No	Information of Operating Systems, IT-41033	
1	Unit name:	Operating System Concepts
2	Code:	IT- 41033, Operating Systems
3	Classification:	Engineering subject
4	Credit value:	3
5	Semester/ Year Offered:	1/IV
6	Pre-requisite:	IT-2014, Operating Systems
7	Mode of delivery:	Lecture, Tutorial, Practical
8	Assessment system and breakdown of marks: Practical Tutorial	10 % 20 %
	Mid-term/ final Examination	70 %
9	Academic staff teaching unit:	Department of Information Technology Engineering
10	Course outcome of unit: In this course, students will be able ✓ To describe the basic organization of computer systems ✓ To discuss the various ways of structuring an operating system and user interfaces (GUI, API and CLI) ✓ To describe the various features of processes, including scheduling, creation, termination, and communication ✓ To discuss the APIs for the Pthreads, Win32 and Java thread libraries ✓ To apply various CPU-scheduling algorithms and the concept of an atomic transaction and mechanisms	
11	Synopsis of unit: Operating systems are an essential part of any computer system. Similarly, a course on operating systems is an essential part of any computer-science education. This field is undergoing rapid change, as computers are now prevalent in virtually every application, from games for children through the most sophisticated planning tools for	

	governments and multinational firms. The fundamental concepts remain fairly clear and base this book.

12	Topic:
	
	1 Introduction
	     1.1 What Operating Systems Do
	     1.2 Computer-System Organization
	     1.3 Computer-System Architecture
	     1.4 Operating-System Structure
	     1.5 Operating-System Operations
	     1.6 Process Management
	     1.7 Memory Management
	     1.8 Storage Management
	     1.9 Protection and Security
	     1.10 Distributed Systems
	     1.11 Special-Purpose Systems
	     1.12 Computing Environments
	     1.13 Open-Source Operating Systems
	
	2 Operating System Structures
	     2.1 Operating-System Services
	     2.2 User Operating-System Interface
	     2.3 System Calls
	     2.4 Types of System Calls
	     2.5 System Programs
	     2.6 Operating-System Design and Implementation
	     2.7 Operating-System Structure
	     2.8 Virtual Machines
	     2.9 Operating-System Debugging
	     2.10 Operating-System Generation
	     2.11 System Boot
	
	3 Processes
	     3.1 Process Concept
	     3.2 Process Scheduling
	     3.3 Operations on Processes

14	Additional references:
	Abraham Silberschatz, New Haven, CT, 2008
	Peter Baer Galvin, Burlington, MA 2008
	Greg Gagne, Salt Lake City, UT, 2008
	An understanding of computer architecture and Java/C programming skills.
	W. Stewart, After notes on Numerical Analysis, SIAM, Philadelphia 1996.
	http://www.personal.kent.edu/~rmuhamma/OpSystems/os.html
	http://cseweb.ucsd.edu/classes/fa00/cse120/
	Operating System Concepts (6th Edition)