

PHYS 105- Section 002: Energy and the Environment (3 credits)

Class Meetings:

MW 12:30-1:45 Kinard 205

Instructor:

Dr. Clifton Harris

Office: Sims 302B

E-mail: harrisc@winthrop.edu

Phone: x 4929

Office Hours:

You will be sure to find me in my office on **MTWR 2:30-3:30**. You are welcome to make an appointment to meet at other times. You may also feel free to send me questions via e-mail. I have an open door policy, so if I happen to be in my office outside of these hours, feel free to come in.

Required Course Materials:

Textbook: *Energy and the Environment, 2nd edition*; Ristinen, A.

Attendance Policy:

There is no mandatory attendance policy. However, you are strongly encouraged to attend every lecture as the order of the course material **will** deviate from the book.

Course Goal:

In this course, students will learn about the formation of the Earth and atmosphere, and learn basic environmental science. Energy will be discussed both from a scientific and an industrial/commercial perspective. The basics of current energy sources ranging from fossil fuels and nuclear power to renewables such as wind and solar will be presented, and the human impact on the environment will be evaluated. At the conclusion of the course, students will develop their own “energy policies”.

Outline of Topics to be covered:

- Introductory chemistry/physics tutorial
- Origins of Earth: Crust, atmosphere, oceans
- Environmental chemistry
 - Smog and air pollution
 - Water contamination/Wastewater treatment
 - Ozone depletion
 - Global warming
- Energy from an industrial/commercial perspective
- U.S. production and consumption
- Fossil fuels
- Nuclear
- Renewables
- Batteries

Study Tips:

Work in groups. Other students are your greatest resource. Stay on top of the material by reviewing the textbook in your free time. Use other textbooks for reference. Make sure you UNDERSTAND the material. Do not simply memorize examples.

Assignments:

Quizzes: 35%

Homework: 20%

Article Review: 10%

In-class assignments/Participation: 10 %

Final Project: 25%

Lectures: Lectures will be a combination of whiteboard lectures and powerpoint. All powerpoints can be downloaded from the course website at chem.winthrop.edu. Click the 'courses' link on the left-hand side, then click the Phys105(Harris) link.

Homework: Homework assignments will be assigned from text. Due dates will be given by the instructor.

Quizzes: Between units, there will be multiple choice quizzes assigned to assess the student

Dropping quizzes: You are allowed ONE dropped quiz. If you skip a quiz, you will not receive a grade for that exam. A 'no-grade' can not be replaced.

Article review: Students will be required to submit and discuss articles related to energy issues. The nature of the article is up to the student, but it is required that the student first discuss the article with myself prior to presenting. All articles must be selected by January 30th.

Grading scale:

A 93-100

A- 90-92

B+ 87-89

B 82-86

B- 79-81

C+ 76-78

C 70-75

D 60-69

F <60

Students with Disabilities:

Winthrop University is dedicated to providing access to education. If you have a disability and require specific accommodations to complete this course, contact the Office of Disability Services (ODS) at 803-323-3290. Once you have your official notice of accommodations from the Office of Disability Services, please inform me as early as

possible in the semester. If you have questions about accessibility statements or other accommodation issues, please contact ODS. Information about services and accommodations is also available on the ODS website: www.winthrop.edu/hcs/DS.htm

The Office of Victims Assistance Syllabus Statement : The Office of Victims Assistance (OVA) provides direct services to survivors of sexual assault, domestic violence, dating violence, and stalking as well as campus-wide educational programming to prevent these crimes from occurring. The staff provides counseling services and assists with obtaining sexual assault forensic exams, STI testing/treatment, pregnancy prevention, housing options, legal prosecution, and access to other support services including assistance with class or course problems resulting from victimization (i.e. missed classes, trouble concentrating or completing assignments). The OVA is located in 204 Crawford and can be reached at (803) 323-2206. In the case of an after-hours emergency, please call Campus Police at (803)323-3333, or the local rape crisis center, Safe Passage, at their 24-hour hotline, (803)329-2800.

Academic Integrity : Any instances of academic misconduct will be dealt with as outlined in the Student Conduct Code (Sect. V), found in the *Student Handbook* (<http://www2.winthrop.edu/studentaffairs/handbook/StudentHandbook.pdf>).

Syllabus Change Policy : Changes to the policies listed here may be made at the instructor's discretion. Students will be notified of any modifications.

Withdrawal: The course withdrawal deadline is 03/06/13.