

Semester	AUG 2022
Open to semester	22
Course code	MT5234
Course title	Topology - II
Credits	/4
Course Coordinator & participating faculty (if any)	Tejas Kalelkar
Nature of Course	Lectures
Pre-requisites	PhD Course Topology I
Objectives (goals, type of students for whom useful, outcome etc)	This course is aimed at PhD students and is designed to be a continuation of Topology I. The primary focus of the course will be on Homology and Cohomology presented from a topological viewpoint. The course is essential for students wishing to specialize in areas of Topology or Geometry.
Course contents (details of topics /sections with no. of lectures for each)	Covering spaces, lifting properties, classification of covering spaces, deck transformations Simplicial/singular/cellular homology, Excision, Mayer-Vietoris Theorem, Statement of Lefschetz fixed point theorem Orientation of topological manifolds, Cohomology, Statement of Poincare Duality Universal Coefficients Theorem, Cup products Cohomology Ring, Statement of Kunnetth Formula
Evaluation /assessment	End-Sem Examination-50% Mid-Sem Examination-30% Others-Assignments: 20% %
Suggested readings (with full list of authors, publisher, year, edn etc.)	“Algebraic Topology”, Allen Hatcher, Cambridge University Press