

Renewable Energy Lab

Building B, Room 201



Equipment Name	Brief Function	Modules Served	Equipment Photo
<p>Artificial Solar Source + Solar Panel</p>	<p>Sun Simulation system provided by solar panel for experiments (postgraduate students)</p>	<p>MSc. REN601 Renewable Energy Sources and Environmental Issues</p>	
<p>Artificial Solar Source + Solar Panel</p>	<p>Sun Simulation system provided by solar panel for experiments (postgraduate students)</p>	<p>MSc. REN602 Solar energy systems and fundamentals</p>	



The
BRITISH
UNIVERSITY
IN EGYPT

FACULTY OF ENGINEERING

Loading Zone	Loading zone for use on site with Electricity Network or Isolated site to provide different experiments on Solar panels.		
Solar Central Unit	Complete Electrical Cabinet for on/off grid Solar System connections		
Data Acquisition for Central Unit	Set of Sensors, interfaces and software for the real-time data monitoring of Photovoltaic installation.		



The
BRITISH
UNIVERSITY
IN EGYPT

FACULTY OF ENGINEERING

Solar Analyzer	The Analyzer can be used in measurements for many experiments and projects inside or outside the lab.		
Fuel Cell	Set of fuel processor, fuel cell stack and Power conditioning controls and monitoring screens	MSc. REN601 Renewable Energy Sources and Environmental Issues	
Solar Thermal Control Unit + Desk	Complete system Controls and monitoring + Water Tank	MSc. REN602 Solar energy systems and fundamentals	
Evacuated Tube Collector	Evacuated Tube Solar Collector		
Flat Plate Collector	Flat Plate Solar Collector		
Artificial Solar Source	Sun Simulation system		
Wind Energy System	Test Section for small wind turbine	MSc. REN603 Wind energy systems and fundamentals	
Small Wind Test Section	Complete System Controls and monitoring screens + Water Tank		



Postgraduate Modules Served

MSc. REN601

Renewable Energy Sources and Environmental Issues

MSc. REN602

Solar energy systems and fundamentals

MSc. REN603

Wind energy systems and fundamentals

Undergraduate Modules Served

18MECH25I

Alternative Energy Systems



Renewable Energy Lab Experiments

Solar PV System Experiments:

- 1- Off-grid solar PV system components and measurements.
- 2- On-grid solar PV system components and measurements.
- 3- Tilt angle effect on PV system Performance.

Solar Thermal System Experiments:

- 1- Solar thermal system components and measurements.
- 2- Effect of flow rate on system performance.
- 3- Effect of radiation on system performance.

Wind Energy System Experiments:

- 1- Wind energy system components and measurements.
- 2- Different configurations for output energy usage.
- 3- Effect of pitch angle on system performance.

Fuel Cell System Experiments:

- 1- The effect of air supply on the characteristic curve of a fuel cell.
- 2- The effect of temperature on the characteristic curve of a fuel cell.

Solar Analyzer:

It is used in measurements for many experiments and projects inside or outside the lab.