ELECTRICAL ENGINEERING DEPARTMENT
FACULTY OF ENGINEERING
ALEXANDRIA UNIVERSITY
EGYPT

EE486: Communications Networks

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I Aim of Course

- The basics of data communications networks and network models are presented.
- The basic network devices and their functions are discussed. In addition, data representation and data flow though the devices are presented.
- Main network protocols and standards at different layers are explained.

II Outline

- Introduction, Basic Concepts, and Network Models.
- Physical Layer of Local Area Networks (LANs).
- Data Link Layer of LANs.
- Fast Ethernets: Data Link Layer.
- Wireless LANs.
- Network Layer.
- Transport Layer.
- Application Layer.
- Security.

III Text Books and References

[1] B. Forouzan, *Data Communications and Networking*, 5th ed. New York: McGraw-Hill, 2013.

[2] W. Stallings, *Data and Computer Communications*, 10th ed. Upper Saddle River, New Jersey: Prentice Hall, 2013.

IV Handouts and Assignments

- Handouts and assignments can be downloaded from
  - ☞ http://www.eng.alexu.edu.eg/∼hshalaby/
  - ☞ http://www.eng.alexu.edu.eg/∼bmokhtar/

V Teaching and Assessments

- Teaching hours per week: Total = 5 hrs.
  1. Lectures: 3 hrs.
     - ☞ Sunday 11:50 AM–1:20 PM, venue m2, every week.
     - ☞ Sunday 1:40–2:25 PM, venue m2, every week.
  2. Exercises: 1 hr.
  3. Laboratories: 1 hr.
- Exams and their durations:
  1. Midterm exam: 1.5 hrs.
  2. Final exam: 3 hrs.
- Distribution of a total mark of 125:
  1. Midterm exam: 25 marks.
  2. Lab assessments: 15 marks.
  3. Term project: 10 marks
  4. Final exam: 75 marks.