## MT507: TOPOLOGY

**Syllabus:** Topological spaces; Subspaces; Open sets; Closed Sets; Neighbourhood system; Bases and sub-bases; Continuous mapping and Homeomorphism; Seperation axioms  $(T_0, T_1, T_2, T_3, T_4)$ ; Compact and locally compact spaces; Tychnoff's one point compactification; Connected and locally connected spaces; Product and Quotient spaces; Nets, Filters

## **UNIT SCHEDULE**

Unit 8	Topological spaces
Unit 9	Bases and Sub-bases and Continuity
Unit 10	Seperation axioms $(T_0, T_1, T_2, T_3, T_4)$
Unit 11	Compact and locally compact spaces
Unit 12	One point compactification
Unit 13	Connected and locally connected spaces
Unit 14	Product and Quotient spaces
Unit 15	Nets, Filters