



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Bachelor of Science

Level: Under Graduate

Branch Name: Honors/ Honors With Research (Biotechnology)

Course / Subject Code: BS01001061

Course / Subject Name: Computer Fundamentals

W.e.f. Academic Year:	2024-25
Semester:	1
Category of the Course:	Skill Enhancement Courses

Prerequisite:	Students should have knowledge of basics in computer, computer applications and operating system
Rationale:	This course will discover the definition of computer networking, its types, computer networks work, networking concepts, commonly used terms, networking and internet, how it works, and network topologies.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
1	Student will learn Linux	UN,AP,AN
2	Student will learn Graphical designing tools	UN,AP,AN
3	Deep understanding of computer networking and different operating systems	UN,AP,AN

*RM: Remember, UN: Understand, AP: Apply, AN: Analyse, EL: Evaluate, CR: Create

Course Scheme:

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Practical		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
2	0	0	2	50	50	0	0	100

Course Content:

Sr. No.	Course Content	No. of Hours	% of Weightage
1	Understanding of computer network and Internet Web and HTTP, E-mail, DNS, TCP and UDP, Introduction and transport layer services.	6	20



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2	Operating system Operating system concepts, salient features of Windows, UNIX and GNU/Linux, different flavours of Linux, Why use Linux? Unix file system, file and directory commands, file permissions.	6	20
3	Linux Administration Creating new accounts, Managing processes (The init process, The init Script, Runlevels, Choosing default run-levels, Manually controlling a process), Shutting down the system, Formatting & Disk Partitioning (Device names, using fdisk, Primary and extended partitions, Adding Partitions, Formatting file systems), Installing software (using rpm package, Installing Manually)	6	20
4	Linux utilities awk, sed, clear, cut, env, find, grep, gzip, gunzip, zip, unzip, tar, killall, rm etc. Vi as text editor	6	20
5	Digital content Flyer, Brochure, Project reports, business plans, ppts, designing using Adobe photoshop, coral draw or canva.	6	20

Reference Books:

1. Linux for Beginners by Jason Cannon first edition publisher Independently Published
2. The Linux Command Line, 2nd Edition: A Complete Introduction by William Shotts
