

TCOM 617 DL1
Enterprise Network Architecture
George Mason University
Fall 2021

Class Meeting Time and Location:

Thursday 7:20 – 10:00 P.M.

Location: Remote Black Board

Instructor: Graham Sheppard

Email: gsheppar@gmu.edu

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, 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	26-Aug	Introduction and QoS Overview	1,2
2	2-Sep	Classification and Marking	
3	9-Sep	Traffic Policing/Shaping and Congestion Management	4,5
4	16-Sep	Link Efficiency and PfR	6,7
5	23-Sep	No Class Research Paper	8
6	30-Sep	PfR Continued	
7	7-Oct	Midterm	
8	14-Oct	IPSec and Site-to-Site IPSec VPN	1,2,3
9	21-Oct	No Class Research Paper	
10	28-Oct	Fault-Tolerant IPSec VPNs and Easy VPN	5,6
11	4-Nov	DMVPN and Remote Access VPNs	
12	11-Nov	GET VPN and PKI	
13	18-Nov	DCI	7
14	25-Nov	No Class – Thanksgiving Break	
15	2-Dec	SDN and Review	
16	9-Dec	Final and Research Paper	

GMU Links:

catalog.gmu.edu

<http://universitypolicy.gmu.edu/>

The material provided in the course is proprietary. Uploading this material anywhere without the express permission of the instructor is strictly prohibited and a violation of the Mason Honor Code. <https://oai.gmu.edu/>