

**King Fahd University of Petroleum and Minerals**  
**College of Computer Sciences and Engineering**  
**Department of Computer Engineering**  
**COE 540: Computer Networks (3-0-3)**

**Textbook:**

1. Andrew S. Tanenbaum and David J. Wetherall , *Computer Networks*, 5<sup>th</sup> Edition., Pearson, 2011
2. Dimitri Bertsekas and Robert Gallager, *Data Networks*, second edition, 1992, Prentice Hall, Inc., and
3. J. F. Kurose and K. W. Ross *Computer Networking: A Top-Down Approach featuring the Internet* , 5<sup>th</sup> Edition, 2008, Prentice Hall Publishing Company.

**References:**

1. Garcia, L., and Widjajm I., *Communication Networks*, 2<sup>nd</sup> Edition, 2006.

**Instructor:** Dr. Ashraf S. Mahmoud, Room 22-420, Ext 1724, email: [ashraf@kfupm.edu.sa](mailto:ashraf@kfupm.edu.sa)

**Class Time/Place:** MW 18:30-19:45 pm – Building 24, Room 114.

**Office Hours:** MW 11:00-13:00, or by appointment.

**Catalog Description:**

Review of Computer networks layering concepts and quality of service requirements. Physical Layer, Data Link Layer; ARQ Strategies; Analysis of ARQ Strategies. Multi-access communication. Network Layer. Routing in Data Networks. Flow and Congestion Control. Transport Layer. Application Layer: peer-to-peer networking, Content Distribution networks. Studying a number of classic and current papers on these subjects.

**Tentative Grading Policy:**

		<i><b>Tentative Date</b></i>
• Quizzes/Homework:	<b>25%</b>	
• Major Exam:	<b>20%</b>	To be determined
• Final Exam:	<b>30%</b>	To be determined
• Project*	<b>25%</b>	
<b>Total</b>	<b>100%</b>	

\* A separate handout will be distributed describing the offered projects and the respective deadlines and subweights.

**Tentative Course Contents:**

1. Introduction to computer networks – Chapter 1 of Tanenbaum's textbook
2. Physical layer – Chapter 2 of Tanenbaum's textbook
3. Data link layer – Chapter 3 of Tanenbaum's textbook
4. Medium access protocol – Chapter 4 of Tanenbaum's textbook, plus notes
5. Network layer - Chapter 5 of Tanenbaum's textbook
6. Transport layer - Chapter 6 of Tanenbaum's textbook
7. Application layer - Chapter 7 of Tanenbaum's textbook