Al-Al Bayt University
Prince Hussein bin Abdullah Faculty of Information Technology
Computer Science

Course Syllabus

Course Title	**Computer Networking**	**Course Code**	**901325**
Coordinator	Mohamed Almaany	**Prerequisite(s)**	901220
E-mail	malmaany@aabu.edu.jo	**Credit Hours**	3
Course Is	√ Required	☐ Elective	

Course Description:

Architecture of data communication systems, OSI reference model, physical layer, signaling and modulation, media types, Ethernet, data link layer, framing, media access, error & flow management, switching, network layer, logical addressing, data routing, transport layer role, network security, 7-layer protocols and devices, practical networking issues addressed. Laboratory component is mandatory.

Course Learning Outcomes

1- Explain the importance of communications, communication standards, open standards, and standards organizations

2- Describe and apply an understanding of the data and computer communications model

3- Evaluate network topologies and explain the advantages and disadvantages of each.

4- Demonstrate an understanding of basic transmission fundamentals and computer networking concepts

5- Exhibit an understanding of the purposes of, and differences between, different networking devices

6- Describe various contention protocols, transmission modes, multiplexing

7- Illustrate various protocol standards and encoding techniques

8- Explain the need for data security and methods to insure system integrity

Tentative Topics Covered

Week No	Topic	Chapter
1	Introduction	
2	Overview of data communications	**1**

3	Network models		**2**
4	Signals		**3**
6	Digital transmission		**4**
6	Transmission media		**7**
7	Error detection and correction		10
8	Data link control and protocols		**11**
9	Multiple access		**12**
10	Wired LANs: Ethernet		**13**
11	Connecting LANs, Backbone networks and VLANs		**15**
12+13	Logical Addressing Routing Protocols and		19
14	Internet Protocol		**20**
15	Address mapping, error reporting		**21**

Textbook(s)			
Title	**Data Communications and Networking** ISBN-10: 0073250325		
Author(s)	**Behrouz A. Forouzan**	**Publisher**	**Mc-Graw Hill**
Edition	**4th**	**Year**	2007

References	
Book Titles (Author(s), Title, Edition, Publisher, Year)	**Website URL (if available)**
James F. Kurose, Keith W. Ross, Computer Networking, 3rd edition, Addison Wesley, 2004 **Data and Computer Communication,** ISBN: 9780131392052 **W. Stallings, 8th ed.** **Prentice Hall, 2011**	

Evaluation	
Assessment Tool	**Marks**
- First Exam	**20**
- Second Exam	**20**
-**Lab**	**10**
- Final Examination	**50**