TCOM 501: Data Communications and Local Area Networks
TCOM 502: Wide Area Networks and Internet
Sections 001 and DL. Spring 2011.

Instructor: Dr. Shyam Pandula
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Teaching Assistant: TBA.

Time and Place Monday 7:20 – 10:00 pm. Innovation Hall, Room 215G.

Office Hours: Monday/Wednesday/Thursday 1:30-2:30 pm. The Nguyen (Engineering) Building, Room 3253.

Course Objective: The objective of this course is to provide an in-depth introduction to the concepts of computer network technology and the principles that make it work.

Distance learning section is offered via the web synchronously using Blackboard and Elluminate Live sessions. Distance learning courses are subject to the same policies as stated in the University catalog for campus-based courses. Please refer to following documents posted on the Blackboard: (a) Elluminate student instructions and (b) Test proctoring and guidelines for distance education.

Textbook

Course Material
Course slides and homework assignments will be distributed via the Blackboard course management system { http://courses.gmu.edu }. Login using your GMU email ID and password.

Homework will be assigned weekly and is due the following week. Late homework assignments will be penalized by 20%.

Grading
Homework: 20%; Midterm Exam: 35%; Final Exam: 45%.
Tentative Course Schedule

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- Week 1: Jan 24; Chapters 1 & 2. Introduction & Network Models: Data communications, layers in the OSI model, TCP/IP protocol suite.
- Week 2: Jan 31; Chapter 8. Switching Techniques: Circuit switching, datagram networks, virtual circuit switching.
- Week 3: Feb 7; Chapter 11. Data Link Control: Stop-and-wait ARQ, Go-back-N ARQ, Selective Repeat ARQ.
- Week 4: Feb 14; **TCOM 501 Midterm Exam.**
- Week 5: Feb 21; Chapter 12. Multiple Access: Random access - ALOHA, CSMA/CD, CSMA/CA; controlled access; channelization.
- Week 7: Mar 7; **TCOM 501 Final Exam.**
- Week 8: Mar 14; **No Class. Spring Break.**

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- Week 9: Mar 21; Chapter 15. Connecting Devices and Virtual LANs.
- Week 10: Mar 28; Chapters 19 & 20. Networks Layer: Logical addressing, Internet protocol.
- Week 11: Apr 4; Chapters 21 & 22. Networks Layer: Address mapping, error reporting, forwarding.
- Week 12: Apr 11; **TCOM 502 Midterm Exam.**
- Week 13: Apr 18; Chapter 22. Networks Layer: Routing protocols.
- Week 15: May 2; Chapter 24. Quality of Service.
- Week 16: May 9; **No Class. Reading day.**
- Week 17: May 16; **TCOM 502 Final Exam.**