

**CRN 31166 CST K176 T1**  
**Course Syllabus Fall 2011(Tuesdays)**

**GENERAL COURSE INFORMATION**

**Course:** CRN 31166 CST K176 T1 INTERNET TECHNOLOGIES, Room B227

**Hours:** 1720 - 0950

**Instructor:** Ronald Leask

**Office:** Three Rivers Community College Room C170 (Next to Cyber Café)

**Office Hours:** M, R 0900 1200

**Office Phone:** 885-2391

**E-mail:** [rleask@trcc.commnet.edu](mailto:rleask@trcc.commnet.edu); Send me an e-mail if cannot attend class

**Textbook:** Computer Networks and Internets, 5/e, 2009, Douglas E. Comer,  
Pearson/Prentice Hall, ISBN 10: 0-13-606698-4

**COURSE OBJECTIVES:** This course surveys the various technologies that form and make the Internet work. It will prepare students to understand current Internet technologies and make intelligent business decisions concerning the Internet. The student will acquire detailed knowledge of a wide range of internet basics, the knowledge and skills required to use and update client software, and to assist in the administration of internet/intranet sites. Additionally, the student will acquire some knowledge of programming related terms and the differences between popular client and server programming language.

**Students will learn:**

- How an IP router use a table to forward IP datagrams

- To describe how a datagram crosses the Internet

- Describe how the Transmission Control Protocol (TCP) identifies a connection.

- Why a concurrent Web server can handle multiple connections to port 80

- Computer the length of a single bit as it travels across the Internet

- Why TCP is classified as an end-to-end

Overheads will be put on mycommnet.com or distributed in class.

**Required:** Flash drive ~ 2-4 Gbytes, Cost ~ \$17.00, to hold all work.

**GRADING AND EVALUATION CRITERIA:**

**60%** of grade is based on class exams of major sections

**30%** of grade is based on end of chapter quizzes and/or research on assigned topics

**10%** for class participation and attendance

Students should keep a course notebook of homework and notes

**Syllabus is subject to change to correct errors and when new information becomes available.**

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<i>Week</i>	<i>Date</i>	<i>Chapter/Topic</i>	<i>Quizzes or Exams</i>	<i>Assignments /Labs</i>
		<b>Part I Introduction and Internet Applications</b>		
<b>1</b>	<b>8/30/11</b>	1 Introduction And Overview, 2 Internet Trends		
<b>2</b>	<b>9/6/11</b>	3 Internet Applications And Network Programming,		
<b>3</b>	<b>9/13/11</b>	4 Traditional Internet Applications		
		<b>Part II Data Communication Basics</b>	<b>Exam/Quiz</b>	
<b>4</b>	<b>9/20/11</b>	5 Overview Of Data Communications, 6 Information Sources and Signals		
<b>5</b>	<b>9/27/11</b>	7 Transmission Media, 8 Reliability And Channel Coding		
<b>6</b>	<b>10/4/11</b>	9 Transmission Modes, 10 Modulation and Modems		
<b>7</b>	<b>10/11/11</b>	11 Multiplexing And Demultiplexing (Channelization), 12 Access And Interconnection Technologies		
		<b>Part III Packet Switching and Network Technologies</b>	<b>Exam</b>	
<b>8</b>	<b>10/18/11</b>	13 Local Area Networks: Packets, Frames, And Topologies, 14 The IEEE MAC Sub-Layer		
<b>9</b>	<b>10/25/11</b>	15 Wired LAN Technologies (Ethernet And 802.3), 16 Wireless Networking Technologies		
<b>10</b>	<b>11/1/11</b>	17 LAN Extensions: Fiber Modems, Repeaters, Bridges, and Switches, 18 WAN Technologies And Dynamic Routing, 19 Networking Technologies Past And Present		
		<b>Part IV Internetworking</b>	<b>Exam/Quiz</b>	
<b>11</b>	<b>11/8/11</b>	21 Internetworking: Concepts, Architecture, and Protocols, 22 IP: Internet Addressing		
<b>12</b>	<b>11/15/11</b>	23 Datagram Forwarding, 24 The Future IP (IPv6)		
<b>13</b>	<b>11/22/11</b>	<b>No Class -Possible Make Up</b>		
	<b>11/29/11</b>	<b>25 UDP: Datagram Transport Service, 26 TCP: Reliable Transport</b>		
<b>14</b>	<b>12/6/22</b>	27 Internet and Routing Protocols		

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		<b>Part V Other Networking Concepts &amp; Technologies</b>	<b>Exam/Quiz</b>	
<b>15</b>	<b>12/13/11</b>	28 Network Performance (QoS and DiffServ), 29, Multimedia And IP Telephony (VoIP), 32 Trends In Networking Technologies And Uses		