



# Modern Algebra

SWAYAM Prabha Course Code: R22

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<b>INSTITUTE</b>	IIT Kanpur
<b>COURSE OUTLINE</b>	<p>The course discusses how algebra allows us to abstract out the geometric objects and numbers. This leads to an understanding of fundamental properties of geometry and numbers as well as allows us to manipulate them in ways not possible directly. This has resulted in some of the most remarkable applications of mathematics in real life.</p> <p><b>Course Outline</b></p> <ol style="list-style-type: none"><li>1. Introduction to abstraction; Introduction to Groups</li><li>2. Properties of Finite Groups; Applications of Groups</li><li>3. Introduction to Rings; Properties of Finite Rings</li><li>4. Introduction to Ideals Week 5: Properties of Ideals</li><li>5. Applications of Ideals and Rings</li><li>6. Introduction to Fields</li><li>7. Applications of Finite Fields</li></ol>