

Semester	Code	Module Title	Credits	C/E/O	GPA/NGPA
7,8	MA4220	Topics in Algebra and Topology	3	E	GPA
Hours/Week		Pre-requisites/Co-requisites	Evaluation (%)		
Lecture	Tute/Lab		CA	WE	
3	0	MA2034	30	70	

### Learning Outcomes

After the successful completion of this course students should be able to

- Understand the basics of modern algebra with a major focus on Groups
- Understand the basics of Topology with a major focus on of Point Set Topology

### Syllabus Outline

#### Algebra

- Groups and Group Homomorphisms
- Normal Subgroups and Factor Groups
- Fundamental Theorem of Finite Abelian Groups
- Sylow Theorems
- Rings and Ideals
- Fields and Field Extensions
- Introduction to Galois Theory

#### Topology

- Metric Spaces
- Continuity
- Completeness
- Topological Spaces
- Connectedness
- Compactness
- Introduction to the Fundamental Group