



AL IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY
COLLEGE OF ENGINEERING
Department of Mechanical Engineering

Course Information	
Course Code and Name:	ME 449 Special topics in thermal sciences, power and energy conversion
Credit Hours:	3 (3 Lecture + 1 Tutorial)
Prerequisites:	ME 323 Thermodynamics-II

Course Description
Rankine cycle analysis, fossil-fuel steam generators, energy balances, fans, pumps, cooling towers, steam turbines, availability (second law) analysis of power systems, energy management systems, and rate analysis.

Textbook			
Title	Power Plant Technology		
Authors	M.M. El Wakil		
Publisher	McGraw-Hill	Year and Edition	1985

Course Contents
Hydroelectric Power Generation
Fossil Fuel Steam Generators
Fuels and Combustion
Turbine types and designs
The Condensate- feed-water system
The Circulation water system
Gas Turbines Shaft Power Cycles
Combined Cycle Power Plants

Academic Coordinator	Signature
Dr. Syed Muhammad Fakhir Hasani	



Official Stamp