Course code and name	**EE433-2: Organization of Power Systems**
Credits units	2 Credit units
Contact hours	4 Contact hours: 1 lecture, 1 tutorial and 2 practical
Instructor name	
Textbook	C. Gross: SE, Power system Analysis, John Wiley & Sons, ISBN 0-471-83732-6, 1986.
Other supplemental materials	-
Specific course information	
a. Course description	This course aims to teach the students the necessary knowledge of power system planning. The course establishes the understanding of generation characteristics, power flow through the power system networks and power system behavior during contingencies. Development of some load forecasting models is explained. Generation rescheduling and rescheduling models corresponding to cost analysis are performed and explained. Constraints applied to generation rescheduling, solving generation rescheduling problem, cost analysis of rescheduling and reliability of power generation systems are also studied. Power system distribution analysis and planning are explained.
b. Prerequisite	EE429-3
c. Required / Elective	Elective
Course Learning Outcomes	
CLO of the Lecture Activities: CLO1: Apply and gain an in depth knowledge on power system planning and economics. CLO2: Illustrate electricity demand forecasting and review the load forecasting techniques. CLO3: Employ the planning methods properly. CLO4: Recognize the optimal transmission capacity. CLO5: Carryout demand side management as a strategic option in utility planning. **CLO of the Laboratory Activities:** CLO1: Verify theory and to improve knowledge learned in class. CLO2: Formulate and solve problems related to theory. CLO3: Design and safety conducts an experimental procedure. CLO4: Independently perform accurate quantitative measurements, interpret experimental results, perform calculations on these results and draw a reasonable, accurate conclusion. CLO5: Communicate critical analysis of scientific information through written reports. CLO6: Be integrated inside a group of work and respect the team working.	
Brief list of topics to be covered	
- Electrical Power System - Planning cycle - System load forecasting	

- Simulated system operation
- Generation, transmission and distribution planning
- System reliability

Mapping Course Learning Outcomes to Student Outcomes

	Lecture Activities						
	SO1	**SO2**	**SO3**	**SO4**	**SO5**	**SO6**	**SO7**
CLO1	☐						
CLO2	☐						
CLO3	☐						
CLO4				☐			
CLO5				☐			☐
	Laboratory Activities						
	SO1	**SO2**	**SO3**	**SO4**	**SO5**	**SO6**	**SO7**
CLO1						☐	☐
CLO2	☐						
CLO3						☐	
CLO4						☐	
CLO5			☐				
CLO6				☐	☐		