

Al-Ayen University / Technical Engineering College /
Department of Computer Technical Engineering

Template of Course Specification

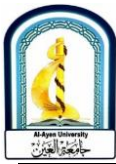
Name and Scientific title of the subject instructor: M.Sc. Nadwa Sabeeh Jaber

Name of Course: Computer Organization

Course Specification

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programmer specification.

1.	Teaching Institution	Al-Ayen University / Technical Engineering College
2.	University Department / Center	Department of Medical Instrumentation Technical Engineering
3.	Course Title / Code	Computer Organization
4.	Program(s) to which it contributes	B.Sc.
5.	Modes of Attendance offered	Lecture, laboratory
6.	Semester/Year	1 st / 2022
7.	Number of hours tuition (total)	60
8.	Date of production/revision of this Specification	5/1/2022
9.	Aims of the Course	
1-	Knowledge of major components and know of the main and basic parts of the electronic calculator	
2-	Knowledge of the main types of memory used in the calculator.	
3-	Knowledge how to represent data in a calculator	
4-	Knowledge of the CPU and components in the electronic calculator.	
5-	Possession of a scientific and practical skill of being able to diagnose faults and perform maintenance and repairs to the system calculator.	
10.	Learning Outcomes, Teaching, Learning and Assessment Methods	

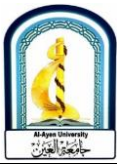


A.	Knowledge and understanding <ol style="list-style-type: none">1- Knowing the generations of computer development2- knowledge of different types of electronic calculator and parts for major3- knowledge of the structural core of the memory and the various classifications of memory from the main memory and secondary memory4- knowledge of the structural core CPU5- Know the types of input and output units6- knowledge of the processor of the type 8085.
B.	Subject-specific skills <ol style="list-style-type: none">1- Ability to diagnose faults in the electronic calculator2- the ability to use meta own processor 80853- the ability to know different types of electronic calculator4- the ability to Know the types of input and output units5- the ability to program processor 8085
C.	Assessment methods <p>Interactive tests: basically to assess the student by observing the extent of interaction provides during the lecture and participation.</p> <p>Written tests: that provides knowledge of the extent of the student's understanding and follow-up of the material and scientific observations given by teaching.</p> <p>Quarterly tests: Episode moderation and be to assess the student's interest and its interaction with the scientific article received during the semester for academic and skills.</p> <p>Final tests: These are the final episode to assess the student's interest and its interaction with the scientific article received during the school year for academic and skills</p>
D.	Thinking Skills <ol style="list-style-type: none">1- Implant the spirit of creativity among students and to ensure that find them innovative solutions to various problems2- Students develop the ability to work together effectively as teams come out excellent result3- Sense of responsibility among students and psychological configuration to carry the burden on their shoulders Development4- Development to ensure the values and perseverance to get the job done to reach satisfactory result
E.	Teaching and learning methods <p>Academic lectures: providing a solid foundation upon which to develop cognitive balance for students</p> <p>Practical laboratory:, which provides each student the expertise to help develop practical skills side and consolidate the principles necessary to carry out the projects correct</p>
F.	General and Transferable Skills (other skills relevant to employability and personal development) <ol style="list-style-type: none">1- Analysis methods of treatment the fault in the electronic



	<p>computer</p> <p>2- Data analysis in the electronic computer</p> <p>3- acquire skill in the use of the language of the machine</p>
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11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Methods	Assessment Methods
1,2	4	Lecture , laboratory	Introduction to Computer Systems, Mains Parts of computer system, Organization and architecture	Identify the main parts of the computer	Questions oral, daily exam
3,4	4	Lecture , laboratory	Von Neumann Architecture	Knowledge of the main principles of Von Neumann	Questions oral, daily exam
5	2	Lecture , laboratory	The representation of data in the computer and the various types of data	Understanding methods of data representation within the electronic computer	Questions oral, daily exam
6	2	Lecture , laboratory	Central processor unit inside the computer	Knowledge of different types of input, output in the computer	Questions oral, daily exam
7	2	Lecture , laboratory	CPU basic organization: Control unit organization	Know the basic organization of the CPU	Questions oral, daily exam
11	4	Lecture , laboratory	Memory hierarchy(internal registers, primary memory, secondary memory, cache Memory...)	Identify the various memory types in the computer	Questions oral, daily exam
8-13	14	Lecture , laboratory	Structural of buses inside the computer	Identify the Buses that used in computer	Questions oral, daily exam
14-15	4	Lecture , laboratory	Memory addressing, Memory organization and expansion	Knowing the organization and meaning of memory	Questions oral, daily exam
18,19,20	6	Lecture , laboratory	Input & Output modules	Understanding the different	Questions oral, daily



				types of Input and output devices inside the computer	exam
21,22	4	Lecture , laboratory	Computer S/W (machine language, assembly language, OS,...)	Know the difference between computer and machine language	Questions oral, daily exam
23,24	4	Lecture , laboratory	8085 processor structure	Understanding the main components of 8085 MP	Questions oral, daily exam
25,26	8	Lecture , laboratory	8085 addressing mode & instructions type	Knowledge of types of instruction that used in 8085 MP	Questions oral, daily exam
27-30	12	Lecture , laboratory	8085 programs	Understanding of different programs for 8085 MP	Questions oral, daily exam

12.	Infrastructure
Required reading: ·CORE TEXTS ·COURSE MATERIALS · OTHER	1- Computer Architecture a quantitative approach”, Fourth Edition Elsevier 2- Computer Organization And Architecture Designing For Performance Ninth Edition
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities)include for example, guest Lectures, internship, field studies)	Specialized Websites

13.	Admissions
Pre-requisites	
Minimum number of students	100
Maximum number of students	150