



<b>Course Number</b>	PHYS 1320, Calculus-based Physics II
<b>Course Name</b>	
<b>Credit Value (Breakdown of theory and lab credits)</b>	3 Theory
<b>Catalog Course Description</b>	A calculus level treatment of classical electricity and magnetism. It is strongly recommended that this course is taken at the same time as Calculus-based Physics II laboratory. Prerequisite: PHYS 1310. Co-requisite: PHYS 1320L (3, 3T+0L)
<b>Course Student Learning Outcomes/Objectives /Competencies of the Course</b>	<p><b>Student Learning Outcomes:</b> At the end of this course the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Apply the concepts of electric charge, electric field and electric potential to solve problems.</li> <li>2. Sketch the electric field in the vicinity of point, line, sheet, and spherical distributions of static electric charge.</li> <li>3. Sketch the magnetic field in the vicinity of line, ring, sheet, and solenoid distributions of steady current.</li> <li>4. Describe the relationship between electric field and electric potential.</li> <li>5. Calculate the Lorentz force on a moving charge for simple geometries of the fields and use it to analyze the motion of charged particles.</li> <li>6. Apply the integral forms of Maxwell's equations.</li> <li>7. Calculate the energy of electromagnetic fields.</li> <li>8. Analyze DC circuits.</li> </ol>
<b>College-Wide Student Learning Outcomes</b>	<p>PHYS 1320 will expose students to the following NNMC College Wide Goal:</p> <p><i>Critical thought: Students are required to analyze and synthesize information and draw reasoned conclusions.</i></p>
<b>Program Student Learning Outcomes measured</b>	None