Course Specifications

Course Title:	Introduction to Computer
Course Code:	101CSC-3
Program:	BS in Computer Science BS in Information Technology BS in Computer & Network Engineering
Department:	Computer Science
College:	Computer Science and Information Technology
Institution:	Jazan University, Jazan

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A. Course Identification

1. **Credit hours:**

2. Course type

a. University ☑   College ☐   Department ☐   Others ☐

b.   Required ☑   Elective ☐

3. Level/year at which this course is offered: Level -01 / Year 01

4. Pre-requisites for this course (if any)**: None**

5. Co-requisites for this course (if any)**: None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	16	27%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**	44	73%
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	39
2	**Laboratory/Studio**	13
3	**Tutorial**	
4	**Others** (Final Exams and Review)	8
	Total	60

B. Course Objectives and Learning Outcomes

1. Course Description

This course introduces the fundamental concepts and features of Computer. It includes the basics of computer hardware, software, types, peripherals, input/output devices, computer network, computer user/client, computer architecture, storage devices, internet, operating system, programming, data representation, advantages and applications.

2. Course Main Objective

1. Discuss the basic hardware and software components of a personal computers and their application.
2. Describe how to use the text editor programs, spreadsheets, presentation and databases application programs.
3. Illustrate the methods of communication and information gathering using internet.
4. Explain the basic fundamentals of data representation, algorithms, flowcharts and computer programming languages.
5. Outline the various practical applications of computer skills.

Course Specifications

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	**Describe** the major components of a personal computer and describe their functionalities.	K1
1.2	**Define** the different types of system software, programming languages, application software and their functionalities.	K1
2	**Skills :**	
2.1	**Compare** various types of network topologies and network .	S1
2.2	**Demonstrate** the working of M.S. office application software for text editing, spreadsheet, presentation and database.	S1
2.3	**Apply** various data representations, number system and solve given problems.	S1
2.4	**Design** algorithms and flowchart for a basic given problem.	S2
3	**Values:**	
3.1		

C. Course Content

No	List of Topics	Contact Hours
1	**Introduction to the world of computers** What is a Computer? Hardware Data vs. Information, Software, Computer Users, End users, Programmers, Computer categories	4T+4P
2	**The System Unit** Processing and Memory: Data and Program Representation, Digital Data Representation, Byte, Bit, Bit pattern, Data Types **Data representation** Coding Systems for Text-Based Data, Image representation methods, Audio representation, and Video representation **The Binary Numbering System** Binary Number, Decimal Number, Hexadecimal Number, Octal Number, Binary to Decimal Conversion, Decimal to Binary Conversion, Inside the System Unit, The Motherboard, The CPU, Memory	4T+4P
3	**Storage** Storage System Characteristics, Magnetic Disks vs. Optical Discs, Magnetic Disk Systems, Floppy Disks and Drives, Hard Disk Drives (HDDs), Optical Disc Systems, Flash Memory Systems	4T+4P
4	**Input and Output** Keyboard, Pointing device, Electric Pen, Scanners, Readers, Touch, Screen, Output Devices, Monitor, Display Screen, Printers	4T+4P
5	**Programming** Algorithms, Flowchart, Pseudo Codes, Programming Languages, Machine Languages, Low Level Languages, High Level Languages, and Natural Languages	4T+4P
6	**Computer Networks and internet:**	2T+2P

	What is a network and internet? What are the benefits? Network Topologies, Star Network, Bus Network, Ring Network, Mesh Network, Types of Network by Size, LAN, WAN and MAN	
7	**System Software - Operating Systems and Utility Programs:** System Software and Application Software, The Operating System, Functions of an Operating System, Differences Among Operating Systems, Operating Systems for Desktop PCs and Servers, Operating Systems for Handheld PCs and Mobile Devices, Utility Programs.	4T+4P
	Total	52

