

IT 341 – Data Communications and Networking Principles
Syllabus
Summer C02 2008

Instructor: ***Khondkar R. Islam***
Office: Room 101, Bull Run Hall (PW campus); Room 17, ST II (Fairfax campus)
Office Hours: Monday (5:30pm-6:55pm) in Fairfax campus;
Thursday (5:45pm-6:55pm) in PW campus or by appointment
Phone: 703-993-8557
Email: kislam2@gmu.edu

GTA: ***Awais A. Sheikh***
Office in Lab: Room 260, Bull Run Hall (PW campus)
Office Hours: Tuesday 5pm-7pm in Room 260, Bull Run Hall (PW campus)
Email: ashaiikh2@gmu.edu

Prerequisite:

IT101, IT108, IT212, Math108 or permission of the instructor

Lecture Textbooks:

Odom, W. & Knott, T.; Networking Basics, CCNA 1 Companion Guide, Cisco Press,
ISBN 1-58713-164-1
Odom, W. & McDonald, R.; Routers & Routing Basics, CCNA 2 Companion Guide, Cisco Press,
ISBN 1-58713-166-8

Lab Textbooks:

McReynolds, S; Networking Basics, CCNA 1 Labs and Study Guide, Cisco Press,
ISBN 1-58713-165-X
Johnson, A; Routers & Routing Basics, CCNA 2 Labs and Study Guide, Cisco Press, ISBN 1-
58713-167-6

Instruction for Purchasing at a Discount Rate:

Can be obtained from www.ciscopress.com

Here are the instructions: Follow these 4 steps once then after that just login to ciscopress.com to get this discount from now onward.

To take advantage of the special offer, simply apply your school's Sales Rep membership code and follow the steps below:

The membership code for the AIT dept at GMU is: **EDU-1CB**

Go to www.ciscopress.com/ph (registration required via this unique URL)

1. Click Register or Log In
2. Enter your e-mail address on the Login or Become a Member page

3. Choose "Apply Membership Code" on the My Account page and enter your code (again that is **EDU-1CB** for this dept at GMU)

Then just log in as a Member each time you visit ciscopress.com to automatically receive your special pricing and save on every purchase.

Slides:

Class and lab lectures

Course Materials at:

<http://gmu.blackboard.com>

Description:

This course focuses on the primary aspects of data communications networking, including a study of the Open Systems Interconnection (OSI) and Internet models. Students will start at Layer 1 with the study of various Layer 1 interface and cabling configurations. They will construct and test various cables with connectors. Moving up the OSI layers, students will focus on IP network addressing, network design, and enhanced hands-on router and port configurations. They will also learn security protocols and do static routing, EIGRP, RIPv2, and OSPF configurations. Students will also develop Access Control Lists (ACLs) used in modern day networks as a prime method of controlling network security and implement the ACLs on laboratory networks. Concentration on layers 4 through 7 include studying TCP, UDP, data reliability, and error correction methods, on the ladder to the FTP, HTTP, SMTP, DNS, and TFTP protocols of Layer 7. This course is 50 percent lab work of configuration of routers and network design, implementation, and testing.

Grading:

Homework -	20%
Lab Work -	50%
Midterm Exam -	15%
Final Exam -	15%

Grades will be awarded in accordance with the GMU Grading System for undergraduate students. For details, refer to <http://www.gmu.edu/catalog/apolicies/>

Gading Scale:

97 – 100%	→ A+
93 – 96%	→ A
90 – 92%	→ A-
87 – 89%	→ B+
83 – 86%	→ B
80 – 82%	→ B-
76 – 79%	→ C+
70 – 75%	→ C
60 – 69%	→ D
0 – 59%	→ F

Raw scores may be adjusted by the Instructor to calculate final grades.

Honor Code:

You may ask other students for help during lab (in fact, you are encouraged to do so), but each student is expected to do his/her own work. Lab exams are to be done without assistance. Anyone caught cheating on exams or copying assignments will be turned in to the Honor Committee. See your instructor or TA if you have any problems or concerns.

Following links contain useful information on GMU's Honor Code and Responsible Use of Computing Policy:

<http://www.gmu.edu/catalog/apolicies/honor.html>

and

<http://www.gmu.edu/facstaff/policy/administrative/60.html>

Homework:

Homework assignments are in Blackboard. Each assignment will be released for viewing one week prior to the due date. Late homework may not be accepted – if accepted, a penalty may be applied. Acceptance of late homework will be at the sole discretion of the Instructor.

Lab Make-ups:

If you miss a lab session and wish to make-up during the lab make-up sessions at the end of the term, you will not receive full credit for the missed labs. Exceptions would be made to those with supporting documentation for extenuating circumstances.

Midterm exam:

The midterm exam will be conducted during class time on July 19th and will cover material discussed in 1 thru 6 class sessions. The midterm exam will be “closed book”– no reference materials will be permitted.

Final exam:

The final exam will be held on August 2nd after the final class in the classroom and will cover material discussed primarily in 7 thru 11 class sessions. The final exam will be “closed book”– no reference materials will be permitted. Final exams are retained by the AIT Department and are not returned to students.

