

**MA-431: ALGEBRAIC TOPOLOGY**

Pathwise connectedness; Notion of homotopy, Homotopy classes, Path homotopy, Path homotopy classes; Fundamental groups, Covering maps, Covering spaces, Lifting properties of covering spaces, Fundamental group of a circle,  $\pi_1(S^n)$ .

**RECOMMENDED BOOKS:**

1. Kosniowski, C., A first course in algebraic topology, Cambridge University Press, 1980.
2. Greenberg, M.J., Algebraic topology, A first course, Benjamin/Commings, 1967.
3. Wallace, A.H., Algebraic Topology, Homology and Cohomology, Benjamin, 1968.