

Syllabus

Sustainable Energy Systems

Course No.	12410323
Semester	Fall 24/25
Instructor	Eng. Tawfiq Saleh
Instructor's email	tawifiq.saleh@ptuk.edu.ps
Class time	Saturday, Monday, Wednesday 10:00-11:00 am
Classroom	H016
Textbook	Renewable Energy Resources, 3rd Edition by John Twidell and Tony Weir
Other References	Lecture slides and notes
Course objectives	<ul style="list-style-type: none"> • Provide a broad introduction to renewable energy systems. • Explain the environmental impacts of both renewable and conventional energy sources. • Explore the challenges and opportunities in adopting sustainable energy solutions. • Introduce students to waste-to-energy technologies like incineration and composting. • Discuss the role of sustainable energy in civil engineering projects.
Evaluation criteria	Midterm exam: 35% Projects and homework: 20% Final exam: 45%
Course outline	
Chapter 1	Introduction to Sustainable Energy Systems
Chapter 2	Conventional Energy Systems and Their Environmental Impact
Chapter 3	Renewable Energy Systems Overview
Chapter 4	Waste-to-Energy Technologies
Chapter 5	Comparing Renewable and Conventional Energy
Chapter 6	Energy in Civil Engineering Projects
Chapter 7	Global and Local Energy Trends