



CS X35
COMPUTER ARCHITECTURES

Dr. Mohammed M. Farag



**Faculty of Engineering
Alexandria University**



Course Staff

□ Instructor:

- Dr. Mohammed Morsy (mmorsy@ieee.org)
 - 4th Floor ECE Building

□ TAs:

- Eng. Khalid Essam

□ Office hours :

- Thursday 10:30-12:00PM



Basic Info.

□ Textbooks

- “Digital Design and Computer Architecture”, David Harris, Sarah Harris, 2nd Edition
- “DSP Architecture Design Essentials”, Dejan Markovic, Robert Brodersen

□ Supplementary References

- “Computer Organization and Design”, David Patterson, John Hennessy, 4th Edition

□ Prerequisites

- Digital and Logic design

□ Computer tools:

- [Xilinx ISE](#)
- [Active-HDL Student Edition](#)



Course Outline

- MIPS Instruction Set Architecture
- MIPS Micro-Architecture
- Memory and I/O System
- Hardware, DSP, and Application Specific Computing Architectures
- Hardware Description Languages



Course Work

- 5 Labs: Using HDL to design a simplified processor
 - Lab work: 10 marks
 - Attendance: 5 marks
- A Project: Design and testing of various processor architectures using HDL
 - 10 marks
- A Midterm exam
 - 25 marks
- A Final Exam
 - 75 marks



Course Webpage

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

http://eng.staff.alexu.edu.eg/~mmorsy/Courses/Undergraduate/CSx35_Computer_Architectures/CSx35.html

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