

## DMX3304 Applied Electronics

<b>Level</b>	3
<b>Course Code</b>	DMX3304
<b>Course Title</b>	Applied Electronics
<b>Credit value</b>	3
<b>Core/Optional</b>	Core
<b>Course Aim/s</b>	Aim of this course is to provide basic principles of electronic engineering and its applications
<b>Course Learning Outcomes (CLO):</b>	<p>At the completion of this course student will be able to:</p> <p>CLO1: Analyze currents and voltages in AC/DC circuits.  CLO2: Describe the operation of balanced three phase circuits.  CLO3: Solve different types of first/second order circuits and filters using ODE.  CLO4: Analyze active components used in various electronics applications.  CLO5: Design op-amp circuits for different applications.  CLO6: Design combinational and sequential logic circuits.  CLO7: Describe the operation of analogue to digital/ digital to analogue converters.</p>
<b>Content</b>	<p><b>Outline Syllabus:</b></p> <p>Unit 1: Network theorems  Unit 2: Circuit analysis  Unit 3: Semiconductor devices  Unit 4: Digital Electronics</p> <p><b>Laboratory work:</b></p> <ol style="list-style-type: none"> <li>1. Determination of unknown resistance using Whetstone bridge (using AC and DC sources).</li> <li>2. Determination of gain and identify the functions of each components in a BJT amplifier circuit.</li> <li>3. Implementation of logic circuits using logic ICs.</li> <li>4. Determination of characteristics of operational amplifiers</li> <li>5. Electronics circuit simulation using software</li> </ol>