SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25)
Syllabus with effect from the Academic Year 2022-2023

Integrated Bachelor and Master Programmes in Biomedical Science
IBMP (Biomedical Science) Semester (I)

Paper Code	IS01ABMC52	Periods per week	02
Title of the paper	Introduction to Computers	Exam Duration	2 Hrs
Total Credit of the Paper	02	Total Marks	50

Course Objectives:	1. To acquaint students with knowledge of the computer systems with an emphasis on their uses and limitation. 2. To foster among students interest and confidence in using computers. 3. To prepare students to show positive attitudes for adapting to and coping with a changing society with the widespread utilization of computers.

Course Content		
Unit	Description	Weightage* (%)
1.	Block diagram of a simple computer and significance of different functional units, Evolution of computers, Definitions of the terms : hardware, software and Applications of computers Main components of a general purpose computer: CPU, main internal memory (Including RAM and ROM), input devices, output devices and secondary/backing storage. Basics of Windows operating systems: Nature and Function of OS, Basic Commands.	25%
2.	Input Devices: keyboards, numeric keypads, Pointing devices(mouse, touchpad), remote control, joysticks, touch screen, magnetic strip readers, chip readers, scanners, digital cameras, microphones, sensor, barcode reader,webcam, video camera etc. Output Devices: Monitors(CRT, TFT, and LCD), projectors, printers(laser, desk jet, dot matrix), plotters, speakers. Uses of output devices stating the advantage and disadvantage of each.	25%
3.	Common backing storage media (including CD and DVD (Rs and RWs), floppy disc, hard disc, memory sticks/pen drives, flash memory cards etc. Comparative advantages and disadvantages of using different backing storage media. Importance and need of backup. Difference between main/internal memory and backing storage: relative benefits of each in terms of speed and permanence.	25%
4.	Instruction execution cycle, CPU organization, Parallel instruction	25%

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	execution, Array processors, Multiprocessors, Multiple functional units, Pipelining	

Teaching-Learning Methodology	Regular class room teaching will be done with following tools:
	    a) Conventional black board and chalk.
	    b) ICT tools such as projectors, smart boards, etc will also be used for better explanation of scientific components.
	Appropriate reference materials will also provide to the students as and when required from departmental library resources.

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Acquire understanding of the basic operations of a computer system
2.	Learn the principles of operations for computer systems used in a particular application, specifically in terms of the systems' hardware and software components
3.	Learn to use computer applications software to solve problems
4.	automate simple tasks in specific applications

Suggested References:	
Sr. No.	References
1.	Rajaraman V: Computer Fundamentals, Prentice-Hall of India Pvt. Ltd.
2.	Computer Fundamentals 4th Edition, P.K. Sinha, Priti Sinha
3.	Computer Fundamentals By P.K. Sinha (BPB Publications)
4.	Introduction To Computers By Peter Norton (sixth edition) (The McGraw– Hill Companies)

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On-line resources to be used if available as reference material
On-line Resources: https://www.researchgate.net/publication/283540479_INTRODUCTION_TO_COMPUTER

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