

Course title: Climate Change and Energy Transition			
Course code: DSE 122	No. of credits: 3	L-T-P: 34-11-00	Learning hours: 45
Pre-requisite course code and title (if any):			
Department: Sustainable Engineering			
Course coordinator: Dr Sapan Thapar		Course instructor: Guest Faculty	
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Course type: Elective		Course offered in: Semester 3	
Course Description: Climate change has been identified as an existential threat to human society. A major reason for rising carbon emissions is attributed to use of fossil fuels for energy generation. Countries across the globe are working to reduce emission by decarbonizing their energy sector. This course shall provide an overview on the global climate discourse, the science behind it, indicators of Climate Change, global and regional climatic trends. It shall cover UNFCCC Protocols, greenhouse gases, mitigation as well as adaptation strategies under NDCs. The course would introduce concept on energy transition, Decarbonization, Just Transition and carbon markets.			
Course Objectives <ul style="list-style-type: none">• Science, Issues and Drivers behind climate change• Climate Change Protocols, Role of UNFCCC, NDCs• Greenhouse gases, GWP and Emission Trajectory• Climate Change - Planning, Mitigation and Adaption Strategies• Energy Transition, Net-Zero, Decarbonization, Just Transition• Carbon Markets and Trading Schemes• Corporate NZE Strategies			