Hong Kong Community College

SEHH2238 Computer Networking
Semester Two 2021/22

<u>Tentative Teaching Plan</u>

<u>Subject Leader</u>

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<u>Objectives</u>

This subject aims to introduce the basic concept and essential knowledge in computer communications and networks.

<u>Subject Intended Learning Outcomes</u>

Upon completion of this subject, students will be able to:

➢ describe the key principles of computer networks and their operation principles and protocols;
➢ evaluate communication systems from the perspectives of communication architectures, network organisation, security, implementation techniques;
➢ discuss technical and practical issues of communicating data between computers over networks;
➢ design a computer network by applying knowledge acquired and by selecting appropriate network devices and systems.

Respective Scheme/Programme Intended Learning Outcomes

This subject contributes to the respective Scheme/Programme Intended Learning Outcomes in the following way:

(1) For students taking this subject as a General Education subject or elective Discipline-specific subject, please refer to your scheme/programme document for the Scheme/Programme Intended Learning Outcomes.

(2) For students of Associate in Information Technology –

(Row extracted from the Curriculum Map of Associate in Information Technology)

Subject Code	Subject Title	S-ILO-1 IT and Quantitative Skills	S-ILO-2 Critical Thinking	S-ILO-3 Problem Solving Skills	S-ILO-4 Communication	S-ILO-5 Ethics and Professional Attitude	S-ILO-6 Broadening	IT-P-ILO-1 Application of IT Knowledge	IT-P-ILO-2 Designing and Developing IT Systems	IT-P-ILO-3 Recognising IT Opportunities and Constraints
SEHH2238	Computer Networking	R, A				R, A		R, A	I	

* Please refer to your scheme/programme document for the full version of the Outcome Statements.
I: The learning leading to the particular outcome is introduced in that subject
R: The learning leading to the particular outcome is reinforced in that subject
A: The learning leading to the particular outcome is assessed in that subject

Teaching and Learning Approach

Please refer to the Subject Description Form.

Weekly Teaching Pattern

2 hours of lecture
1 hour of tutorial

Tentative Teaching Schedule

	Lecture			Tutorial	
No	**Content**	**Remarks**	**No**	**Content**	**Remarks**
1	L1: Overview and Network Models	Ch.1, 2	1	T0: Overview of the subject	Optional *
2	L2: Basic Communication Principles	Ch.3, 4	2	T1: Networking Basic	
3	L3: Error Detection and Correction	Ch.10	3	T2: Signal Transmission	
4	L4: Data Link Control (DLC) Protocols	Ch.11	4	T3: PCM Error Detection	
5	L5: Multiple Access Control (MAC) Protocols	Ch.12	5	T4: Data Link Control	
6	L6: Ethernet, wireless LAN, Internetworking	Ch.8,13,15	6	T5: MAC Protocols	**Assignment 1 due**
7	L7: IP Addressing and Subnets	Ch.18	7	T6: LAN Internetworking	
8	L8: Internet Protocol and Routing	Ch.19, 20	8	T7: IP Addressing and Subnets	
9	L9: Automatic Repeat Request (ARQ) Protocols	Ch.23	9	T8: IP and Routing	**Mid-term Test ****
10	L10: Network Security	Ch.31	10	T9: ARQ Protocols	
11	L11: UDP and TCP	Ch.24	11	T10: Network Security	
12	L12: Network Applications and Sockets	Ch.25,26	12	T11: Transport Protocols	**Assignment 2 due**
13	**Revision**		13	T12: Application Protocols	

*   **T0 will be conducted if the first tutorial is arranged before the first lecture.**
**   **Mid-term test (topic: L1 – L7): Tentatively scheduled in week 9. More details will be announced in due course.**

Assessment Weighting

Continuous Assessment:	40%
Examination:	60%
	100%

Assessment Methods for Continuous Assessment

Continuous Assessment	Percentage		Brief Description
Test	37.5%		Main Scope: Lecture 1 to 7
Assignment 1	25%	(Individual)	Main Scope: Lecture 1 to 4
Assignment 2	37.5%	(Group)	Main Scope: Lecture 7 to 12 + Project
	100%		

Attendance and other rules / regulations

The attendance requirement and all other rules and regulations in the HKCC Student Handbook and in the respective Definitive Scheme/ Programme Document apply.   Kindly refer to these documents for details.
For the attendance requirement, please note that sick leave and approved leave of absence shall be counted as absence in the calculation of attendance.   However, sick leave and approved leave of absence may be taken into consideration in cases of insufficient attendance.

Lecture/Tutorial Notes and Assignments

Students are required to download lecture/tutorial notes and assignments from the e-Learning platform.

Text and References

Textbook:

Forouzan, B.A. (2013). *Data Communications and networking*. (5th ed.), McGraw Hill.

References:

Comer D.E., (2015). *Computer Networks and Internets*. (6th ed.), Prentice-Hall.

Kurose J.F. & Ross K.W. (2017). *Computer Networking: A Top-Down Approach*. (7th ed.), Pearson.

Peterson L. & Davie B., (2011). *Computer networks: A systems approach*. (5th ed.), Morgan Kaufmann.

Tanenbaum A. S., (2010). *Computer networks*. (5th ed.), Prentice Hall.

Plagiarism

You are strongly advised to pay attention to the rules and guidance notes regarding plagiarism, how sources should be referred to, and bibliography referencing as stipulated in the Student Handbook.

The College may take disciplinary actions against students when there is evidence of collusion between individuals.   The work of others which is included in the assignment must be attributed to its source (a full bibliography and a list of references must be submitted).   Failure to observe such requirements may lead to serious consequences for your study in this subject and your registration at the College.   Please refer to the Section "Penalties for Offences" in the Student Handbook for details.

You are also strongly advised to review the hot tips about plagiarism and how to avoid it with reference to the following document: http://www.polyu.edu.hk/ogur/academic_integrity/Plagiarism_Booklet.pdf.