

King Fahd University of Petroleum and Minerals  
Electrical Engineering Department

EE 400: Telecommunication Networks (091),  
Section 1: (UT 10:00-11:15), Room: 59-2013  
Section 2: (UT 8:30-9:45), Room: 59-1010  
Course Pre-requisites: EE 315 & EE 370

**Instructor:** Dr. Wajih Abu-Al-Saud

**Office:** 59 – 1067.

**Office Tel.** 1824

**Email :** wajih@kfupm.edu.sa

**Office Hour:** (SM @ 9:00 - 11:00 AM) & (UT @ 2:00 - 3:30 PM) or (by appointment)

**Course Textbook:** Albert Leon-Garcia and Indra Widjaja, *Communication Networks: Fundamental Concepts and Key Architectures*, 2<sup>nd</sup> ed., McGraw-Hill, 2006.

<b>Grade Distribution:</b>	Exam 1 & Exam 2	30%	(15% each)
	Class Work	10%	(at least 4 quizzes)
	Course Project	10%	
	Laboratory	20%	
	<u>Final Exam</u>	<u>30%</u>	
	Total	100%	

Wk	DATE	TOPICS	Text Sections	Laboratory Experiment
1	October 4 October 6	Intro. to Communication Networks and Services Important Networking Terminology	1.1, 1.2	<b>No Lab</b>
2	October 11 October 13	Applications and Layered Network Architectures	2.1, 2.2, 2.3	<b>Exp 1: Internetworking Basics. Devices and Models, Configuration of TCP/IP</b>
3	October 18 October 20	TCP/IP Protocols	8.1, 8.2, 8.3	<b>Exp 2: IP Addressing and Sub-netting</b>
4	October 25 October 27	TCP/IP Protocols (Cont.)	8.4, 8.5	<b>Exp 3: Data Traffic Capture and Protocol Analysis</b>
5	November 1 November 3	Physical Layer	3.1, 3.2, 3.3, 3.4, 3.5, 3.6	<b>No Lab</b>
<b>↓↓ Exam 1: Monday, November 2 @ 7:30pm – 9:30pm ↓↓</b>				
6	November 8 November 10	Physical Layer (Cont.)	3.7, 3.8, 3.9	<b>Exp 4: Design of Simple and Complex Networks</b>
7	November 15 November 17	Data Link Layer	5.1, 5.2	<b>Exp 5: LAN Extension by Bridges and WAN Connectivity by Routers</b>
<b>Id Al-Adha Vacation: Thursday, 19 November – Saturday, 4 December</b>				
8	December 6 December 8	Data Link Layer (Cont.)	5.3, 5.4, 5.5	<b>No Lab</b>
9	December 13 December 15	Medium Access Control & Local Area Networks	6.1, 6.2	<b>Exp 6: Access Method, Configuration and Monitoring of Layer-2 Switches</b>
10	December 20 December 22	Medium Access Control & Local Area Networks (Cont.)	6.3, 6.4	<b>Exp 7: Configuration of Routers and Establishing Routed Networks</b>
<b>↓↓ Exam 2: Monday, December 28 @ 7:30pm – 9:30pm ↓↓</b>				
11	December 27 December 29	Medium Access Control & Local Area Networks (Cont.)	6.5, 6.6	<b>Exp 8: Understanding Dynamic Routing Protocol, RIP</b>
12	January 3 January 5	Routing in Packet Switching Networks	7.1, 7.2, 7.3	<b>Exp 9: KFUPM Data Network (in Building 14)</b>
13	January 10 January 12	Routing in Packet Switching Networks (Cont.)	7.4, 7.5, 7.6	<b>Exp 10: KFUPM Voice Network (in Building 34: Tel. Exchange)</b>
14	January 17 January 19	Security Protocols	11.1, 11.2, 11.3	<b>No Lab</b>
15	January 24 January 26	Circuit Switching Networks	4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.8	<b>Lab Final Exam</b>