

TITLE: Energy and Society  
NUMBER: PHYS 102X  
CREDITS: 4  
PREREQUISITES:



Lab 4 – Simple machines  
Lab 5 – Human power and food energy  
Lab 6 – Analyze a bad example of scientific research design  
Lab 7 – Heat transfer  
Lab 8 – Home energy  
Lab 9 – DC circuits 1  
Lab 10 – DC circuits 2 + AC circuits  
Lab 11 – Photovoltaics

To provide education that will help solve the current energy situation.

Upon successful completion of this course, students will be able to:

- Answer questions such as the energy savings of more efficient appliances or automobiles, or the installation of storm windows or attic insulation.
- Understand and make informed decisions about legislation relating to the regulation of energy sources, pollution from energy sources, energy efficiency standards, “zero” pollution vehicles and public investment in mass transit.

Required Text:

Energy and the Environment (4th Edition): R. Ristinen, J. Kraushaar, and J. Brack

Regular access to a computer and the Internet to access online materials in Canvas and to submit assignments. Required software: MS Word and MS PowerPoint.

Zoom lectures are closely integrated with homework exercises and independent projects. Email and Canvas are used for off-class communication, sharing material, and exams. Labs are performed by distance using a lab-kit and online tools.

See the “Course Completion Guide”.

1. UAF requires students to conduct themselves honestly and responsibly, and to respect the rights of others.
2. You are encouraged to attend and actively participate in all lectures.
3. All labs and reports must be completed to get a passing grade for the lab. A passing grade in the lab is necessary to pass the course.

4. **Late lab reports will not be accepted without prior arrangements and will result in failure of the course.**
5. **Lab kits must be mailed back using a pre-paid shipping label by Tuesday April 23, 2024. Neglecting to do so will result in an I (incomplete) grade and a hold on the student's account.**
6. Homework will be assigned each Tuesday and due at 11:59pm the following Tuesday. You are encouraged to discuss homework questions with your peers, but you are not allowed to copy.
7. **Late assignments will not be accepted without prior approval of instructor.**
8. Student presentations must be delivered when scheduled.
9. The instructor reserves the right to amend this course outline as needed.

Final grades are calculated from the points earned in the following areas:

**Attendance and Participation** 10%  
Students are expected to attend and actively participate in all sessions (this can be done synchronously or asynchronously).

**Homework** 10%

## Letter Grades

A+	96.7 – 100%
A	93.3 – 96.7%
A-	90.0 – 93.3%
B+	86.7 – 90.0%
B	83.3 – 86.7%
B-	80.0 – 83.3%
C+	76.7 – 80.0%
C	73.3 – 76.7%
C-	70.0 – 73.3%
D+	66.7 – 70.0%
D	63.3 – 66.7%
D-	60.0 – 63.3%
F	Below 60%

“The letter “I” (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student’s control, such as sickness, he has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an “I” grade.”

**Successful, timely completion of this course depends on committing yourself early and maintaining your effort.** Failure to submit assignments in a timely manner may result in faculty-initiated Withdrawal from the course, which can result in a **W** on your transcript.

Generally, emails will be responded to within 24 hours (except for weekends). Graded material with instructor’s comments will generally be returned within 48 hours after assignment due date.



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