

Tentative Course Plan MTH 461/2, 561/2

Text: D. B. West *Introduction to Graph Theory*, 2nd Edn, Prentice-Hall, 2001.

MTH 4/561: Quizzes and HW's will be assigned in class.

Time line	Topic	Section of Text
week 1:	Graphs	1.1
week 2:	Paths, circuits, and degrees	1.2, 1.3
week 3:	Directed graphs, Trees	1.4, 2.1
week 4:	Spanning trees and optimization	2.2, 2.3
week 5:	Matchings and covers	3.1
week 6:	Applications of matchings	3.2, 3.3
week 7:	Cuts and connectedness	4.1
week 8:	k -connectedness	4.2
week 9:	Network flows	4.3
week 10:	Vertex coloring	5.1
week 11:	k -chromatic graphs	5.2

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Time line	Topic	Section of Text
week 1:	Colorings	5.3
week 2:	Embeddings of Graphs	6.1
week 3:	Planar Graphs	6.2
week 4:	Parameters of Planarity	6.3
week 5:	Line graphs	7.1
week 6:	Hamiltonian cycles	7.2
week 7:	Planarity and cycles	7.3
week 8:	Extremal problems	8.4
week 9:	Random graphs	8.5
week 10:	Eigenvalues	8.6
week 11:	Topics and Review	