Syllabus

Purpose and content of the course: The purpose of the course is to make students familiar with fundamental methods in the design and analysis of telecommunication networks. The main emphasis is on the methodology that remains valid on the long term and does not depend strongly on frequently changing applications.

Outline of topics to be addressed: introduction to the network planning problem; mathematical programming for planning; network algorithms for planning; elements of network reliability; optimization for network design; network data analysis; selected topics form link level and network level traffic modeling and analysis for traffic engineering.

Your Instructor

Name: Andras Farago
Title: Professor
Department: Computer Science
Office: ECS 4.204
Phone: 972-883-6885
E-Mail: farago@utdallas.edu
Mail Station: EC31
WWW: Homepage

Textbook

T. G. Robertazzi, "Planning Telecommunication Networks", IEEE Press, 1999.

Note: The printed textbook and the on-line material are to be used **together.**

Lecture Notes

Most of the material is in postscript (.ps) files. By clicking on a link you can download the corresponding file. They can be viewed by any standard postscript viewer program, such as Ghostview. It is recommended that you configure your browser such that it uses the postscript viewer as a plug-in for .ps files, then the files are automatically opened upon download and the material in the files can be directly viewed or printed.

Need Ghostview? Download it Here

Note: A ps file can also be directly printed, without viewing it in Ghostview, but this works **only** with ps enabled printers (otherwise only unreadable code would come from the printer).

Prerequisites

As this is a graduate course in Computer Science, it is therefore assumed that the students have been already exposed to the fundamentals of calculus, probability, discrete mathematics, and networks during their undergraduate studies.

Grades

Each submitted item (3 assignments, project, exam) will be graded on a scale of 0%...100%. (Information on each of these items will be posted later).

A final score will be computed as follows:

F=(A+P+E+R)/4

where

- A = average score of assignments
- P = score of project
- E = score of exam
- R = class rank (expressed in percentage). Note: the class rank is computed from the ordering of the A+P+E values in the class.

  Then the grade will be computed from the value of the final score F as follows:

  - **A:** 85...100%
  - **B:** 75...84%
  - **C:** 65...74%
  - **F:** 0...64%

University Policy on Scholastic Dishonesty

Students who engage in scholastic dishonesty are subject to serious academic penalties, including the possibility of failure in the course and dismissal from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts."
Regents' Rules and Regulations, Part One, Chapter VI, Section 3,
Subsection 3.2, Subdivision 3.22.