

Birla Institute of Technology & Science, Pilani
Work-Integrated Learning Programmes Division

Second Semester 2009-2010
Course Handout

Course No. : IS ZC362

Course Title : Operating Systems

Course Description

Introductory concepts of Operating Systems; Process Management, Memory Management, File Systems- Security & Protection, Input- Output principles; Deadlocks detection and avoidance; Distributed computing; Examples of some widely used Operating Systems.

Scope and Objective of the course

- (a) To provide an understanding of the functions of an operating systems.
- (b) To provide an insight into functional modules of an operating systems.
- (c) To study the concepts underlying the design and implementation of operating systems.

Prescribed Textbook

T1. Silberschatz, A. and Peter B. Galvin, Operating System Principles, WSE, 7th Ed., 2006.

Reference Books:

R1. Stallings W, "Operating Systems", 4th edition, Pearson Edition, 2001.

R2. Bach M J, "The Design of Unix Operating System", PHI, 1993.

R3. Tanenbaum A.S., "Modern Operating Systems", 4th Edition, Pearson Edition, 2001.

R4. Gary Nutt, "Operating Systems- A Modern perspective", 3rd Edition, Pearson, 2000.

Plan of Self-Study:

Week No.	Topic	Reference to Text Book
1.	Introduction	Chapter 1
2.	System Structures	Chapter 2
3.	Process-Concept	Chapter 3
4.	Multithreaded Programming	Chapter 4
5 & 6	Process Scheduling	Chapter 5
7.	Synchronization	Chapter 6
8.	Deadlock	Chapter 7
Syllabus for Mid Semester Test (Closed Book): Topics in Week No. 1 to 8		
9.	Memory-Management Strategies	Chapter 8
10.	Virtual-Memory Management	Chapter 9
11.	File System	Chapter 10
12.	Implementing File Systems	Chapter 11
13.	Secondary – Storage Structure	Chapter 12
14.	I/O Systems	Chapter 13
15.	Distributed Operating Systems	Chapter 14
16.	The Linux System	Chapter 21
Syllabus for Comprehensive Exam (Open Book): All topics given in Plan of Self Study		

Evaluation Scheme:

EC No.	Evaluation Component & Type of Examination	Duration	Weightage	Day, Date, Session, Time
EC-1	Mid-Semester Test (Closed Book)*	2 Hours	40%	Sunday, 07/02/2010 (FN)* 10 AM – 12 Noon
EC-2	Comprehensive Exam (Open Book)*	3 Hours	60%	Sunday, 04/04/2010 (FN)* 9 AM – 12 Noon

*** Legend:**

AN: AfterNoon Session; FN: ForeNoon Session

Closed Book Test: No reference material of any kind will be permitted inside the exam hall.

Open Book Exam: Use of any printed / written reference material (books and notebooks) will be permitted inside the exam hall. Loose sheets of paper will not be permitted. Computers of any kind will not be allowed inside the exam hall. Use of calculators will be allowed in all exams. No exchange of any material will be allowed.

Note:

It shall be the responsibility of the individual student to be regular in maintaining the self study schedule as given in the course handout, attend the online/on demand lectures as per details that would be put up in the BITS DLP website www.bits-pilani.ac.in/dlp-home and take all the prescribed components of the evaluation such as Mid Semester Test and Comprehensive Examination according to the Evaluation Scheme given in the respective Course Handout. If the student is unable to appear for the Regular Test/Examination due to genuine exigencies, the student must refer to the procedure for applying for Make-up Test/Examination, which will be available through the **Important Information** link on the BITS DLP website on the date of the Regular Test/Examination. The Make-up Tests/Exams will be conducted only at selected exam centres on the dates to be announced later.

Instructor-in-Charge