

EEPW 3257	<b>Power Electronics</b>	3 Credit Hours
Prerequisites:	EETE 3102	
<b>Goal</b>	To provide the student with the understanding of the power switching devices and their applications.	
<b>Objectives</b>		<b>Outcomes</b>
<p>This course should enable the student to:</p> <ol style="list-style-type: none"> <li>1. Understand the concepts of power semiconductor switches.</li> <li>2. Understand the concepts of line-commutated diode rectifiers.</li> <li>3. Understand the concepts of dc-dc switch-mode converters.</li> <li>4. Understand the concepts of switch-mode dc-ac inverters.</li> <li>5. Understand the concepts of resonant converters.</li> <li>6. Understand the concepts of different regulated AC/DC power supply and their applications.</li> </ol>		<p>A student who satisfactory complete the course should be able to:</p> <ol style="list-style-type: none"> <li>1. Define the power diodes, thyristors, power MOSFET, G.T.O., IGBT, field controlled switches (SiT and SiTH).</li> <li>2. Compare between different types of semiconductor switches.</li> <li>3. Draw the desired characteristics of controllable switches.</li> <li>4. Compare between different types of converter.</li> <li>5. Differentiate between Uncontrolled rectifiers and controlled rectifiers.</li> <li>6. Apply the knowledge of : <ol style="list-style-type: none"> <li>a- AC/DC converter.</li> <li>b- DC/DC converter.</li> <li>c- DC/AC converter.</li> <li>d- Resonant converter.</li> </ol> </li> <li>7. Working of different types of AC/DC regulated power supply.</li> </ol>