

EETE 4220	<b>Digital Communications and Switching</b>	3 Credit Hours
Prerequisites:	EETE 3211	
<b>Goal</b>	To enable the students to understand and analyze the techniques involved in the modern digital communication systems and also understand the modern telephone switching techniques	
<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 processes involved in the data transmission and digital transmission of analog signals</li> <li>2. understand about the error detection and correction techniques in the digital communication</li> <li>3. understand the concepts involved in the measurement of information and source coding and channel coding</li> <li>4. analyze and design the electronic switching systems for communication</li> </ol>		<p>A student who satisfactorily completes the course should be able to:</p> <ol style="list-style-type: none"> <li>1. describe the various elements of a Digital Communication systems</li> <li>2. explain the general constraints and limitations in the design of communication systems</li> <li>3. understand the problems and the techniques involved in the baseband data transmission – ISI, Pulse Shaping, Eye diagram</li> <li>4. analyze the modern digital modulation techniques such as QAM, MSK</li> <li>5. know the concepts in measure of information, entropy</li> <li>6. describe the source coding techniques based on information</li> <li>7. understand the channel encoding - error detection and correction</li> <li>8. explain about the electronic space division switching</li> <li>9. explain about the time division switching</li> <li>10. understand about the traffic engineering – Erlang's formula, Traffic Load, GoS</li> <li>11. describe the modern local access techniques – xDSL, WLL</li> </ol>