

**King Fahd University of Petroleum and Minerals**  
**College of Computer Sciences and Engineering**  
 Department of Computer Engineering

COE 342 Data and Computer Communications (3-0-3)

**Instructor:** Dr. Marwan Abu-Amara  
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**Term:** 041 (1<sup>st</sup> term 2004–2005)  
**Day & Time:** SMW 11:00 AM – 11:50 AM  
**Location:** 24-108  
**Corequisite:** STAT 319 (Probability and Statistics for Engineers and Scientists)  
**Textbook:** *Data and Computer Communication*, William Stalling, Prentice Hall International, 7<sup>th</sup> Edition, 2004.  
**Office Hours:** UT 10:00 AM – 11:30 AM (or by appointment)  
**Web Site:** <http://www.ccse.kfupm.edu.sa/~marwan>

**Tentative Grading Policy:**

- Quizzes & Homeworks **20%**
- Major Exam I **25%** (Tuesday October 12, 2004 from 06:00 PM to 08:00 PM)
- Major Exam II **25%** (Tuesday December 07, 2004 from 06:00 PM to 08:00 PM)
- Final Exam **30%** (*Comprehensive*)

**Tentative schedule:**

Week*	Topic	Textbook Section
1	Communication Model - Data Communications Networking	1.1, 1.2, & 1.3
2	Protocols (characteristics and functions) and Protocol Architecture (OSI and TCP/IP models)	2.1, 2.2, 2.3 & 2.4
3	Data Transmission (concepts and terminology), Analog and Digital Data Transmission	3.1, 3.2
4	Analog and Digital Data Transmission (continued) – Fourier Series Analysis and Fourier Transform Representation	Fourier Transform
5	Transmission Impairments – Nyquist formula and Shannon’s Capacity	3.3 & 3.4
<i>Major Exam I</i>		
6	Transmission Media: Guided & Wireless	4.1 & 4.2
7	Data Encoding: Digital Data – Digital Signals	5.1
8	Data Encoding: Digital Data – Analog Signals	5.2
9 & 10	<i>Eid al-Fitr Holiday</i>	
11	Data Encoding: Analog Data - Digital Signals, Analog Data – Analog Signal	5.3 & 5.4
12	Data Encoding: Analog Data – Analog Signal (continued)	5.4 & 5.5
<i>Major Exam II</i>		
13	Asynchronous and synchronous data interface, Error Detection	6.1, 6.2, & 6.3
14	Flow Control (stop-and-wait and sliding window flow) and Error Control	7.1 & 7.2
15	Error Control (continued), HDLC	7.2 & 7.3
16	FDM and Synchronous TDM	8.1 & 8.2
17	Synchronous TDM, ADSL, and Statistical TDM	8.2 & 8.3
<i>Final Exam (Comprehensive)</i>		

\* Week 1 begins on *September 11, 2004*

**IMPORTANT NOTES:**

- All KFUPM regulations and standards will be enforced. Attendance will be checked each class. The KFUPM rule pertaining to a DN grade will be strictly enforced as stated earlier.
- Homeworks are to be submitted **in class** on the due date during the class period. **NO late homework** will be accepted.
- You have 48 hours to object to the grade of a homework, a quiz, or a major exam from the end of the class time in which the graded papers have been distributed back. If for some reason you cannot contact me within this period, send me an email requesting an appointment. The email should be sent within the 48-hour time period.
- **NO make up exams.** ALL quizzes & homeworks will be counted towards your grade.
- Final exam is **comprehensive**.
- General guidelines for grades:

Range	³ 90 and £ 100	³ 80 and < 90	³ 70 and < 80	³ 60 and < 70
Minimum Grade	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>