



Computer Science Department

**Course Syllabus**

**CS220 - Computer Organization and Assembly Language**

- Catalog Description:** This course introduces the general concepts of computer system organization. The students will be exposed to the instruction cycle and describe the organization of the CPU, I/O and Memory units. Moreover, students are required to gain some knowledge about computer system programming using “assembly language.
- Credit Hours:**      **4 Credit hours:**      3 Lectures per week      2 Labs. per week      0 Recitation per week
- Prerequisites:**
- CS104 Discrete Structures
  - CS106 Digital Logic
- Course Learning Outcomes:**
1. Designing simple combinational and sequential Circuits
  2. Study in details the structure of a computer system (e.g., processors, memory, and I/O devices).
  3. Designing a logic control of a basic computer organization (fetch, decode and execute steps for all the instructions).
  4. Edit, compile, and execute assembly computer programs.
  5. Solve problems and write readable assembly programs using coding conventions such as comments, indentation, and naming.
- Major Topics:**
- Review of Combinational Logic Circuits
  - Review Sequential Circuits
  - Register Transfer and Micro-operations
  - Basic Computer Organization & Design
  - The organization of Central Processing Unit
  - Input-Output Organization
  - Memory Organization
  - Assembly language (lab)
- Text Books:**
1. The Essentials of Computer Organization and Architecture, Null and Lobur, Jones and Bartlett Pub, 2012.
  2. Computer System Architecture, Morris Mano, 3rd edition, Pearson Education, 2007.



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**Grading:**

- ⦿ The grading scale for this course is:

. 95 - 100	A+	Passing
. 90 - 94	A	Passing
. 85 - 89	B+	Passing
. 80 - 84	B	Passing
. 75 - 79	C+	Passing
. 70 - 74	C	Passing
. 65 - 69	D+	Passing
. 60 - 64	D	Passing
. 0 - 59	F	Failing

- ⦿ Final grades will be determined based on the following components:

. 60%	Semester Work
. 40%	Final Exam

- ⦿ Students may not do any additional work for extra credit nor resubmit any graded activity to raise a final grade.
- ⦿ Late submissions will not be accepted for any graded activity for any reason.
- ⦿ Students have one week to request the re-grading of any semester work.

**Attendance Policy:**

Students should attend 80% of the overall course hours taught in the semester as per the University regulations.

If a student fails to achieve this portion, he/she shall not be allowed to appear in the final exam and shall be awarded "DN" grade and repeat the course.

**Cheating and Plagiarism Policy:**

The instructor will use several manual and automated means to detect cheating and/or plagiarism in any work submitted by students for this course.

When a student is suspected of cheating or plagiarism, the instructor raises the issue to the disciplinary committee.



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**Communications:** Registered students will be given access to a section of the Blackboard Learning System for this course. Bb will be used as the primary mechanism to disseminate course information, including announcements, lecture slides, assignments, and grades.

Communication with the instructor on issues relating to the individual student should be conducted using CIS email, via telephone, or in person.