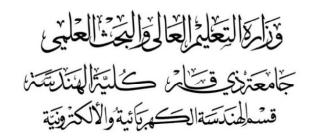
## Ministry of Higher Education and Scinetific Research Thi-Qar University Collage of Engineering Electrical and Electronic Engineering Dept

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Course number and name	EE 4350: Power Systems Analysis II
Credits and contact hours	3 credits and 3 hours
Course coordinator	
Textbook	a-Power Systems Analysis, 2 <sup>nd</sup> edition, H. Sadaat, McGraw-Hill
	Higher Education, 2002.
Course Information	a. Prerequisites: EE 4340: Power Systems Analysis I
	c. Selective Elective
	-Balanced short-circuits, including: series R-L circuit transients,
	synchronous machine transient, sub-transient, and steady-state
	models, inclusion of pre-fault currents by superposition.
	-Unbalanced three-phase short-circuits, including: developing
	sequence networks for power systems, developing sequence
	impedance matrices for power systems from the sequence networks,
	applying sequence networks and sequence impedance matrices to
Topics to be covered	determine the system, currents and voltages under the application of
	unbalanced faults, selecting fuses and circuit breakers in power
	systems.
	-Power system protection, including instrument transformers, CTs
	and VTs., overcurrent, directional, impedance, and differential
	relays; fuses and reclosers, coordination of overcurrent devices,
	protecting lines, buses, and transformers.
11 2/1114	-Control of power system operation: power flow, scheduling
	generation, including the statistical nature of load, generator-voltage
	control, turbine-governor control, economic
ية والألكة ونية	dispatch, including losses.  -Power system stability: the swing equation, equal-area criterion,
	solution of the swing
	equation, design methods for improving stability

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