nov 26-27		
27	Dec 2	Carbon sequestration; Power transmission		Reaction paper to biodiesel OR hydrogen
28	Dec 4	Clean coal and the Sierra Club's lawsuit against the DeYoung Power Plant		Liberal Arts Reflective Essay
29	Dec 9	Our proposal for America's energy future	W&B pp. 110-113	
30	Dec 11	Other sources not discussed	W&B pp. 26-33 pp. 68-95 pp. 104-109	(Pick at least one of the page ranges and contribute to class discussion)

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