

MATHEMATICS 205A

General Topology

Text: *Topology, Second Edition*, by J. R. Munkres

This is the first course in a three quarters study of topology. Topics covered in this course include the theory of the general topology—topological spaces, metric spaces and completeness, continuous maps, connectness and compactness, and countability and separation axioms, paracompactness and manifolds.

TOPICS	SUGGESTED NO. OF 50 MIN. CLASSES
Topological Spaces and Continuous Functions 9 (Ch. 2, §§12, 13, 15–20, 22)	
Topological spaces, product, subspaces, continuous maps, metric spaces, quotient spaces.	
Connectness and Compactness 7 (Ch. 3, §§23, 24, 26–29)	
Connectness spaces, compact spaces.	
Countability and Separation Axioms 8 (Ch. 4, §§ 30–34; 36)	
Countability axioms, separation axioms, normal spaces, manifolds, imbedding and metrization of manifolds.	
Further topics 3 (Ch. 3, §§ Supplement; Ch. 6, §§ 39, 41)	
Nets, local finiteness, paracompactness, metrization of general manifolds.	

Homework: Homework will be assigned biweekly during the classes. Homework is important, it counts for 20% of the total credit.

Test: Midterm 30%, and Final 50%.