

HKU BUSINESS SCHOOL
IIMT3604 Telecommunications Management
Semester 1, 2022-2023

I. Information on Instructor, Tutor, and Course

Instructor: Michael Chau, Ph.D.

Email/Skype/Facebook: mchau@business.hku.hk

URL: <http://www.business.hku.hk/~mchau/>

Consultation time: by appointment

Class hours: Thursday 1:30-4:20pm

Class venue: TT 404

Tutor: Eric Tam

Email: eriktam@hku.hk

Tutorial venue: KK 610

Course Website: Class readings, assignments and other related materials will be provided on the course site on Moodle (<http://moodle.hku.hk/>). Please visit this site frequently.

Pre-requisite: IIMT2601 Management Information Systems

Remarks: Students taking or having taken COMP3234 are not allowed to take this course.

Required Text: *Business Data Networks and Security (10/E or 11/E)*, Raymond R. Panko and Julia Panko

II. Course Description and Objectives

This course introduces telecommunications and computing networks used in the support of business activities. Topics include data, voice, image and communication technologies; networking and communication architectures; and protocols and standards.

Course objectives

1. Provide students with the opportunity to learn the basic concepts of telecommunications and network management.
2. Provide students with hands-on experience in designing business communications networks.
3. Help students understand the role of networks in various types of information systems and its importance in real world applications.
4. Raise students' awareness of the importance of network security.

III. Learning Outcomes

After taking this course, students should be able to:

1. Explain the network infrastructure and the Internet protocols.
2. Identify the key issues that need to be considered and measures that need to be adopted for providing secure communication services for businesses.
3. Decide the tradeoffs of parameters for effective design of local and wide area networks.
4. Demonstrate a solid understanding of global issues as they relate to practices in business telecommunications.
5. Explain the threats to network security and devise effective security measures.

IV. Alignment of Program and Course Outcomes

Faculty Goals	Course Learning Outcome
1. Acquisition and internalization of knowledge of the program discipline	1,2,3,4,5
2. Application and integration of knowledge	3,4,5
3. Inculcating professionalism	2,5
4. Developing global outlook	4
5. Mastering communication skills	1,2,5
6. Cultivating leadership	2,4

V. Teaching and Learning Activities

Teaching and learning activities for this course include:

1. Interactive lectures
 - Lectures: basic concepts and knowledge will be presented in-class through powerpoint slides.
 - In-class exercises: basic concepts and techniques are illustrated using examples. Students work along with the lecturer to solve the problems. These exercises help students follow the lectures closely and actively.
 - In-class discussions: sometimes discussion questions are raised by the lecturer. Students are encouraged to participate in discussions and share opinions with their peers. These discussions encourage students to think more for certain arguable topics.
 - Demonstration: live demonstrations of software and technologies will be given in class to show students how they work.
2. Tutorial and online discussions
 - Tutorial lab sessions: Students practice concepts learned in class in the computer lab and work on examples with the tutor.
 - Online discussions: students express and share their ideas and questions online. These discussions encourage students to think about the class materials after class.
3. Assignments and group activities
 - Assignments: Students accomplish tasks and solve problems using knowledge covered in class.
 - Group activities: Students form group to conduct class activities to review the concepts and knowledge covered in class in an interactive way.
4. Written examination
 - A written exam will test students' knowledge of the topics covered in class and their application of the knowledge.

Course Teaching and Learning Activities	Expected Hours	Study Load (% of study)
T&L1. Interactive lectures	36	30.0%
T&L2. Tutorials and online discussions	12	10.0%
T&L3. Assignments and group activities	36	30.0%
T&L4. Self-study and written exam	36	30.0%
Total	120	100%

VI. Assessment

Learning outcome	Teaching and learning activity	Assessment
1. Explain the network infrastructure and the Internet protocols.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exam
2. Identify the key issues that need to be considered and measures that need to be adopted for providing secure communication services for businesses.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exam
3. Decide the tradeoffs of parameters for effective design of local and wide area networks.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exam
4. Demonstrate a solid understanding of global issues as they relate to practices in business telecommunications.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exams
5. Explain the threats to network security and devise effective security measures.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exams

VII. Standards for assessment

Assignments (30%)

Two individual assignments will be given. Students will have approximately two weeks to complete each assignment. Make sure to work on the assignments individually and do not share with others. Please be prompt in submitting assignments. If a submission is late for 24 hours or less, 20% will be deducted. If a submission is late for more than 24 hours, no credit will be given.

Class Activities (20%)

Students are asked to form groups and each group will design and lead class activities on one of the course topics during the semester. The exact details of what to do for class activities will be discussed later on. (Note: this part is subject to change depending on the pandemic situation.)

Exam (40%)

There will be a written exam. Students must receive permission to take an exam at a different time at least one week prior to the scheduled date and have a documented emergency. Failure to do so will result in a zero for the exam. Other exams/projects during the same week do not constitute a valid excuse.

Class Participation (10%)

Class participation will be assessed based on both participation inside classroom (in-class discussion) and outside classroom (online discussion).

Assignments, group presentation, exam, and class participation are graded using the following criteria:

- A+, A, A- : demonstrate a clear understanding of and high ability to apply the theory, concepts and issues relating to the topic
- B+, B, B-: demonstrate a good understanding and some application of the theory, concepts and issues relating to the topic
- C+, C, C-: demonstrate a good understanding of the theory, concepts and issues relating to the topic but limited application relating to the topic
- D+, D: demonstrate mainly description showing basic understanding of the topic but no application
- F: demonstrate limited understanding of the topic and draw conclusions unrelated to the topic

VIII. Academic Conduct

Plagiarism will be reported to the University. Plagiarism and sharing of assignments with others are serious offences and may lead to disciplinary actions. Students should read the chapters on “Plagiarism” and “Copyright” in the Undergraduate/Postgraduate Handbook for details. Students are strongly advised to read the booklet entitled “What is Plagiarism” which was distributed to students upon admission into the University, a copy of which can be found at www.hku.hk/plagiarism. A booklet entitled “Plagiarism and How to Avoid it” is also available from the Main Library.

IX. Course Schedule (subject to change)

<i>Week</i>	<i>Date</i>	<i>Topic</i>	<i>Submission</i>
1	Sep 1 (Thu)	Course Introduction	
2	Sep 8 (Thu)	Welcome to the Cloud (Ch. 1)	
3	Sep 15 (Thu)	Network Standards (Ch. 2)	
4	Sep 22 (Thu)	Network Security (Ch. 3)	
5	Sep 29 (Thu)	Network and Security Management (Ch. 4)	
6	Oct 6 (Thu)	Ethernet Switched LANs (Ch. 5)	
7	Oct 10 - 15	-- Reading Week --	
8	Oct 20 (Thu)	Wireless LANs I (Ch. 6)	Assignment 1
9	Oct 21 (Thu)	Wireless LANs II (Ch. 7)	
10	Nov 3 (Thu)	TCP/IP Internetworking I (Ch. 8)	
11	Nov 10 (Thu)	TCP/IP Internetworking II (Ch. 9)	
12	Nov 17 (Thu)	Carrier Wide Area Networks (Ch. 10)	Assignment 2
13	Nov 24 (Thu)	Written Exam	