

Course title: Energy Project Management				
Course code: DSE 115		No. of credits: 3	L-T-P: 40-05-00	Learning hours: 45
Pre-requisite course code and title (if any):				
Department: Sustainable Engineering				
Course coordinator: Dr. Sapan Thapar			Course instructor(s): Mr. Ankit Narula	
Contact details: sapan.thapar@terisas.ac.in				
Course type: Core			Course offered in: Semester 2	
Course description The course is designed for provide an insight to students on various aspects of energy management, encompassing electric (power, renewables) as well as non-electric sectors (coal, oil, gas). Students will be exposed to the various stages of an energy project (pre-implementation to completion), its techno-commercial assessment, contract management, besides the different procurement cum pricing options. They shall further be acquainted with green finance and the enviro-social aspects of energy projects.				
Course objectives				
<ul style="list-style-type: none"> ▪ Understand relevance of Project Management in an energy project ▪ Learn about project lifecycle stages ▪ Undertake Techno-Commercial Assessment ▪ Learn about PPA & EPC, ESIA ▪ Exposure to green finance & Project Management Techniques 				
Course content				
Module	Topic	L	T	P
1	Understanding Energy Projects Lifecycle Assessment (Upstream, Midstream, downstream) <ul style="list-style-type: none"> • Coal, Oil and Gas based projects • Power Sector • Renewable Energy Projects • Policy & Regulatory Aspects 	4	0	0
2	Project Development <ul style="list-style-type: none"> • Definition, Need • Project vs routine production • Project planning matrix • Stages of Project • Role of stakeholders 	8	0	0
3	Techno-Economic Assessment <ul style="list-style-type: none"> • Market Analysis • Technical Assessment • Financial Feasibility (LCOE, NPV, IRR, payback) • Project Appraisal • Risk Analysis & Management 	7	2	0

- Project Management techniques, including ESIA
- Sources and types of climate finance

Pedagogical approach

The course will be delivered through classroom lectures. Relevant case studies shall be discussed in class to expose students on the latest project management techniques

Materials Textbooks

Prasanna, C. (2008). *Projects, Planning, Analysis, Selection, Financing, Implementation and Review*. TataMcGraw-Hill Publishing Company Limited.

Finnerty, J. D. (2013). *Project financing: Asset-based financial engineering*. John Wiley & Sons.

Frigenti, E., & Comminos, D. (2002). *The Practice of Project Management: a guide to the business-focused approach*. Kogan Page Publishers.

Lewis, J. P. (2002). *Fundamentals of project management: developing core competencies to help outperform the competition*. AMACOM Div American Mgmt Assn.

Scott, B. (2005). *The Art of Project Management. California USA. O'Reilly Media Inc.*

Thapar S. (2024). *Renewable Energy: Policies, Project Management and Economics*. Springer

Suggested readings

SECI Tenders
 Energy Sector Regulations (MoP/ MNRE/ MoPNG/ CERC)

Journals

Project Management Journal
 International Journal of Project Management

Additional information (if any)

Student responsibilities

The students are expected to submit assignments in time and come prepared with readings when provided.

Course reviewers

- Prof Atul Kumar, Director, JNU
- Ms Avantika Garg, Manager, Indian Oil Corporation
- Mr Mudit Jain, Head-Research, Tata Cleantech Capital