TCN-6215 Advanced Network Algorithms

Catalog Description
This course will cover algorithms that are used in network research and implementation.
(3 credits)

Prerequisites
SCIS Graduate Standing

Type
Elective for MSTN

Course Objectives
Students will study advanced network algorithms to solve research problems or implementation challenges. Students will learn to design efficient and practical algorithms for specific problems in wired and wireless networks.

Topics
Graph Theory
Computational Geometry
Maximum Flow
Combinatorial Optimization
NP Completeness
Queuing Theory
Fair Queuing Algorithms
Switch Scheduling Algorithms

Textbook
Thomas Cormen, Charles Leiserson, Ronald Rivest, and Clifford Stein, Introduction to Algorithms (3rd Edition), MIT Press, 2009.

Steve Skiena, The Algorithm Design Manual (2nd Edition), Springer, 2010.

Last Update
Deng Pan 8/30/2012