

Handout 0: Course Information

Instructor: Wing-Kin Ma

1 General Information

- INSTRUCTOR: Wing-Kin Ma
 - OFFICE: SHB 323
 - EMAIL: wkma@ee.cuhk.edu.hk
- TEACHING ASSISTANTS:

Name	Office	Email
Huang Chujun	SHB 329	cjhuang@link.cuhk.edu.hk
Zhu Benjin	SHB 304	benjinzhu@link.cuhk.edu.hk
Liu Ya	SHB 322	yaliu@link.cuhk.edu.hk
Dai Qi	SHB 329	1155168025@link.cuhk.edu.hk

- LECTURE HOURS & VENUE:
 - Wednesday 12:30–2:15pm, YIA LT4
 - Thursday 1:30–2:15pm, ERB 407
- TUTORIAL HOURS: Thursday 4:30–5:15pm, and TBA
- COURSE WEBSITE: <http://www.ee.cuhk.edu.hk/~wkma/eleg2310>

2 Course Description

This is a foundation course on telecommunication and related technologies. It describes the essential elements of a modern communication system. Students will learn the basic concepts in electrical communication, the operation principles and the performance requirements for a real-world communication system. The course is the basis of various advanced courses on electrical and optical communication.

3 Topics to be Covered

An overview on communication systems; Fourier transform (a review); amplitude modulation; angle and frequency modulation; digital representation of analog signals; digital baseband transmission; digital bandpass transmission.

4 Rough Course Schedule

Class Dates	Topics
Sep 8, 9	Communication systems overview; Fourier transform
Sep 15, 16	Fourier transform; Amplitude modulation
Sep 23	(Sep 23 is holiday) Amplitude modulation
Sep 29, 30	A wider class of amplitude modulation schemes
Oct 6, 7	A wider class of amplitude modulation schemes
Oct 13	(Oct 14 is holiday) Angle and frequency modulation
Oct 20, 21	Angle and frequency modulation; midterm review
Oct 27, 28	Midterm examination ; digital representation of analog signals
Nov 3, 4	digital representation of analog signals, digital baseband transmission
Nov 10, 11	digital baseband transmission
Nov 17, 18	digital baseband transmission
Nov 24, 25	digital bandpass transmission
Dec 1, 2	digital bandpass transmission, course wrap-up

5 Assessment

- **IN-CLASS QUIZZES (10%)**: A number of quizzes will be carried out during class. The times of the quizzes are random.
- **ASSIGNMENTS AND LABS (30%)**: The lab arrangement will be announced later. The assignments should be submitted online by Blackboard. Please submit on or before the deadline specified in each assignment. For late submission, the following rule applies: score received = original score $\times 0.85^{\text{number of days late}}$. Also, no assignment will be accepted after the solution is distributed.
- **MIDTERM EXAMINATION (20%)**: The tentative date for the midterm examination is Oct 27; it will be an in-class examination.
- **FINAL EXAMINATION (40%)**

6 Learning Resources

- Handouts, as well as supplementary materials, are provided; please check the course website regularly.
- There are many textbooks for communications, which you can easily find in the university library. The following two textbooks are recommended:
 - Simon Haykin and Michael Moher, *Communication Systems (5th Edition)*, Wiley & Sons Ltd.
 - B. P. Lathi and Z. Ding, *Modern Digital and Analog Communication Systems (4th Edition)*, Oxford University Press.

7 Academic Honesty

Students are strongly advised to read the University's guideline on academic honesty (<http://www.cuhk.edu.hk/policy/academichonesty/>). The definition of plagiarism includes copying of the whole or parts of written assignments, midterm examinations and final examinations. The Chinese University of Hong Kong places very high importance on honesty in academic work submitted by students, and adopts a policy of zero tolerance on cheating in examinations and plagiarism. Any related offence will lead to disciplinary action including termination of studies at the University.

8 Student/Faculty Expectations on Teaching and Learning

Please read:

<http://www.erg.cuhk.edu.hk/upload/StaffStudentExpectations.pdf>

for Student/Faculty Expectations on Teaching and Learning, from the Faculty of Engineering, The Chinese University of Hong Kong.