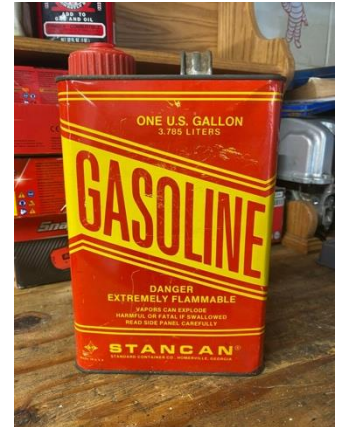
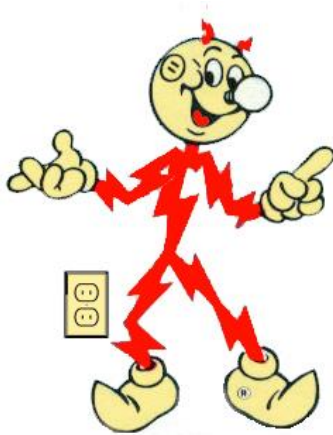


About EGY 105

Energy in Our World

- Summer 2026 -



Kenneth M. Klemow, Ph.D.

Emeritus Professor of Biology and Earth Systems Science
Wilkes University



Course objectives I

- Students completing EGY 105 will be able to:
 - Understand the physical basis of energy in our universe, its importance in biological systems, and various ways in which it is measured.
 - Understand the essentials of electricity
 - Understand the science behind climate change
 - Understand the history of energy use both worldwide and in “developed” countries.
 - Understand current trends of energy production and consumption locally, nationally, and worldwide basis.



Course objectives II

- Students completing EGY 105 will also be able to:
 - Learn and critically evaluate arguments about the sustainability of fossil fuels and nuclear energy.
 - Learn and critically evaluate information about the benefits and weaknesses of potential sources of alternative energy from a variety of perspectives
 - Potential energy yield
 - Economic
 - Environmental
 - Sociopolitical
 - Consider whether much can be done to improve energy efficiency and reduce consumption.



Course objectives III

- Students completing EGY 105 will also be able to:
 - Develop a well-reasoned personal philosophy about the present energy situation and whether we should move forward on developing and implementing alternative sources.
 - Be able to interpret graphs and tables, especially as they relate to energy.
 - Take more advanced courses that relate to energy at Wilkes or elsewhere.
 - Understand employment opportunities that relate to energy.



Long term objective

Students will develop a mature attitude about - and lifelong interest in - energy issues, and will assert leadership on that topic long after the course is completed, whether as citizens or through careers that involve energy in some way.

Note: Past students of this course have gone on to hold elected office, obtain graduate level degrees in energy and otherwise make important decisions on energy-related issues! I hope the same will be true for the EGY 105 class of Summer 2026.



Intended audience

- All students at Wilkes University.
 - Non-majors, taking it as Area II elective
 - See syllabus for discussion of the ways that EGY 105 meets the Area II requirements.
 - STEM majors as an elective
 - Students seeking to take a first college course in energy, as part of a plan to take more advanced courses in energy at Wilkes or elsewhere.
- Students from institutions other than Wilkes, needing this kind of course.



Course theme:

- Should renewables be an important part of the U.S.'s goal of becoming “Energy Dominant?”



Information delivery

- ***Students will gain information by way of:***
 - Online presentations and study guides provided by the course instructor
 - The Hinrichs & Wade textbook
 - Articles assigned by the instructor
- Lectures and other materials are coordinated through course homepage:
<https://klemow.wilkes.edu/EGY-105Su.html>



EGY 105 Homepage

(<https://klemow.wilkes.edu/EGY-105Su.html>)

Welcome to the Homepage for EGY 105 - Energy in Our World

Offered Online During Summer 2026

Course instructor: [Dr. Kenneth M. Klemow](#)

Emeritus Professor of Biology and Earth System Sciences

[Email Dr. Klemow](#)

[Click for course syllabus](#)

[Course Description](#)

[Course Delivery](#)

[Links to Powerpoints and
Lectures \(IMPORTANT!!\)](#)

[Course Objectives](#)

[Organization](#)

[General links](#)

[Course Policies](#)

[Presentation Links](#)

Announcements:

(last updated 7 June 2026 @ 12:15 P.M.)

1. Welcome to EGY 105 - Energy in Our World (Summer session 2026) at Wilkes University. I will use this page to provide announcements and links to the information that you will need for the course.

This page posted and maintained by [Kenneth M. Klemow, Ph.D.](#), Department of Biology and Earth Systems Science, [Wilkes University](#), Wilkes-Barre, PA 18766.
kenneth.klemow@wilkes.edu.



