

TCOM 690
Enterprise Network Architecture
George Mason University
Spring 2012

Class Meeting Time and Location:

Wednesday 7:20 – 10:00 P.M.

Location: ENGR 1203

Instructor: Graham Sheppard

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Phone: 571-246-7426

Office Hours: By appointment

Class Description:

This course will cover various advanced technologies used in ensuring quality for critical business applications and cost-effective solutions for providing both secure and non-secure communication across a public infrastructure. Topics to be covered in this class include an extensiveness introduction to Quality of Service and IPsec VPNs.

Course Prerequisites:

TCOM 501, TCOM 502, and TCOM 529/590 are highly recommended to be successful in this class.

Course Text:

None Required

Cisco QOS Exam Certification Guide

IPsec VPN Design

Course Grading:

Midterm 35%

Research Paper 15%

Labs 15%

Final Exam 35%

Midterm and Final are based on lectures and class discussions.

Research Paper Topic/Requirements:

Write a 3-5 page research paper of the one of the following topics:

- Performance Routing (PfR)
- MPLS Traffic Engineering
- Public-Key Cryptography
- Remote Access VPNs

Labs:

Location: GMU Telecom Lab

Students must be present to receive credit for labs

Course Schedule:

The schedule below is tentative.

Lesson #	Date	Topics	Chapters
1	25-Jan	Introduction and QoS Overview	1,2
2	1-Feb	Classification and Marking	4,5
3	8-Feb	Traffic Policing/Shaping and Congestion Management	6,7
4	15-Feb	Lab1 or Research Paper	
5	22-Feb	Lab1 or Research Paper	
6	29-Feb	Link Efficiency and PFR	8
7	7-Mar	Midterm	
8	14-Mar	Spring Break - No Class	
9	21-Mar	IPSec and Site-to-Site IPSec VPN	1,2,3
10	28-Mar	Lab 2 (In ENGR 1203)	
11	4-Apr	Fault-Tolerant IPSec VPNs and Easy VPN	5,6
12	11-Apr	Lab 3 (In ENGR 1203)	
13	18-Apr	DMVPN and Remote Access VPNs	7
14	25-Apr	Lab 4 (In ENGR 1203)	
15	2-May	Final and Research Paper Due	
16	9-May	Final	

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