Schedule on next page

Schedule (Subject to Change):

Class	Content	Reading, Assignments & Labs
1 July 01	Chapter 1 (CCNA 1) <ul style="list-style-type: none"> • Introduction to Networking Chapter 1 (CCNA 2) <ul style="list-style-type: none"> • WANs & Routers 	<ul style="list-style-type: none"> • Home Assignment 1 (Refer to Assignments Folder in gmu.blackboard.com)
July 03	<i>No Class- Holiday</i>	
2 July 08	Chapter 2 (CCNA 1) <ul style="list-style-type: none"> • Networking Fundamentals Chapter 2 (CCNA 2) <ul style="list-style-type: none"> • Introductions to Routers 	<ul style="list-style-type: none"> • Lab Session (Refer to Lab Folder in gmu.blackboard.com)
3 July 10	Chapter 3 (CCNA 1) <ul style="list-style-type: none"> • Networking Media Chapter 3 (CCNA 2) <ul style="list-style-type: none"> • Configuring a Router 	<ul style="list-style-type: none"> • Home Assignment 1 Due • Home Assignment 2 (Refer to Assignments Folder in gmu.blackboard.com) • Lab Session (Refer to Lab Folder in gmu.blackboard.com)
4 July 12	Chapter 10 (CCNA 1) <ul style="list-style-type: none"> • Routing Fundamentals & Subnets Chapter 4 (CCNA 2) <ul style="list-style-type: none"> • Learning About other Devices 	<ul style="list-style-type: none"> • Lab Session (Refer to Lab Folder in gmu.blackboard.com)
5 July 15	Chapter 10 (CCNA 1) - continued <ul style="list-style-type: none"> • Routing Fundamentals & Subnets Chapter 5 (CCNA 1) <ul style="list-style-type: none"> • Cabling LANs & WANs 	<ul style="list-style-type: none"> • Home Assignment 2 Due • Home Assignment 3 (Refer to Assignments Folder in gmu.blackboard.com) • Lab Session (Refer to Lab Folder in gmu.blackboard.com)
6 July 17	Chapter 5 (CCNA 2) <ul style="list-style-type: none"> • Managing Cisco IOS Software Chapter 6 (CCNA 1) <ul style="list-style-type: none"> • Ethernet Fundamentals Review for Midterm Exam	<ul style="list-style-type: none"> • Lab Session (Refer to Lab Folder in gmu.blackboard.com)
7 July 19	Midterm Exam Chapter 7 (CCNA 1) <ul style="list-style-type: none"> • Ethernet Technologies Chapter 6 (CCNA 2) <ul style="list-style-type: none"> • Routing & Routing Protocols 	<ul style="list-style-type: none"> • Home Assignment 3 Due • Home Assignment 4 (Refer to Assignments Folder in gmu.blackboard.com)
8 July 22	Chapter 7 (CCNA 2) <ul style="list-style-type: none"> • Distance Vector Routing Protocols 	<ul style="list-style-type: none"> • Home Assignment 4 Due • Home Assignment 5 (Refer to Assignments Folder in gmu.blackboard.com) • Lab Session (Refer to Lab Folder in gmu.blackboard.com)
9 July 24	Chapter 8 (CCNA 1) <ul style="list-style-type: none"> • Ethernet Switching Chapter 8 (CCNA 2) <ul style="list-style-type: none"> • TCP/IP Suite Error & Control Messages 	<ul style="list-style-type: none"> • Lab Session (Refer to Lab Folder in gmu.blackboard.com)

10 July 26	Chapter 9 (CCNA 1) <ul style="list-style-type: none"> TCP/IP Protocol Suite & IP Addressing Chapter 9 (CCNA 2) <ul style="list-style-type: none"> Basic Router Troubleshooting Chapter 10 (CCNA 2) <ul style="list-style-type: none"> Intermediate TCP/IP 	<ul style="list-style-type: none"> Home Assignment 5 Due Home Assignment 6 (Refer to Assignments Folder in gmu.blackboard.com) Lab Session (Refer to Lab Folder in gmu.blackboard.com)
10 July 29	Chapter 11 (CCNA 1) <ul style="list-style-type: none"> TCP Transport and Application Layers Chapter 11 (CCNA 2) <ul style="list-style-type: none"> Access Control Lists 	<ul style="list-style-type: none"> Home Assignment 6 Due Home Assignment 7 (Refer to Assignments Folder in gmu.blackboard.com) Lab Session (Refer to Lab Folder in gmu.blackboard.com)
11 July 31	Chapter 11 (CCNA 2) - continued <ul style="list-style-type: none"> Access Control Lists Review for Final Exam	<ul style="list-style-type: none"> Home Assignment 7 Due Lab Session (Refer to Lab Folder in gmu.blackboard.com)
12 August 02	Final Exam	

Dates to Remember:

Last day to drop with no tuition liability	July 8
Last day to add classes	July 8
Last day to drop	July 11

Note:

- No make-ups for missed quiz and/or exam unless due to extreme circumstances
- We would like this course to be interactive and motivating, so class participation is encouraged
- Recommend review of lecture slides as they focus on the textbook for detail reading