

COURSE SYLLABUS

Course Number: COMP6330/6336

Course Title: NETWORK OPTIMIZATION AND ALGORITHMS

Credit Hours: 3

Prerequisites: COMP 3240 or ELEC3800

Corequisite: none

I. Course Content/Objectives:

1. Objectives: At the conclusion of this course the student will have an understanding of the mathematical structures and algorithms essential to analysis and optimization of computer and communication networks.

2. Tentative Schedule and Outline of Course Content.

Foundations, 3 classes
Disjoint Sets, 2 classes
Heaps, 3 classes
Search Trees, 3 classes
Linking and Cutting Trees, 3 classes
Minimum Spanning Trees, 3 classes
Shortest Path algorithms, 3 classes
Network Flows, 5 classes
Matching, 4 classes
NP-completeness, 4 classes
Optimization overview, 1 class
Optimal algorithms, 3 classes
Heuristic algorithms, 6 classes
Tests: 2 classes

3. Textbook or assigned readings

Data Structures and Network Algorithms, Robert Tarjan, Society for Industrial and Applied Mathematics Press, 1983.

II. Grading and Evaluation Procedures:

Test 1	25%
Test 2	25%
Homework	25%
Final exam	25%

Grading scale:

90-100	A
80-89	B
70-79	C
60-69	D
59 and lower	F

III. Statement related to policies on unannounced quizzes and class attendance and participation.

There will be no unannounced quizzes and attendance will not affect the grade.

Accommodation Statement: Students who need special accommodations should make an appointment to discuss the Accommodation Memo during my office hours as soon as possible. If scheduled office hours conflict with classes, please arrange an alternate appointment time. If you do not have an Accommodation Memo, but need special accommodations, contact the Program for Students with Disabilities in 1244 Haley Center (844-2096 V/TTY).

Justification for Graduate Credit: This course builds on required skills developed in advanced undergraduate courses, either discrete mathematics (COMP3240) or probability theory (ELEC3800).

11/6/01