TCN-6260 Internetworking

Catalog Description
The course will discuss advanced topics, current trends and control of internetworking. An analytical and descriptive approach will be used to cover the subject of internetworking. (3 credits)

Prerequisites
SCIS Graduate Standing

Type
Elective for MSTN

Course Objectives
This course provides an in-depth understanding of the internetworking techniques of the current Internet. Students will study various routing and switching algorithms and protocols, including intra-/inter-AS routing, router/switch architecture, switch scheduling, and traffic engineering. Students will also learn hands-on operation with typical routers/switches.

Topics
Introduction
Routing Algorithms
Network Flow Optimization
Routing Protocols
IP Address Lookup
Packet Classification
Switch Architecture
Packet Queuing and Scheduling
Traffic Conditioning

Textbook
Deepankar Medhi and Karthikeyan Ramasamy, Network Routing: Algorithms, Protocols, and Architectures, Morgan Kaufmann, 2007.

H. Jonathan Chao and Bin Liu, High Performance Switches and Routers, Wiley-IEEE Press, 2007.

Last Update
Deng Pan 8/31/2012