



C. U. Shah University, Wadhwan City

Faculty of Computer Science

Name of Program: Bachelor of Science (Information Technology)
(B.Sc.IT)

Semester : I

W.e.f. June-2016

Teaching & Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							
			Th	Tu	Pr	Total		Theory				Practical			Total Marks
								Sessional Exam		University Exam		Internal		Uni.	
								Marks	Hrs	Marks	Hrs	Pr	TW	Pr	
3	4CS01ICO2	Computer Basics & Organization	4	-	2	6	5	30	1.5	70	3	30	20	-	150

Objectives: To enable the student to learn number system, computer codes, hardware

Pre-requisites: Student should have knowledge about computer

Course Outline:

Ch. No	Chapter Name	Course Contents	Lect. Hours
1	Number System and Computer Codes:	<ul style="list-style-type: none"> ➤ Introduction to Number System and types <ul style="list-style-type: none"> ○ Binary ○ Octal ○ Decimal ○ Hexadecimal ➤ Conversion of Numbers: <ul style="list-style-type: none"> ○ Decimal to Binary, Octal, Hexadecimal ○ Binary to Decimal, Octal, Hexadecimal ○ Octal to Decimal, Binary, Hexadecimal ○ Hexadecimal to Decimal, Binary, Octal ➤ 1's complement ➤ 2's complement ➤ Binary Addition ➤ Binary Subtraction ➤ ASCII code ➤ EBCDIC code ➤ Bit, Nibble and Byte 	8
2	Introduction to Computer	<ul style="list-style-type: none"> ➤ Introduction to Computer ➤ Components/Architecture/Block Diagram of Computer ➤ Advantage and Disadvantage of Computer ➤ Generation of Computers ➤ Characteristics of Computer ➤ Categories/Type of Computers <ul style="list-style-type: none"> ○ Analog ○ Digital 	8

		<ul style="list-style-type: none"> ○ Mini ○ Micro ○ Mainframe ○ Super ○ Hybrid ➤ Bus and its types <ul style="list-style-type: none"> ○ Address ○ Control ○ Data 	
3	Input/output Devices	<ul style="list-style-type: none"> ➤ Introduction ➤ Input Device <ul style="list-style-type: none"> ○ Keyboard ○ Mouse ○ Scanner ○ Trackball ○ Joystick ○ Touch screen ○ Light Pen ○ Biometric ➤ Output Device <ul style="list-style-type: none"> ○ Printer <ul style="list-style-type: none"> Impact <ul style="list-style-type: none"> ● Dot matrix ● Wheel ● Drum Non-Impact <ul style="list-style-type: none"> ● Laser ● Inkjet ● 3-D ○ Plotter ○ Display device <ul style="list-style-type: none"> ● CRT ● LED ● LCD ○ OMR ○ OCR ○ MICR ○ BCR 	10
4	Storage Devices:	<ul style="list-style-type: none"> ➤ Types of Memory <ul style="list-style-type: none"> ○ RAM ○ ROM ○ PROM ○ EPROM ○ EEPROM ○ Cache ➤ Magnetic tape ➤ Magnetic disk ➤ CD and DVD ➤ Pen drive ➤ Ports (with Types) 	8

5	Basic of Gate and Operating System	<ul style="list-style-type: none"> ➤ Logic Gate <ul style="list-style-type: none"> ○ AND ○ OR ○ NOT ○ NAND ○ NOR ○ EX-OR ○ EX-NOR ➤ Half Adder ➤ Full Adder ➤ Multiplexer ➤ Demultiplexer ➤ Operating System <ul style="list-style-type: none"> ○ Batch ○ Multiprocessor ○ Multiprogramming ○ Time Sharing ○ Real Time 	10
6	Computer Languages and Emerging Technology	<ul style="list-style-type: none"> ➤ Assembler ➤ Compiler ➤ Interpreter ➤ Duplex System <ul style="list-style-type: none"> ○ Simple ○ Half Duplex ○ Full Duplex ➤ Bluetooth ➤ Wi-Fi ➤ Li-fi ➤ GPS ➤ Wi-max 	6
7	CPU & I/O Organization	<ul style="list-style-type: none"> ➤ Stack Organization ➤ Instruction Formats, Addressing modes Asynchronous Data ,Transfer, Modes of Transfer, ➤ Direct Memory Access(DMA) 	5
TOTAL			55

Books Recommended:

- (1) Computer Fundamentals, by P. K. Sinha, ISBN-13: 978-8176567527, Publisher: BPB
- (2) COMPUTER ORGANIZATION AND ARCHITECTURE Kindle Edition, by V.Radhakrishnan, T. Rajaraman, Publisher: PHI
- (3) Computer System Architecture – M. Morris Mano
- (4) Computer Organization & Architecture – William Stallings, 4th Ed.