

TCOM 617
Enterprise Network Architecture
George Mason University
Fall 2022

Class Meeting Time and Location:

Thursday 7:20 – 10:00 P.M.

Location: Remote Black Board

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 extensive introduction to Quality of Service, PfR, IPSec VPNs and DCI.

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 30%

Final Exam 35%

Midterm and Final are based on lectures and class discussions

Research Paper Topic/Requirements:

Write a 5-7 page research paper of the one of the following topics:

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

Course Schedule:

The schedule below is tentative.

Chapters are from the books listed above.

Lesson #	Date	Topics	Chapters
1	25-Aug	Introduction and QoS Overview	1,2
2	1-Sep	Classification and Marking	
3	8-Sep	Traffic Policing/Shaping and Congestion Management	4,5
4	15-Sep	Link Efficiency and PfR	6,7
5	22-Sep	No Class Research Paper	8
6	29-Sep	PfR Continued	
7	6-Oct	Midterm	
8	13-Oct	IPSec and Site-to-Site IPSec VPN	1,2,3
9	20-Oct	No Class Research Paper	
10	27-Oct	Fault-Tolerant IPSec VPNs and Easy VPN	5,6
11	3-Nov	DMVPN and Remote Access VPNs	
12	10-Nov	GET VPN and PKI	
13	17-Nov	DCI	7
14	24-Nov	No Class – Thanksgiving Break	
15	1-Dec	SDN and Review	
16	8-Dec	Final and Research Paper	

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