
Energy
2013-2014

Course Description:
Energy is a course that examines energy, the energy resources in the Earth system and how they form, and how different methods "produce" usable energy. The course begins with a survey of the many forms energy can take. Then, students will systematically investigate sources of energy from historic to modern to understand how they came to be and how humans harness them for use by civilization.

Course Content:

Laws of Energy (conservation laws, thermodynamics)
Transforming Energy (generators, engines)
Historical Energy Sources (whale oil, animal carriage, mills, firewood)
Fossil Fuels (formation, extraction, societal effects, environmental effects)
Nuclear Energy (ore formation, nuclear fission, societal effects, environmental effects)
Wind and Water (wind generation, dams, societal effects, environmental effects)
Solar Energy (photovoltaic effect, societal effects, environmental effects)
Biomass (generation, types of biomass, societal effects, environmental effects)
Alterative Vehicle "Fuels" (ethanol, biodiesel, electricity, societal effects, envir. effects)

Required Textbooks and/or Other Reading/Research Materials

Earth Science by Namowitz and Spaulding. McDougall Littell, 2003.

Course Requirements:
Students are expected to:

identify sources of energy and explain how humans use them
address societal needs using Earth science knowledge
communicate scientific thoughts through speech and writing
perform laboratory activities to test hypotheses
draw conclusions from scientific data

Grade Components/Assessments:
To measure the multiple intelligences of our students, a wide variety of assessments will be used in Energy. Quarter grades will be determined as follows:

40% - Tests and Quizzes
30% - Projects
20% - Labs
10% - Homework/Classwork

PLEASE NOTE THAT THE MARKING PERIOD BREAKDOWN BELOW IS FOR FULL-YEAR COURSES. SEMESTER COURSES BREAK DOWN DIFFERENTLY.

Each marking period is worth 20% of a student's overall grade. The midterm and final exam are each worth 10% of a student's overall average:

Quarter 1	20%
Quarter 2	20%
Midterm	**10%**
Quarter 3	20%
Quarter 4	20%
Final	**10%**

Required Summer Reading/Assignments:

No Required Summer Reading