# 2309 SE370/EIE470/CN101 Course Outline

| | | |
|---|---|---|
| Subject Code | : | SE370/EIE470/CN101 |
| Subject Title | : | COMPUTER NETWORKS I / COMPUTER NETWORKS |
| Course Type | : | Compulsory |
| Level | : | 3 |
| Credits | : | 3 / 4 |
| Teaching Activity | : | Lecture 45 hours |
| Prior Knowledge* | : | N/A |
| Class Schedule | : | |

| Class | Week | Time | Classroom | Date |
|---|---|---|---|---|
| D1 | THU | 15:30-18:20 | C309 | 04/09/2023 - 17/12/2023 |


| | | |
|---|---|---|
| Instructor | : | Li Xianfeng |
| Contact Number | : | (853)88973036 |
| E-mail Address | : | xifli@must.edu.mo |
| Office | : | A317 |
| Office Hour | : | Tuesday (16:30-18:30)<br>Wednesday (10:00-14:00)<br>Thursday (13:00-15:00)<br>Friday (10:00-12:00) |


## COURSE DESCRIPTION

This subject aims to provide an introduction of computer networks to the students. The students are expected to be able to understand the architecture and principles of communications in data networks, be familiar with the functionalities, services, algorithms and protocols of different layers in the network stack.

## TEXT BOOK

**Required Text Book:**

J.Kurose, K. Ross, Computer Networking: a Top-Down Approach, Global Edition, 8th Edtion, Pearson Press, 2021.

**Reference Book:**

## INTENDED LEARNING OUTCOMES

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

1. Understand the architecture and principles of communications in data networks,

including the reference models, the protocols and the technologies used in the data networks.

2. Understand the functionalities and services of different network layers.
3. Explain the algorithms and protocols in different layers of the network stack.
4. An ability to analyze the network problem and troubleshooting the network problem.

**Weekly Schedule**

| Week | Topic | Hours | Teaching Method |
|---|---|---|---|
| 1 | Lecture 1.Introduction | 3 | lecture |
| 2 | Lecture 1.Introduction (cont.) | 3 | lecture |
| 3 | Lecture 2.Application Layer | 3 | lecture |
| 4 | Lecture 2.Application Layer (cont.) | 3 | lecture |
| 5 | Lecture 3.Transport Layer + Quiz 1 | 3 | lecture |
| 6 | Lecture 3.Transport Layer (cont.) | 3 | lecture |
| 7 | Lecture 3.Transport Layer (cont.) | 3 | lecture |
| 8 | Lecture 4.Network Layer: Data Plane + Quiz 2 | 3 | lecture |
| 9 | Lecture 4.Network Layer: Data Plane (cont.) | 3 | lecture |
| 10 | Lecture 5.Network Layer: Control Plane | 3 | lecture |
| 11 | Lecture 5.Network Layer: Control Plane (cont.) | 3 | lecture |
| 12 | Lecture 6.Link Layer + Quiz 3 | 3 | lecture |
| 13 | Lecture 8.Link Layer (cont.) | 3 | lecture |
| 14 | Wireless LAN + Quize 4 | 3 | lecture |
| 15 | Course review | 3 | lecture |

**ASSESSMENT APPROACH**

| Assessment method | % weight |
|---|---|
| 1. Attendance (Class participation) | **10%** |
| 2. Assignment | **20%** |
| 3. Quiz | **20%** |
| 4. Final exam | **50%** |
| Total | **100 %** |

**Guideline for Letter Grade:**

| Marks | Grade |
|---|---|
| **Marks** | **Grade** |
| 93-100 | A+ |
| 88-92 | A |
| 83-87 | A- |
| 78-82 | B+ |
| 72-77 | B |
| 68-71 | B- |
| 63-67 | C+ |
| 58-62 | C |
| 53-57 | C- |
| 50-52 | D |
| 0-49 | F |

**Notes:**
Students will be assessed on several assessment items (i.e. attendance, assignment experiment exam, midterm exam, and final exam.).
The attendance evaluates the student's participation of discussion in the classes.
The midterm exam and the final exam evaluate the student's understanding of the concepts of computer networks in theory.
The experiment exam evaluates the student's ability to apply the knowledge to solve practical problem of computer networks.

**ADDITIONAL READINGS**

*None:*