



## ELEC 1150 SYLLABUS

<b>Course Number Course Name</b>	ELEC 1150 Electrical Theory II
<b>Credit Value (Breakdown of theory and lab credits)</b>	4 (4 Theory)
<b>Catalog Course Description</b>	<p>This course exposes students to electrical fundamental and basic AC circuits. Students learn inductance/inductors and capacitance/capacitors. Students learn about RC, LC, RCL circuits in series and parallel. Finally, students can analyze and work safely with these types of AC circuits.</p> <p>Pre-requisites: ELEC 1140</p>
<b>Student Learning Outcomes/Objectives /Competencies of the Course</b>	<p>Outcomes</p> <ul style="list-style-type: none"> <li>• Explain differences between DC and AC circuits.</li> <li>• Explain what inductance and capacitance is.</li> <li>• Calculate and analyze RC, LC, RCL (series and parallel) circuits.</li> <li>• Identify and work with RC, LC, RCL (series and parallel) circuits.</li> </ul> <p>Topics</p> <ul style="list-style-type: none"> <li>• Understanding vectors and how to use them effectively</li> <li>• Comparing direct current to alternating current</li> <li>• Making circuit calculations for basic systems</li> <li>• Becoming familiar with AC resistive circuits</li> <li>• Understanding the basic characteristics of AC circuits</li> <li>• Understanding inductance and how it affects a circuit</li> <li>• Working with inductors that are in series and/or parallel</li> <li>• Becoming familiar with inductive reactance</li> <li>• Understanding capacitance and how it affects a circuit</li> <li>• Working with capacitors that are in series and/or parallel</li> <li>• Becoming familiar with capacitive reactance</li> <li>• Comprehending the parameters of series RL circuits</li> <li>• Comprehending and analyzing series RLC circuits</li> <li>• Understanding and working with parallel RL circuits</li> <li>• Comprehending and analyzing parallel RLC circuits</li> <li>• Identifying and working with LC circuits</li> <li>• Comparing series and parallel RLC circuits</li> <li>• Analyzing and working with combination RLC circuits</li> <li>• How current reacts in DC combination circuits</li> <li>• How voltage functions in DC combination circuits</li> <li>• How to calculate power in DC combination circuits</li> <li>• How voltage and current dividers work</li> <li>• The design and operation of the 3-wire, single-phase system</li> </ul>

# NORTHERN NEW MEXICO COLLEGE



<b>College-Wide Student Learning Outcomes</b>	<i>College Wide Student Learning Outcomes:</i> Communication Critical Thought
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