United International University

School of Business and Economics

Course Outline & Schedule

Faculty Name: Ahmed Imran Kabir	**Email: iamahmedimrankabir@gmail.com** **Website: ahmedimrankabir.weebly.com** **Semester: Summer 2019**
Course Title: Computer Networks	**Course Code : MIS 4284 Credit Hours:03**
Course Category : Major	**Program: Bachelor Of Business Administration.**
Class Duration: 1 Hour 30 Minutes **Venue: Room 0225**	**Time Slot:** **SAT & TUE- 10:05 am- 11:35 am (A)** ****Office Hours will be updated later on the website****

Course Objective: This is an introductory course in computer networks. In particular, it concentrates on the Internet technology. It first introduces the OSI and TCP/IP network architecture models. It then studies the implementation principles and design issues at each layer of these models. Lecture topics include: OSI and TCP/IP models, data transmission basics, data-link protocols, local area networks, wide-area networks, Internet structures, TCP/IP protocol suite, and application Layer protocols. Laboratory work focuses on the implementation of stop-and-wait protocol based on the BSD socket. In addition, students will gain practical experience by building and studying a physical network using network devices such as switches and routers. The following are course objectives:

* Understand the principles and concepts on computer networks.
* Understand general-purpose computer networks.
* Master the computer network applications.
* Master the knowledge on designing and building a complete system.

Course Outcome: At the end of this course, the successful student will be able to:

1. Uses the specialized core engineering knowledge in the field of computer networks to

understand and design a various types of communication links and networks. (1d)

2. Uses engineering knowledge to solve real world open-ended engineering problems (1c)

3. Uses numerical and analytical models to predict, control, and design component, system, and processes behaviors (1b)

4. Designs and develops communication software to perform given networking tasks as required by the labs and project (5c)

5. Writes and revises documents using appropriate discipline specific conventions (7a)

Teaching techniques: Discussion on the theoretical background of each topic, in- class problem solving after completion of each topic, relevant / similar problems will be assigned for self-practice.

Evaluation Policy:

Evaluation is comprised of:

Midterm Exam 25%

Final Exam 40%

Individual Assignments and /or quizzes 15% (To be announced on class)

Networking Project and Defense 15% (To be announced on class)

Attendance 5%

Required Text Book

Author	Title	Edition & Year	Publisher	ISBN
1. Tanenbaum and Wetherall	Computer Networks	5th Edition 2011	Prentice Hall	**ISBN**-13: 978-0-13-212695-3
2. James F. Kurose and Keith W. Ross	Computer Networking – A Top-Down Approach Featuring the Internet	6th Edition, 2013	Addison Wesley	**ISBN**-10: 0132856204

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	Letter Grade	Marks %	Grade Point	Letter Grade	Marks%	Grade Point
Grading Policy	A (Plain)	90-100	4.00	C+ (Plus)	70-73	2.33
	A- (Minus)	86-89	3.67	C (Plain)	66-69	2.00
	B+ (Plus)	82-85	3.33	C- (Minus)	62-65	1.67
	B (Plain)	78-81	3.00	D+ (Plus)	58-61	1.33
	B- (Minus)	74-77	2.67	D (Plain)	55-57	1.00
				F (Fail)	<55	0.00

Lecture No:	Topic/ Content	Remarks
1	**Topic 1: Orientation/ Introduction; Internet overview:** **Chapter 1 (Computer Networks and Internet)**	Orientation + Book 2
2	**Topic 2: Chapter 1: Internet Overview and Fundamental Concepts** **Chapter 1 (Computer Networks and Internet)**	Lecture (Book 2)
3	**Topic 3: Advanced Concepts** **Chapter 2 (Application Layer)**	Lecture (Book 2)
4	**Topic 4: Advanced Concepts** **Chapter 2 (Application Layer)** *** GROUP FORMATION FOR PROJECT***	Lecture + (Book 2)
5	**Topic 5: Advanced Concepts** **Chapter 3 (Transport Layer)** *** GROUP FORMATION FOR PROJECT***	Lecture+ (Book 2)
6	**Topic 6: Advanced Concepts** **Chapter 3 (Transport Layer)**	Lecture (Book 2)
7	**Topic 7: Advanced Concepts** **Chapter 4 (Medium Access Control Sublayer)** *Quiz 1: (Chapter 1, 2, 3)*	Lecture (Book 1)+ **Quiz 1**
8	**Topic 8: Advanced Concepts** **Chapter 4 (Medium Access Control Sublayer)**	Lecture (Book 1)
9	**Topic 9: Advanced Concepts** **Chapter 4 (Medium Access Control Sublayer)**	Lecture (Book 1)
10	**Topic 10: Advanced Concepts** **Chapter 5 (Network Layer)**	Lecture (Book 1)
11	**Topic 11: Advanced Concepts** **Chapter 5 (Network Layer)**	Lecture (Book 1)
12	**Review of Chapter (1-5) For Mid-term Exam** *Quiz 2: (Chapter 4,5)*	**Quiz 2** **+Review**
13	****Mid-Term Examination****	
14	**Topic 12: Network Technologies** **Chapter 6 (Wireless and Mobile Networks)**	Lecture (Book 2)
15	**Topic 13: Network Technologies** **Chapter 6 (Wireless and Mobile Networks)**	Lecture (Book 2)

16	**Topic 14: Network Technologies** **Chapter 7 (Multimedia Networking)**	Lecture (Book 2)
17	**Topic 15: Network Technologies** **Chapter 7 (Multimedia Networking)**	Lecture (Book 2)
18	**Topic 16: Securities + Quiz 3** **Chapter 8 (Securities in Computer Networks)** *Quiz 3 (Chapter 6, 7)*	Lecture (Book 2) + **Quiz 3**
19	**Topic 17: Securities** **Chapter 8 (Securities in Computer Networks)**	Lecture (Book 2)
20	**Topic 18: Securities** **Chapter 8 (Web Security)**	Lecture (Book 1)
21	**Topic 19: Network Management** **Chapter 8 (Web Security)**	Lecture (Book 1)
22	**Topic 20: Network Management + Quiz 4** **Chapter 9 (Network Management)** *Quiz 4 (Chapter 8 (Securities in Computer Networks)+ Chapter 8 (Web Securities)*	Lecture (Book 2) + **Quiz 4**
23	**Topic 21: Network Management** **Chapter 9 (Network Management)**	Lecture (Book 2)
24	**Networking Project Defense** *****Defense of your Project*****	*project* *defense*
25	*****Defense of your Project*** + Final exam review** **(Remaining)**	*project* *defense*
26	*****Final Examination*****	

Note: The instructor reserves the right to make changes to the syllabus if necessary.