CERTIFICATE IN POWER ENGINEERING

This program provides power engineers with a solid foundation in the design and analysis of large-scale power systems and state-of-the-art power conversion systems, including power systems control, power electronics, motor drives, design of fault-tolerant systems, power markets, and fundamentals of power system operation and planning.

Curriculum

Required Courses			(6-8)
Select a minimum of two courses from the following:			6-8
ECE 411	Power Electronics	4	
ECE 412	Electric Motor Drives	4	
ECE 418	Power System Analysis	3	
ECE 419	Power Systems Analysis with Laboratory	4	
ECE 420	Analytical Methods in Power Systems	3	
Elective Courses			(9)
Select a minimum of three courses from the following:			9
ECE 417	Power Distribution Engineering	3	
ECE 533	Robust Control	3	
ECE 538	Renewable Energies	3	
ECE 539	Computer Aided Design of Electric Machines	3	
ECE 540	Reliability Theory and System Implementation	3	
ECE 548	Energy Harvesting	3	
ECE 549	Motion Control Systems Dynamics	3	
ECE 550	Power Electronic Dynamics and Control	3	
ECE 551	Advanced Power Electronics	3	
ECE 552	Adjustable Speed Drives	3	
ECE 553	Power System Planning	3	
ECE 554	Power System Relaying	3	
ECE 555	Power Market Operations	3	
ECE 556	Power Market Economics and Security	3	
ECE 557	Fault-Tolerant Power Systems	3	
ECE 558	Power System Reliability	3	
ECE 559	High Voltage Power Transmission	3	
ECE 560	Power Systems Dynamics and Stability	3	
ECE 561	Deregulated Power Systems	3	
ECE 562	Power System Transaction Management	3	
ECE 563	Computational Intelligence in Engineering	3	
ECE 564	Control and Operation of Electric Power Systems	3	
ECE 580	Elements of Sustainable Energy	3	
ECE 581	Elements of Smart Grid	3	
ECE 582	Microgrid Design and Operation	3	
Total Credit Hours			15-17