



ELECTRONIC ENGINEERING PRINCIPLES AND APPLICATIONS

Dr. Mohammed M. Farag



**Faculty of Engineering
Alexandria University**



Course Staff

□ Instructor:

□ Dr. Mohammed Morsy (mmorsy@ieee.org)

■ 4th Floor ECE Building

□ TAs:

□ Eng. Nour Nabil

□ Eng. AbdelKader Matrawy

□ Office hours :

□ Thursday: 10:00-11:30AM



Basic Info.

□ Textbook

- Malvino, Albert, and David Bates. *Electronic Principles with Simulation CD*. McGraw-Hill, Inc., 2006.

□ Supplementary References

- Floyd, Thomas L. *Electronic devices: conventional current version*. PEARSON Prentice hall, 2008.
- Boylestad, Robert L., and Louis Nashelsky. *Electronic Devices and Circuit Theory, Eight Edition*. Prentice Hall (Pearson Education Inc.), 2002.

□ Prerequisites

- Electrical Engineering Principles

□ Computer tools:

- Multisim



Course Outline

- **Chapter 1:** Review of Electric Principles
- **Chapter 2:** Semiconductors
- **Chapter 3:** Diode Theory
- **Chapter 4:** Diode Circuits
- **Chapter 5:** Special-Purpose Diodes
- **Chapter 6:** BJT Fundamentals
- **Chapter 7:** BJT Biasing
- **Chapter 8:** Basic BJT Amplifiers



Course Work

- 5 Labs: Using HDL to design a simplified processor
 - Lab work: 10%
 - Lab attendance: 5%
- Hardware Design Project: Design and testing of a selected electronic circuit
 - 5%
- A Midterm exam
 - 20%
- A Final Exam
 - 60%



Course Webpage

- All course materials and lecture slides will be published to the following website:

http://eng.staff.alexu.edu.eg/~mmorsy/Courses/Undergraduate/EE_Principles_and_Applications_of_Electronic_Engineering/EE_Principles_and_Applications_of_Electronic_Engineering.html

- Announcements and course updates will be published on the course webpage