



UNIVERSITY  
GWALIOR • MP • INDIA

“ CELEBRATING DREAMS ”

**THEMATIC DISTRIBUTION OF SUBJECTS**  
**DEPT. OF ELECTRICAL ENGINEERING**

<b>Theme</b>	<b>Subjects</b>
<b>Fundamental Engineering and Mathematics</b>	<ol style="list-style-type: none"><li>1. Calculus for Engineers</li><li>2. Engineering Graphics</li><li>3. Engineering Mathematics</li><li>4. Statistics for Engineers</li></ol>
<b>Core Electrical and Electronics Subjects</b>	<ol style="list-style-type: none"><li>1. Basic Electronics</li><li>2. Principles of Electrical Engineering</li><li>3. Circuit Theory and Networks</li><li>4. Electrical Machines I &amp; II</li><li>5. Digital Electronics and Logic Design</li><li>6. Electrical &amp; Electronic Materials</li></ol>
<b>Electric Vehicle Technology</b>	<ol style="list-style-type: none"><li>1. Introduction to Electric Vehicle Technology</li><li>2. Architecture of Electric Vehicles &amp; Solar Panels</li><li>3. Energy Storage Systems for Electric Vehicles</li><li>4. Electric and Hybrid Vehicles</li><li>5. Electric Vehicles Control</li><li>6. Vehicle Dynamics</li></ol>
<b>Advanced Electrical Topics</b>	<ol style="list-style-type: none"><li>1. Power Generation, Transmission, and Distribution</li><li>2. Power System Stability</li><li>3. Power System Protection</li><li>4. High Voltage Engineering</li><li>5. Power Electronics</li></ol>
<b>Computer Programming and Simulation</b>	<ol style="list-style-type: none"><li>1. Essentials of Information Technology</li><li>2. Programming Logics</li><li>3. Object-Oriented Programming by Java</li><li>4. Computer Programming (Python)</li><li>5. Electrical Engineering Simulation Labs I &amp; II</li></ol>
<b>Elective Courses</b>	<ol style="list-style-type: none"><li>1. Elective 1 (Signal &amp; Systems, Special Electrical Machines, Computer-Aided Protection)</li><li>2. Elective 2 (Power Quality, Advanced Power System Protection, Energy Management &amp; Audit)</li></ol>



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	<ol style="list-style-type: none"><li>3. Elective 3 (IoT and Sensors, Soft Computing Techniques, Machine Learning)</li><li>4. Elective 4 (Generalized Theory of Electrical Machines, Industrial Instrumentation)</li><li>5. Elective 5 (HVDC, Smart Grid and Energy Management, EHV AC &amp; DC Transmission)</li></ol>
<b>Industrial Training and Projects</b>	<ol style="list-style-type: none"><li>1. Industrial Training I, II, and III</li><li>2. Major Project I and II</li><li>3. Mini Project</li></ol>
<b>Communication and Interdisciplinary Subjects</b>	<ol style="list-style-type: none"><li>1. Communication Skills &amp; Colloquium</li><li>2. Environmental Pollution &amp; Global Issues</li><li>3. Making of Modern India</li></ol>