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	**Describe** the major components of a personal computer and describe their functionalities.	• Online Virtual • classes • Tutorials • Media Lectures • On line discussion • Lab Demonstration	• Mid-Exam • Assignment • Final Theory
1.2	**Define** the different types of system software, operating system, application software and their functionalities.	• Online Virtual • classes Tutorials • Media Lectures • On line discussion	• Quiz • Assignment • Final Theory
2.0	**Skills**		
2.1	**Compare** various types of network topologies and network types.	• Online Virtual • classes Tutorials • Media Lectures • On line discussion • Lab Demonstration	• Quiz • Assignment • Final Practical • Final Theory
2.2	**Demonstrate** the working of M.S. office application software for text editing, spreadsheet, presentation and database	• Lab Demonstration	• Lab Exam
2.3	**Apply** various data representations, number system and solve given problems.	• Online Virtual • classes • Tutorials • Media Lectures • On line discussion	• Mid-Exam • Assignment • Final Theory
2.4	**Design** algorithms and flowchart for a basic given problem	• Online Virtual • classes • Tutorials • Media Lectures • On line discussion	• Quiz • Assignment • Final Theory
3.0	**Values**		
3.1			
…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-Exam	7th Week	15%
2	Assignment	9th Week	10%
3	Quiz	10th Week	5%
4	Attendance	All Weeks	10%
5	Final Practical	14th Week	20%
6	Final Theory	15th Week	40%
7			

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
Department have an arrangement for "Academic Counseling and Support" for each student by the department. The Department Coordinator nominates faculty members for "**Student Academic Advisory Committee**" every semester. These **"Academic Advisors"** are responsible for student counseling and advising to a group of fix number of students (around10-15 students) and maintaining students' files. At the beginning of semester and at time of course registration all students take counseling from Academic Advisor according to his previous grades and coverage of pre-requisite course and follow-up.

Also students with GPA below than 2.00are remained under deep observation and continuous meetings with respective course teachers about their performance are arranged to help and support the students. The course teacher is to be associated with this course provide a proper guidance for students who are looking to focus on their future career based on their intellectual interests, identify better opportunities related to this course and connections in their academic fields.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	• Understanding Computers Today and Tomorrow, Deborah Morley, Charles S. Parker, Course Technology, Cengage Learning, 15th Edition, 2015, ISBN: 9781285767277.
Essential References Materials	• Absolute beginner's guide to computer basics, Michael Miller, Que Publishing, 5th edition 2009, ISBN-13:978-0789742537 • Step by Step Microsoft Office professional 2010, Joan Lambert and Curtis Frye, Microsoft Press, 1st edition, 2010, ISBN-13:978-0735626966 • Foundations of Computer from Data Manipulation to Theory of Computation,Behrouz . A. Forouzan, Thomson Learning 2003, ISBN 0534379680

Electronic Materials	These are the few useful magazines that can provide latest trends and development in the field of Computer Science and application:
	    a. PC World
	    b. PC Magazine
	    c. Computer World

	a. URL:http://www.tutorialspoint.com/computer_fundamentals/ b. URL:https://support.office.com/en-us/office-training-center c. URL:https://www.gcflearnfree.org/subjects/office/ d. URL:http://www.comptechdoc.org/basic/index.html e. URL:http://www.baycongroup.com/el0.htm- Description: Microsoft Excel 2007Tutorial f. URL:http://deitel.com/books/iw3HTP3/iw3htp3_powerpoint.zip- Description: Download helping Power Point slides related tocourse g. URL:http://computer.howstuffworks.com/- Description:Averygoodknowledgerepository h. URL:http://www.thocp.net/hardware/embedded_computers.htm- Description: Embedded computers i. URL:https://en.wikipedia.org
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Classroom equipped with projector and whiteboard and sufficient seating arrangements. • Lab with software installed and individual computer terminal for each student.
Technology Resources (AV, data show, Smart Board, software, etc.)	• Whiteboards and projectors for classroom and lab • Following software for lab work: **MS Office**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	None

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Sufficiency of resources and facilities for students	Students	Course evaluation survey form
Effectiveness of teaching / learning process	Students	Course evaluation survey form
Effectiveness of teaching / learning process	CRC / QAU / HoD	Course reports / result analysis
Quality of learning Resources	Track leaders / CRC	Review meetings and star rating with suggestions for further modification and improvements

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Verifying standards of student achievement / evaluation	HoD / committee nominated by HoD	Random re-checking of evaluated answer sheets
Achievement of course learning outcomes	Course Teachers / QAU	CLO assessment template that is further verified at course coordinator and QAU level.

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	DEPARTMENT COUNCIL
Reference No.	05
Date	WEDNESDAY 06-02-2019