

FMT409 Renewable Energy Systems

Level: 4

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JAN

Synopsis:

FMT409 Renewable Energy Systems provides an insight into the principles of various renewable energy sources are covered in this course. These include solar, wind, water, geothermal and bio-mass. This module will also cover the various renewable energy systems and technologies used in the built environment, the ability to select the appropriate types to be integrated into the building, the benefits and limitations as well as the maintenance aspects of these systems.

Topics:

- Renewable Sources of Energy
- Harnessing Solar Energy
- Harnessing Energy from Wind
- Harnessing Energy from Water
- Harnessing Geothermal Energy
- Bio-mass
- Nuclear Energy
- Principles of the Renewable Energy Systems – Solar Water Heating, Photovoltaic Systems, Wind Turbine System, Co-Gen and Trigen Systems
- Functions of Key Components
- Benefits and Limitations
- Applications
- Maintenance Requirements

Textbooks:

John Andrews, Nick Jelley: Energy Science: Principles, Technologies, and Impacts 2nd Oxford University Press
ISBN-13: 9780199592371-AA

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ISBN-13: 9780199592371

Learning Outcome:

- Compare the types of renewable energy sources
- Appraise the benefits and limitations of the systems
- Evaluate the efficiency of renewable energy systems
- Appraise the principles and functions of renewable energy systems
- Propose appropriate renewable energy systems
- Select maintenance programmes for such renewable energy systems

Assessment Strategies:

Continuous Assessment Component	Weightage (%)
TUTOR-MARKED ASSIGNMENT	10
TUTOR-MARKED ASSIGNMENT	20
Sub-Total	30

Examinable Component	Weightage (%)
Written Exam	70
Sub-Total	70

Weightage Total **100**