Module Proforma

Approved, 2022.02

Summary Information

Module Code	5568NCCG
Formal Module Title	Application of Renewable Energy in Buildings
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Graham Sherwood	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings

Partner Module Team

Contact Name	Applies to all offerings	Offerings

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Nelson and Colne College Group

Learning Methods

Learning Method Type	Hours
Lecture	48

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	28 Weeks

Aims and Outcomes

Aims	The aim of this module is to provide students with an understanding on how different renewable energy sources can be designed, installed and optimised to provide a clean energy supply to displace the reliance of building in fossil fuels and its sustainability implications to climate change. The module will allow students to familiarise themselves with the latest implementation of renewable energy into buildings and how they will interact with available fossil fuel sources from the point of creating a clean energy supply for the building needs

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Produce an overview of renewable energy technology available for buildings
MLO2	Evaluate the design of renewable energy in buildings
MLO3	Analyse the implementation into different building types
MLO4	Evaluate the integration of renewable energy and fossil fuels

Module Content

Outline Syllabus
Renewable energy systems for buildingsSolar Energy (Solar thermal, PV, solar cooling, solar chimney, thrombi wall)Wind energyBiomassBiogasGeothermal (ground source and aquifers)Integration of renewable energy systemsEnergy management

Module Overview

Additional Information

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	Case Studies	50	0	MLO3, MLO4
Report	Report	50	0	MLO1, MLO2