

<b>B.A. 2<sup>nd</sup> Year (Mathematics)</b>		
<b>Course</b>	<b>Objective</b>	<b>Learning Outcome</b>
<b>Algebra</b>	Provide students with a thorough understanding of algebraic structures, including groups, rings, and fields, and their fundamental properties.	<ul style="list-style-type: none"> <li>• Students will be able to understand the relationships between abstract algebraic structures with familiar numbers systems such as the integers and real numbers.</li> <li>• Students will be able to verify relationships between operations satisfying various properties (e.g. commutative property).</li> <li>• Students learn the basic definitions and properties of groups, rings, and/or fields.</li> </ul>
<b>Real Analysis</b>	Provide students with a thorough understanding of the real number system, including properties of real numbers, sequences and series, including convergence and divergence, Cauchy sequences, and the properties of series, including tests for convergence (e.g., the Ratio Test, Comparison Test).	<ul style="list-style-type: none"> <li>• Describe the fundamental properties of the real numbers that underpin the formal development of real analysis.</li> <li>• Demonstrate an understanding of the theory of sequences and series, continuity, differentiation and integration.</li> <li>• Demonstrate skills in constructing rigorous mathematical arguments.</li> <li>• Apply the theory in the course to solve a variety of problems at an appropriate level of difficulty.</li> </ul>