

PHYS 131: Introduction to Renewable Energy

Classes

Place: Horizon Hall room 5001

Time: MW 1:30–2:45

Website: <http://physics.gmu.edu/~joe/PHYS131.html>

Instructor

Joe Weingartner (he/him)

Planetary Hall room 231

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Office hours: TW 3:15–4:15, or by appointment

Learning Outcomes

1. Develop a broad-based understanding of the renewable-energy field, including technologies, trends in the adoption of renewable energy, successful policy drivers, and environmental impacts.
2. Develop sufficient familiarity with the renewable-energy field to have a successful internship experience in the field, for students of all majors.

Topics

1. Energy Basics and History
2. Types of Power
3. Electricity
4. Sustainability
5. Transportation
6. Energy Storage
7. Buildings
8. Critical Inputs for Renewable Energy
9. Energy Trends
10. Energy System Vulnerabilities
11. Energy Policy
12. Jobs in Renewable Energy

Evaluation

Assignments: 60%

These include class presentations and write-ups of class content, readings, and presentations (made by other students and guest speakers)

Class participation: 40%

Engagement in class discussions and at presentations.

Final course grades will be assigned based on numerical course grades as follows:

93%–100%	A
90%–93%	A-
87%–89%	B+
83%–86%	B
80%–83%	B-
77%–79%	C+
73%–76%	C
70%–72%	C-
60%–70%	D
<60%	F

General Policies

Academic Integrity: Any instance of cheating or plagiarism is a violation of the Honor Code Pledge and will result in a score of zero on the assignment and referral to the Honor Committee. The website for the Office of Academic Integrity is <https://oai.gmu.edu/>.

Disability Accommodations: If you have a disability and need academic accommodations, please contact Disability Services. Their website is <https://ds.gmu.edu/>. All academic accommodations must be arranged through Disability Services.

Diversity and Inclusion: We seek to create a learning environment that fosters respect for people across identities. We welcome and value individuals and their differences, including gender expression and identity, race, economic status, sex, sexuality, ethnicity, national origin, first language, religion, age and ability. We encourage all members of the learning environment to engage with the material personally, but to also be open to exploring and learning from experiences different than their own. Mason's non-discrimination policy is at <https://universitypolicy.gmu.edu/policies/non-discrimination-policy/>.

Communication: Students must use their Mason email account to receive important University information, including communications related to this course.

University Resources

Learning Services <https://learningservices.gmu.edu/>

Student Support and Advocacy Center <https://ssac.gmu.edu/>

Counseling and Psychological Services <https://caps.gmu.edu/>