

# CERTIFICATE IN POWER ELECTRONICS

In this certificate program, students receive professional preparation in the areas of power electronic converters, industrial electronics, switching power supplies, electric/electronic motor drives, and electric power quality. This certificate program is useful to managers, engineers, and students who are seeking a position in power electronics related industry.

## Curriculum

Code	Title	Credit Hours
<b>Required Courses</b>		<b>(6-7)</b>
Select a minimum of two courses from the following:		6-7
ECE 411	Power Electronics	4
ECE 512	Hybrid Electric Vehicle Drives	3
ECE 550	Power Electronic Dynamics and Control	3
ECE 551	Advanced Power Electronics	3
ECE 552	Adjustable Speed Drives	3
<b>Elective Courses</b>		<b>(6-7)</b>
Select a minimum of two courses from the following:		6-7
ECE 411	Power Electronics	4
ECE 430	Fundamentals of Semiconductor Devices	3
or ECE 523	Fundamentals of Semiconductor Devices	
ECE 437	Digital Signal Processing I	3
ECE 438	Control Systems	3
ECE 441	Smart and Connected Embedded System Design	4
ECE 510	Internet of Things and Cyber Physical Systems	3
ECE 512	Hybrid Electric Vehicle Drives	3
ECE 531	Linear System Theory	3
ECE 533	Robust Control	3
ECE 535	Discrete Time Systems	3
ECE 537	Next Generation Smart Grid	3
ECE 538	Renewable Energies	3
ECE 539	Computer Aided Design of Electric Machines	3
ECE 548	Energy Harvesting	3
ECE 550	Power Electronic Dynamics and Control	3
ECE 551	Advanced Power Electronics	3
ECE 552	Adjustable Speed Drives	3
ECE 575	Electron Devices	3
ECE 579	Operations and Planning and Distributed Power Grid	3
ECE 580	Elements of Sustainable Energy	3
ECE 581	Elements of Smart Grid	3
ECE 582	Microgrid Design and Operation	3
<b>Total Credit Hours</b>		<b>12-14</b>