Syllabus

Ordered sets: Ordered sets; diagrams; constructiong and deconstructing ordered sets; down-sets and up-sets; order preserving map. Lattices and complete lattices: Lattices as ordered sets; lattices as an algebra, sublattices and convex sublattice of a lattice; product lattice; ideals and filters; prime ideals and maximal ideals; Zorn's Lemma *Books Recommended:*

- S. L. Ross. Differential Equation
- J.D. Murray. Mathematical Biology I. An Introduction
- J.D. Murray. Mathematical Biology II. Spatial Models and Biomedical Applications.
- J.C. Frauenthal. Introduction to population modeling
- Britton Nicholas. Essential Mathematical Biology.
- Brain Ingalls. Mathematical Modeling in Systems Biology: An Introduction
- H.F. Freedman. Deterministic Mathematical models in population.