

# Course Outcome Guide (COG)

<b>Course:</b>	PHYS251: University Physics II	<b>Credits:</b>	5	<b>Instructor:</b>	Lance Olson
<b>Course Description:</b>	Pre-requisite: Calculus I or placement examination. A calculus based physics course covering the basic principles of Waves, Magnetism, Optic. Co-requisite: PHYS 252 Lab				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institution
<ul style="list-style-type: none"> <li>*Oscillatory motion</li> <li>*Wave Motion</li> <li>*Sound waves</li> <li>*Super position and Standing waves</li> <li>*Electric fields</li> <li>*Gauss's Law</li> <li>*Electric potential</li> <li>*Capacitance and Dielectrics</li> <li>*Current and Resistance</li> <li>*Direct-Current circuits</li> <li>*Magnetic fields</li> <li>*Faraday's law</li> <li>*Inductance</li> <li>*AC currents</li> <li>*DC currents</li> <li>*Ray optics</li> <li>*Image formation</li> <li>*Wave optics</li> <li>*Intro to modern Physics</li> </ul>	<ul style="list-style-type: none"> <li>*Express Physics problems in Laymen's terms using drawings, vectors and diagrams when applicable.</li> <li>*Use Polya's problem solving strategies to set up and solve Physics problems.</li> <li>* Use an understanding of mathematics, along with physics principles to effectively solve problems.</li> <li>*Apply knowledge of subject material to explain natural physical processes.</li> </ul>	<ul style="list-style-type: none"> <li>*Participate in class discussions and activities demonstrating knowledge of subject matter.</li> <li>*Complete examinations demonstrating acceptable skill level of concept and process.</li> <li>*Complete textbook readings, questions and problems (both individually and collaboratively) demonstrating acceptable skill levels of concept and process.</li> <li>*Design experiments and acquire data in order to explore physical principles and effectively communicate results.</li> <li>* Design, construct and test your final project.</li> </ul>	<ul style="list-style-type: none"> <li>*Students will apply physics principles to real-world situations and/or future academic pursuits.</li> <li>*Students will work effectively within a collaborative group to achieve a distinct result.</li> <li>*Students will be able to Integrate learning theory with laboratory performance.</li> </ul>	<ul style="list-style-type: none"> <li>Students will use reasoning skills to analyze and solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>Students will use reasoning skills to analyze and solve problems.</li> </ul>