

1. Course Number and Name: 011 CSM – Introduction to Computer

2. Credits and Contact Hours: 3 Credits

- a. Lecture – 2 days per week at 50 minutes for 16 weeks
- b. Laboratory – 1 day per week at 100 minutes for 16 weeks

4. Text Book:

- An Invitation to Computer Science -by G.Michael Schneider , Judith Gersting

3.Course Coordinator or Instructor:

Dr.OmarAlqahtani

5. Specific Course Information:

a. Catalog Description:We introduce the fundamentals of the computer science and issues related to a computer. We look at a computer and the way is processes, and manipulates the data. We also have look at computer hardware, computer software, and data organization.

- b. Prerequisites:** None
- c. Status:** Required

Learning Outcomes:List the historical development of Computer and Its applications

- States the Development process of an Algorithms
- Define and different components of computers
- Outline the Computer Architecture and its functional process
- Criticize the Efficiency of an Algorithm
- Explain the representation of data types and its computational process using Boolean logic and Gates
- Differentiate Programming Languages
- Demonstrate the use of different types of network topology.
- Illustrate the use of system and application software for day to day application

Map course LOs with the program LOs.

Course LOs #	Program Learning Outcomes											
	a1	a2	b1	b2	b3	b4	b5	c1	c2	c3	d1	d2
1	√											
2							√					
3	√											
4							√					
5					√							
6			√									
7				√								
8		√										
9		√				√						

List of Topics: 011 CSM – Introduction to Computer

List of Topics for theory :

- **Introduction** :Computer definitions, Brief history of computer & historical development of modern electronic computers
- **Algorithms** :Definitions, Constructs, algorithm representation & algorithmic operations
- **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 Topics for Lab:

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