

Syllabus for B.Tech – Energy Engineering

Course Number & Title: EN209 - Energy and Sustainability	
L-T-P-C: 3-0-0-6	
Offered in (Odd/ Even / Any): Semester IV	
Pre-Requisite: Nil	
Preamble / Objectives (Optional): To understand the importance of energy and its role in sustainability.	
Course Content/ Syllabus: Energy resources and energy mix; energy conservation and energy efficiency, energy audit of thermal and electrical utilities; steam and gas turbine cycles; waste heat recovery; heat exchanger network; energy pricing and economics; sustainability: review of sustainable development concepts, rules and indicators-measures, sustainable accounting, economics of green accounting and sustainable resource management, green economy, review of sustainable development goals.	
Books (In case UG compulsory courses, please give it as “Text books” and “Reference books”. Otherwise give it as “References”.	
Text Books: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	Y Demirel, <i>Energy Production, Conversion, Storage, Conservation, and Coupling</i> , 2 nd Edition Springer International Publishing Switzerland, 2016.
2.	T D Eastop and D R Croft, <i>Energy Efficiency for engineers and technologies</i> , Longman Group UK limited, reprinted, 1995.
Reference Books: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	I Dincer and A A Rayash, <i>Energy Sustainability</i> , Elsevier, 2020.
2.	
3.	
4.	