



CC 322:  
**COMPUTER ARCHITECTURE**

Dr. Mohammed M. Farag



**Faculty of Engineering  
Alexandria University**



## Course Staff

### □ Instructor:

□ Dr. Mohammed Morsy ([mmorsy@ieee.org](mailto:mmorsy@ieee.org))

■ 4<sup>th</sup> Floor ECE Building

### □ TAs:

□ TBD

### □ Office hours :

□ Thursday: 10:00-11:30AM



## Basic Info.

### □ Textbooks

- “Digital Design and Computer Architecture”, David Harris, Sarah Harris, 2<sup>nd</sup> Edition

### □ Supplementary References

- “Computer Organization and Design”, David Patterson, John Hennessy, 4<sup>th</sup> Edition

### □ Prerequisites

- Digital and Logic design

### □ Computer tools:

- Xilinx ISE

- [https://www.aldec.com/en/products/fpga\\_simulation/active\\_hdl\\_student](https://www.aldec.com/en/products/fpga_simulation/active_hdl_student)



# Course Outline

- MIPS Instruction Set Architecture
- MIPS Micro-Architecture
- Memory and I/O System
- Hardware Description Languages



# Course Work

- Attendance:
  - 10 marks
- 5 Labs: Using HDL to design a simplified processor
  - Lab work: 10 marks
- A Project: Design and testing of various processor architectures using HDL
  - 10 marks
- A Midterm exam
  - 20 marks
- A Final Exam
  - 50 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/CC322\\_Computer\\_Architecture/CC322.html](http://eng.staff.alexu.edu.eg/~mmorsy/Courses/Undergraduate/CC322_Computer_Architecture/CC322.html)

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