

011 CSM Course Syllabus

Course Code	011CSM
Course Name	Introduction to Computers
Credit Hours	3
Contact Hours	4
Instructor Name	Dr. Omar Al qahtani

Text Book (title, author, and year)

Invitation to Computer Science by G. Michael Schneider , Judith Gersting Course Technology; 5e, ISBN-10: 0324788592

Specific Course Information

Catalog Description	The course introduces the students to the basics of computers hardware, software, networks and users. The different features of computer and its main components are described. It presents also the data types and data representations. Moreover the student will learn how to write algorithms for solving problems using flowchart, pseudo code, structured programming language concepts, and some concepts about assembler, interpreter and compiler. Operating system and its components are also discussed
Prerequisites	NIL
Co-requisites	NIL
Required/Elective	required

Course Learning Outcomes

1	List the historical development of Computer and Its applications
2	States the Development process of an Algorithms and Criticize the Efficiency of an Algorithm
3	Define and different components of computers
4	Outline the Computer Architecture and its functional process
5	Explain the representation of data types and its computational process using Boolean logic and Gates
6	Differentiate Programming Languages
7	Demonstrate the use of different types of network topology.
8	Illustrate the use of system and application software for day to day application.

Mapping course LOs to the SLO.

Course LOs #	Student Learning Outcomes											
	a1	a2	b1	b2	b3	b4	b5	c1	c2	c3	d1	d2
1	√											
2			√									
3			√									
4				√								
5			√									
6			√									
7				√								
8							√					

List of Theory Topics

Introduction :Computer definitions, Brief history of computer & historical development of modern electronic computers

Algorithms : Definitions, Constructs, algorithm representation & algorithmic operations, the efficiency of algorithms

Computer Systems Organization: Von Neumann architecture & Non-Von Neumann architecture, Components of the Computer Systems

Data Representation: Data types, Data inside the computer, & Representing ,Building Blocks: Binary Numbers, Boolean Logic, and Gates

System Software :Operating Systems, Assemblers and assembly language

Programming Languages: High-Level Language Programming (Procedural languages Special-purpose languages Alternative programming paradigms) Building a program, Program execution, Categories of languages.

Computer Networks: Introduction to network, OSI model, Categories of Networks, Connecting Devices, The Internet and TCP/IP.

List of Lab Experiments

1. Introduction to computer: Microsoft Word, Microsoft PowerPoint
2. Writing C\C++ programming language, Structure of Program, Basic programs, compiling and execution of a programs.
3. Writing programs to understand the concept of input, output statements and data types.
4. Writing programs to implement the concept of operators, find area and perimeter of circle, square and rectangle
5. Writing programs to understand the concepts of conditional statements, find minimum , maximum, Even, odd, grade of students
6. Implement the concept switch case statements, checking days of week, months name of years