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


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