

## FTS100 Energy: Where are we and what's next

### Gustavus Adolphus College Fall 2009

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**Required:** Energy: Its Use and the Environment, Hinrichs and Kleinbach, Fourth Edition (Thomson Brooks/Cole, 2006)  
The Everyday Writer, A. Lunsford, Fourth Edition (Bedford/St. Martins 2009)  
A calculator that allows trigonometric functions and scientific notation  
(You don't need a high-end graphing calculator: ask your instructor if you have questions)

#### Core Activities for all Gustavus First-Term Seminar Courses

1. Critical Thinking
2. Values
3. Writing
4. Oral Communication
5. Advising

#### Course Topics

1. Numeracy (How to use and interpret numbers, tables and graphs)
2. Basic Physical Concepts (Work, Energy, Power, Electricity and Magnetism)
3. Overview of Past, Present and Projected Energy Usage
4. Overview of Energy Resources (Fossil Fuels, Solar, Nuclear)
5. Conservation and Personal Energy Choices

#### Course Policy and Evaluation

1. **Objectives:** The objectives of all First Term Seminar courses are to develop the skills and habits central to the liberal arts: critical thinking, writing, speaking, and recognizing and exploring question of values. In addition, this particular course aims to introduce students to issues related to energy and the environment.
2. **Class Meetings:** The class will meet four days per week (MTWF) at 9:00-9:50 for lectures, discussions, group problem solving, videos and exams. Students are expected to have read assigned materials **before** coming to class.
3. **Attendance:** Regular attendance at all classes is expected. Students are responsible for informing themselves of all announcements and assignments made in the classroom. Arrive at class on time; excessive tardiness may be reflected by a reduction of the final course grade.

4. **Writing Designation:** This course has been approved as a writing course. (Students are required to take three designated writing courses during their four years at Gustavus). The writing assignments for this course are described in a separate handout . Some of the writing assignments will be distributed to other members of the class for peer review.
5. **Exams:** There will be two one-hour exams and a two-hour final exam. The hour exams will include short answer and multiple choice questions, and longer essay and computational problems.
6. **Missed Exams:** Students are expected to arrange with the instructor *in advance* to take an exam at other than the announced time. Permission to make up a missed exam after the fact will be at the discretion of the instructor and should not be assumed.
7. **Quizzes:** There will be short quizzes on roughly a weekly basis. These will be announced at least two classes days prior to the quiz. Some of these will be individual problems and some will be in small groups.
8. **Homework:** Problems sets will be assigned approximately every week. Homework sets should be neat and organized. Each student will submit their own assignment, but you may discuss the problems with each other. Late homework will be accepted at the discretion of the instructor with some loss of points.
9. **Group Problems:** Frequently in class, students will work together, in assigned groups of 2 to 4 members, to cooperatively solve problems. A group solution will be submitted, with all group members receiving the same grade. There will be no make-up for group problems missed due to absence. These activities will not be scheduled and may be used to test students' knowledge of old material or to introduce new material.
10. **Presentations:** During the course, at several times during the semester there will be individual or group presentations. You will have at least 3 class days of advanced notice before any formal presentations. A ten minute presentation based on your term paper will take place during class on November 14-21.
11. **Public Service Project:** With a topic like Energy, there are not only academic areas of interest, but areas where we can make a difference in our lifestyle or choices. In this group project, you will develop a video, poster and table tent (for in the caf) related to ways that students or others can reduce their energy usage.
12. **Computer Usage and Electronic Mail:** Frequently during the semester, we will be using computers for Electronic Mail (e-mail), discussions, to turn in assignments, and to access internet resources. You will be assigned a computer account by the department of GTS (Gustavus Technology Services) and you should check your e-mail on a regular basis.

13. **Participation:** An important component of this course is group discussion. The participation component of the grade will be based on attendance and regular participation in group discussions. NOTE: There are a variety of ways that one can participate in group discussions - these include contributing information, summarizing discussion (in both written and verbal form), acting as "devils advocate," brainstorming and being a group leader. You should try to take on all of these roles at various times during the semester.
  
14. **Classroom Respect:** In this course, as well as in all other courses that you take at Gustavus, it is essential that you treat others in the course with respect. As a discussion course, the general atmosphere of the course will be less formal than many lecture-style courses that you may be taking. Obey the golden rule: treat others as you would like to be treated. A few general rules for maintaining a respectful classroom:
  - a. Arrive to class on time, preferably a few minutes early. Wait until class is over to leave. Don't walk out midway through class or be loading up your backpack to leave before we are done with class. If you must leave during class, please let your instructor know in advance.
  - b. Respect the opinions of others. No personal attacks, slurs, derogatory remarks, etc. are tolerated in or outside of the classroom. Do not raise your voice or interrupt others during a discussion.
  - c. Topics that we discuss with the class stay with this class (no saying to others "you will never guess what so-and-so said")
  - d. Drinking water and soft-drinks in class is acceptable, but eating in class is not allowed.
  - e. The use of cell phones, or other electronic communication devices, is not allowed during class time. These devices should be set to a silent mode so that they will not interrupt the class.
  
15. **Academic Honesty:** Having signed and agreed to abide by the College's Honor Code, students thereby pledge that, in all academic exercises, examinations, papers, and reports, they shall submit their own work. Footnotes, or some other acceptable form of citation must accompany any use of another's words or ideas. In the context of this course, students are expected to collaborate and to discuss their out-of-class assignments. However, submitting under one's own name work that is copied from another source is a violation of the Honor Code. (The full text of the Gustavus Academic Honesty Policy may be found in the Gustavus Adolphus College Academic Catalog).
  
16. **Incompletes:** A grade of incomplete will **only** be given for work not completed due to circumstances beyond the control of the student (*This is the college policy*).

**17. Evaluation:**

- 25% Hour Exams & Quizzes
- 10% Final Exam
- 10% Short Papers
- 10% Argumentative Essay Paper (10% Outline, 30% Draft, 60% Final)
- 15% Term Paper (10% Outline, 30% Draft, 60% Final)
- 15% Homework, Group Problems
- 15% Presentations, Public Service Project, Participation

Final course grades will be assigned using the following scale as a guide:

|        |    |       |    |
|--------|----|-------|----|
| 94-100 | A  | 74-78 | C+ |
| 90-94  | A- | 70-74 | C  |
| 86-90  | B+ | 66-70 | C- |
| 82-86  | B  | 62-66 | D+ |
| 78-82  | B- | 58-62 | D  |
|        |    | 0-58  | F  |

Assignment of final letter grades will also take into account the instructor's subjective evaluation of the student's attendance, initiative, preparation (particularly quantity and quality of homework), and evidence of improvement.

**18. Exam Dates**

- Exam 1: Friday, October 9, 2009
- Exam 2: Friday, November 13, 2009
- Final Exam: Thursday, December 17, 2009, 10:30-12:30