EGY 105 Homepage

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Links page

EGY 105 - Energy in Our World

(Summer session)

Links to Powerpoints and Lectures

Due dates for study guide submissions

Last updated: 8:45 AM, Sunday, 7 June 2026

Week number and date	Lecture #	Lecture Title and Study Guide Due Dates	Links to Powerpoint files (.pdf versions)	Links to Study guides	Links to recorded lectures
Week 1: 8-12 June					
		Intro. Email			
	01	Introduction	Download Powerpoint	Download Study guide	View Lecture
	02	Course syllabus	Download Powerpoint	Download syllabus	View Lecture
	03	Energy Literacy	Download Powerpoint	Download Study guide	View Lecture
		Completed study guides due: 15 June			
Week 2: 15-19 June					
	04	Energy Concepts 1: Velocity and Acceleration	Download Powerpoint	Download Study guide	View Lecture
	05	Energy Concepts 2: Force and Energy	Download Powerpoint	Download Study guide	View Lecture
	06	Energy Concepts 3: Conversions and Efficiency	Download Powerpoint	Download Study guide	View Lecture
	07	Heat 1: Heat and Temperature, Water Cycle	Download Powerpoint	Download Study Guide	View Lecture
		Completed study guides due:			



Policies relating to course delivery

- EGY 105 is Asynchronous Online, meaning that lectures will be delivered virtually using Panopto.
 - Lectures will contain images and a narration.
 - All lectures will be on demand.
- Links may be adjusted as the session progresses.
- Each lecture will be accompanied by an outline (study guide); you are to download and take notes on the outline.
- By Monday of the following week, you are to email your completed notes to me for review and grading.
 - The deadline will be 11:59 PM that Monday.
 - Each lecture's notes are worth 10 points, for a total of 300 points.



Online meetings

- If there is demand, the instructor will arrange Zoom meetings to allow students to ask questions, discuss material, or anything else relating to energy.
 - Details to follow.
- Instructor will also arrange mandatory one-on-one Zoom meetings to get to know students.
 - No meeting: no grade
 - Meetings will be scheduled starting Week 

Outside information sources:

Textbook: Hinrichs, R.A. & R.H. Wade. 2024.
Energy: Its Use and the Environment.
Cengage. 6/e.

This semester, you will also receive several readings (essays, websites) that address various energy issues. You will be expected to read those resources.



Assessment and grading

- ***Students will be assessed via:***
 - Submission of weekly notes (notes for each lecture will be worth 10 points). Points will be deducted for notes submitted after the deadline.
 - Two exams totaling 200 points
- ***Grading System (subject to change; students will be given fair notice of any changes):***

◦ Exams	200 points
◦ Submitted notes	300 points
◦ Total	500 points
- ***Grades will be assigned as follows:***
 - $\geq 92\%$ = 4.0; 85-92% = 3.5; 80-85% = 3.0; 75-80% = 2.5; 70-75% = 2.0; 65-70% = 1.5; 60-65% = 1.0; $< 60\%$ = 0.0.
These cutoffs may be adjusted downward.



Exams

- EGY 105 will include two exams:
 - Collectively worth 200 points
 - Both exams will contain mix of questions.
 - Both exams will be open-notes.
 - Both exams will be emailed to you on the date indicated on the syllabus.
 - They will be due by 11:59 P.M. on the date indicated on the syllabus. Late exams will not be accepted.



Academic honesty (see syllabus!)

- To learn, you must honestly review lectures and readings, take good notes on the study guides, and do the exams diligently.
- Since we are doing this course remotely, I acknowledge that it is easy to not do the work, and submit somebody else's work (either from this semester or one previous) as your own.
 - That is academically dishonest and short-circuits the learning process.
 - No A.I. (e.g., ChatGPT) on notes or exams.
- Instances of academic dishonesty will be addressed by disciplinary action, TBD.



Miscellaneous

- Since I am now living in San Diego, all contact will be via e-mail and Zoom (don't worry, this arrangement will work well). So don't look for this course in D2L.
- e-mail: kenneth.klemow@wilkes.edu
- If you want to meet via Zoom, please email me.
- Course webpage: <http://klemow.wilkes.edu/EGY-I05Su.html>
- Social media:
 - [Facebook: DrKlemow](#)
 - [LinkedIn: ken-klemow](#)



Course Schedule

- See syllabus and webpage for details.

Lecture numbers	Topics
01-03	Introduction to Energy, Energy Literacy
04-06	From Velocity to Power (Newtonian Motion)
07-08	Heat
09	Biological Dimensions
10	Electricity
11	Climate Change
12-18	Fossil Fuels (coal, petroleum, natural gas)
19	Nuclear Fission and Fusion
20-26	Renewables (solar, wind, geothermal, hydro., biomass)
27	Energy Conservation



That's it!

- You are now ready to go on to Lecture 3 and beyond!

