

PHSC 1014



Physical Science
Energy and the Environment
Fall 2017
Dr. John M. Pratte

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Text: [Energy and the Environment](#)
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Download from Web
Course Content: <http://myweb.astate.edu/jpratte/phsc1014/>
Class: MW 3:30 p.m. – 4:45 p.m., LSW 334

PHSC 1014 is a course that satisfies the general education physical science requirement at Arkansas State University. In the traditional format, this requirement is met with two courses (lecture and lab) that are taught at separate times by different instructors. This particular course is slightly different in that 1) the laboratory section will be integrated directly into the class section, with activities occurring online and in the field and 2) rather than a generic covering of physical science topics, this combination will cover the basics of energy use and its impact on our society and environment. Students will be expected to compare energy sources and resources in terms of their environmental and economic impacts, social, and political concerns, as well as their sustainability and scientific attractiveness. A schedule of topics and reading materials is posted on the course schedule site. Objectives for each topic are listed at the end of the reading for each chapter.

Assessment: This general education course assesses a student's [understanding of basic concepts of science as they apply to contemporary issues](#) through the use of pre and post testing. In particular, it will assess your understanding of the current energy systems used, their impact on the environment, and factors that affect their usage. Students successfully completing this course will be able to 1) analyze their own energy usage and 2) identify sustainable and economically-viable alternatives to it. During the semester, you will also do several activities that will rely on your ability to understand the scientific process and how to use this to investigate your energy usage and its impact on the environment. In particular, these activities will allow an assessment of your abilities to 1) state the problem(s), 2) exam scientific considerations, 3) identify constraints, and 4) develop and analyze solutions.

This is a hybrid course. In order to participate, you must have access to a computer with Internet access. All lab for this course will be delivered and done over the Internet.

In order to do well in this class, you need to be an active participant in the process. A famous quote is “90% of success is just showing up.” For this class, just showing up will guarantee you one thing: you will receive a grade of at least an F. You will be expected to read material ahead of class, come prepared to discuss it with the instructor and other class members, and ask relevant questions when you do not understand something. This course will cover a broad range of topics about energy use and its impact on the environment. You are expected to put in 6-9 hours each week on this course. This means that you will need to do more than just read the textbook. Each week's material and assignments will have objectives listed with them. You will be expected to understand the material covered in these objectives and to synthesize it into coherent and rational statements. This may require you to seek out additional sources of information in the library or on the Internet, or even call, e-mail, or come by to see the instructor or TA. Statements like "It was not covered in the textbook" will hold no weight with the instructor.

Because of the nature of this course, you will be expected to do more work and thinking on your own and in groups. You will need to take the initiative to find out when deadlines are and what needs to be done in order to meet these deadlines. If you are not sure about deadlines, materials, or objectives, please call, write, or see the instructor. If you have not made an effort to contact the instructor beforehand, then you have no reason to complain about the tests, quizzes, or assignments.

You should be taking this course because you are interested in learning more about the world around you and how it operates. If you fully participate in this class, you will achieve this objective. Remember, your instructor is here to help you in this goal. If you are having trouble, come see me or call me as soon as the trouble starts. Do not wait until later in the semester when things might have gotten worse for you.

Individual and group projects, including written reports, will also be assigned during the course. The due dates for these projects will be listed in the schedule. Projects turned in late will be assessed a 10% penalty for each day past the due date.

Evaluation: 2 one-hour exams @ 20% each 40%
Chapter quizzes 20%
Lab activities and projects 20%
Final examination 20%

Grading: A: 90.0-100.0
B: 80.0 < 90.0
C: 70.0 < 80.0
D: 60.0 < 70.0
F: Below 60.0

All activities have a set time period in which they can be done and must be turned in by the deadline listed. There are no make-up quizzes or tests. With an appropriate medical excuse, the score for any missed test or quiz will be replaced with the final exam score.

Academic Honesty: Every ASU student is expected to follow the regulations regarding academic integrity as stated in the Arkansas State University Undergraduate Handbook. Plagiarism and cheating of any kind will not be tolerated. A first infraction will result in a zero for the assignment. Further infractions will result in a failing grade for the course and a recommendation for sanctions to be imposed on the student by the University.

Withdrawal Policy: The withdrawal policy as stated in the Arkansas State University Undergraduate Handbook will be followed. Make certain to follow all procedures if you decide to withdraw; failure to do so will result in your being assigned a grade of "F" for the course.

Disability: Students with a documented disability and wish to receive academic accommodations need to meet with the instructor as soon as possible to discuss special needs. Students who require academic adjustments in the classroom due to disability must also register with ASU Disability Services (room 410 Chickasaw Building).

If, for some unusual reason, changes need to be made to this syllabus at a later date, announcements will be made in class, and changes made to the copy found on the class website.

For comments and questions, send messages to : jpratte@astate.edu