Module Proforma

Proposed, 2024.01

Summary Information

Module Code	7524CATSCI
Formal Module Title	Transformational International Energy Management
Owning School	Biological and Environmental Sciences
Career	Postgraduate Taught
Credits	15
Academic level	FHEQ Level 7
Grading Schema	50

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Sarah Dalrymple	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
Biological and Environmental Sciences

Partner Teaching Institution

Institution Name
Centre for Alternative Technology

Learning Methods

Learning Method Type	Hours
Lecture	18
Practical	3
Seminar	6
Workshop	3

Aims and Outcomes

Aims	a) Analyse energy related greenhouse gas (GHGs). b) Form a critical appreciation of, and interconnections between, Minority World and Majority World energy demand, provision and resource availability. c) Analyse and develop scenarios of future global energy provision and demand in short, medium and long-term contexts.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Demonstrate a critical understanding of key aspects of global energy provision and demand in the context of GHG emissions.
MLO2	Critically appraise selected technological and resource availability challenges of future global energy provision and demand management under a transformational adaptation ethos.
MLO3	Critically appraise the justice and responsibility impacts of extraction, manufacture, transport, use, end of life outcomes, and social change, in relation to selected energy provision technologies and demand management strategies.

MLO4	Systematically analyse future global energy provision and demand projections and synthesise relationships between the economics of the energy transition and its environmental and social impacts.
MLO5	Systematically analyse evidence and synthesise relationships between present and future global energy provision and demand.

Module Content

Outline Syllabus
Existing global CO2 emissions related to energy provision and demand, Applicability of emerging sustainable energy systems to Majority World nations. Justice, ethics and responsibilities in global energy provision, including the role of states, corporations and the third sector in energy provision transition. Environmental and social impacts of energy provision as experienced across international and interregional boundaries. Funding and economics of global energy provision transition. Examples of technical and nature-based solutions.

Module Overview

Additional Information
Indicative references: Armstrong J., (2021) *The Future of Energy: The 2021 guide to the energy transition - renewable energy, energy technology, sustainability, hydrogen and more.* Energy Technology Publishing, ISBN-10: 1838388605 Hafner, M. and Tagliapietra, S. (2020) *The Geopolitics of the Global Energy Transition*. Cham: Springer International Publishing AG Sovacool, B.K.,Dworkin, M.H. (2014) *Global Energy Justice, Problems, Principles, and Practices*, Cambridge University Press, https://doi.org/10.1017/CBO9781107323605

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	Report	100	0	MLO1, MLO2, MLO3, MLO4, MLO5