

With effect from the A.Y 2018-19

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
SYLLABUS FOR B.E VI SEMESTER**

**INTRODUCTION TO OPERATING SYSTEMS (Open Elective-VI)
(for other Departments)**

Instruction: 1 Hr /week	SEE Marks :50	Course Code :OE610CS
Credits : 1	CIE Marks: 30	Duration of SEE : 2 Hrs

Course objective	Course outcomes
At the end of the Course students should be able to:	At the end of the Course students will be able to:
<ul style="list-style-type: none">• Understand different Operating system Structures, Services and threading models	<ol style="list-style-type: none">1. Differentiate Operating system structures to show the evaluation of an operating system2. Analyze the role of an Operating system in executing tasks on a system3. Distinguish single threaded and multi threaded models of execution4. Compare CPU scheduling algorithms to find effective algorithm for a given instance of process

UNIT-I

Introduction to operating systems: Definition, Mainframe, Multiprocessor, Clustered and Real time systems, Distributed, OS System structure, Unikernel, OS Services, Virtual machines, Containers, System calls.

UNIT-II

Process: Process concept, Process Scheduling, Inter-process communication, Threads, Multithreading Models.

CPU Scheduling: Scheduling Criteria, Scheduling Algorithms, Multiprocessor scheduling.

Suggested Books:

1. Abraham Silberschatz, Peter B. Galvin, Greg Gagne, Operating System Concepts, 9th Edition (2016), Wiley India.

Reference Books:

1. Andrew S. Tanenbaum, Modern Operating Systems, 2nd Edition (2001), Pearson Education, Asia.
2. Dhananjay, Dhamdhere.M, Operating System-concept based approach, 3rd edition (2009), Tata McGraw Hill, Asia
3. Robert Love, Linux Kernel Development, (2004)Pearson Education
4. Richard Stevens, Stephen Rago, Advanced Programming in the UNIX Environment, 3rd Edition (2013), Pearson Education

Online Resources:

<https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-828-operating-system-engineering-fall-2012/>