

Course title: Firm and Dispatchable Energy – Resources, Technology, Applications			
Course code: DSE 111	No. of credits: 3	L-T-P: 37-08-00	Learning hours: 45
Pre-requisite course code and title (if any):			
Department: Sustainable Engineering			
Course coordinator: Prof. Naqui Anwer		Course instructor: Prof. Naqui Anwer, Dr. Lakshmi Raghupathy and Dr. Asif Nazar	
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Course type: Core		Course offered in: Semester 2	
Course Description: The firm and dispatchable power are very much essential for the stability of the grid. In view of the increased penetration of variable renewable energy resources like wind power and solar power, the role of the firm and dispatchable power has increased considerably. This course introduces a mix of renewable and conventional energy that fall under the category of firm and dispatchable power. The students in this course will be able to appreciate the resources, technologies, and applications surrounding these sources of energy.			
Course objectives: <ul style="list-style-type: none"> • To familiarize students with the concept and need of firm and dispatchable power • To understand the resources, technology, and applications of firm and dispatchable power. • To understand the global and Indian scenarios of these resources • To impart knowledge about dispatchable renewable energy • To understand fossil fuels as well as nuclear energy 			
Evaluation criteria Minor Test 1: Assignment (after completion of modules 1, 2 and 3)- 20% Minor Test 2: Written test (after completion of modules 1, 2, 3 and 4)- 25% Minor Test 3: Written test/ Case Study Presentation (after completion of modules 5 and 6)- 25% Major Test: Written test/ Presentation (after completion of all modules) - 30%			
Learning outcomes <ul style="list-style-type: none"> ▪ Appreciate the distinction between dispatchable and non-dispatchable energy ▪ Understand the significance of firm and dispatchable power ▪ Understand technology and applications of firm and dispatchable power 			