

DAYANANDA SAGAR COLLEGE OF ENGINEERING

(An Autonomous Institute Affiliated to VTU, Belagavi) Approved by AICTE & ISO 9001:2008 Certified)

Accredited by National Assessment & Accreditation Council (NAAC) with 'A' grade

Shavige Malleshwara Hills, Kumaraswamy Layout, Bengaluru-560078

**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING
SCHEME 2018**

Unit	Course Content	Hours	COs
1	UNIX Operating System: The Unix Operating System, The UNIX architecture and Command Usage, The File System, Handling Ordinary files, Basic File Attributes, the vi Editor, The Shell, The Process, Essential Shell Programming. UNIX Standards: ANSI C Standards, ANSI/ISO C++ standards, Difference between ANSI C and C++, The POSIX Standards	08	CO1 CO2
2	UNIX Files: File Types, The UNIX and POSIX File System, File Attributes, Inodes in UNIX System V, Application Program Interface to Files, UNIX Kernel Support for Files, Relationship of C Stream Pointers and File Descriptors, Directory Files, Hard and Symbolic Links. UNIX File APIs: General File APIs, File and Record Locking.	08	CO1 CO3
3	UNIX Processes: The Environment of a UNIX Process: Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes.	08	CO1 CO4
4	Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, wait3, wait4 Functions, Race Conditions, exec Functions, Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting, User Identification, Process Times, I/O Redirection. Process Relationships: Introduction, Terminal Logins, Network Logins, Process Groups, Sessions, Controlling Terminal, tcgetpgrp and tcsetpgrp Functions, Job Control, Shell Execution of Programs, Orphaned Process Groups.	08	CO1 CO5
5	Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, Timers. Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Client-Server Model.	08	CO1 CO6