MERI College of Engineering & Technology (MERI-CET)

Session: 2018-2019   Course- CSE
Department: CSE   Semester: 5th
Subject code: CSE-301-F   Faculty Name : Ms. Sonal

MERI COLLEGE OF ENGINEERING & TECHNOLOGY

LESSON PLAN FILE

ACADEMIC SESSION   ---------------------- 2018-19

BRANCH NAME ------------------------------ CSE (5TH SEM)

SUBJECT   -------------------------------------- OPERATING SYSTEM

PAPER CODE   -------------------------------- CSE-301-F   LECTURE PER WEEK = 03

FACULTY NAME   ---------------------------   MS. SONAL

SIGNATURE :

HOD REMARK

LESSON PLAN FILE HAS BEEN PREPARED AS PER UNIVERSITY SYLLABUS.

REGISTRAR   DIRECTOR

Session: 2018-2019   **Course- CSE**
Department: CSE   **Semester: 5th**
Subject code: CSE-301-F   **Faculty Name : Ms. Sonal**
(DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING)

LESSON PLAN FILE

Name of the Faculty :

Semester :

Subject :

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Principles of Operating Systems

CSE-301-F   Duration of Exam : 3 Hrs.

L T P   Class Work : 50 Marks

3 1 -   Exam : 100 Marks

     Total : 150 Marks

NOTE: For setting up the question paper, question no 1 will be set up from all the four sections which will be compulsory and of short answer type. Two questions will be set from each of the four sections. The students have to attempt first common question, which is compulsory, and one question from each of the four sections. Thus students will have to attempt 5 questions out of 9 questions.

Section-A

Introduction: Introduction to Operating System Concepts (including Multitasking, multiprogramming, multi user, Multithreading etc)., Types of Operating Systems: Batch operating system, Time-sharing systems, Distributed OS, Network OS, Real Time OS; Various Operating system services, architecture, System programs and calls. Process Management: Process concept, process scheduling, operation on processes; CPU scheduling, scheduling criteria, scheduling algorithms -First Come First Serve (FCFS), Shortest-Job-First (SJF), Priority Scheduling, Round Robin(RR), Multilevel Queue Scheduling.

Section-B

Memory Management: Logical & Physical Address Space, swapping, contiguous memory allocation, non-contiguous memory allocation paging and segmentation techniques, segmentation with paging; virtual memory management - Demand Paging & Page-Replacement Algorithms; Demand Segmentation.

Section-C

File System: Different types of files and their access methods, directory structures, various allocation methods, disk scheduling and management and its associated algorithms, Introduction to distributed file system. Process-Synchronization & Deadlocks: Critical Section Problems, semaphores; methods for handling deadlocks-deadlock prevention, avoidance & detection; deadlock recovery.

Section D

I/O Systems: I/O Hardware, Application I/O Interface, Kernel, Transforming I/O requests, Performance Issues and Thresds Unix System And Windows NT Overview Unix system call

for processes and file system management, Shell interpreter, Windows NT architecture verview, Windows NT file system.

Text Books:

Operating System Concepts by Silberchatz et al, 5 edition, 1998, Addison-Wesley.

Modern Operating Systems by A. Tanenbaum, 1992, Prentice-Hall.

Operating Systems Internals and Design Principles by William Stallings,4 edition, 2001, Prentice-Hall

Reference Books:

Operating System By Peterson , 1985, AW.

Operating System By Milankovic, 1990, TMH.

Operating System Incorporating With Unix & Windows By Colin Ritche, 1974, TMH.

Operating Systems by Mandrik & Donovan, TMH

Operating Systems By Deitel, 1990, AWL.

Operating Systems – Advanced Concepts By Mukesh Singhal , N.G. Shivaratri, 2003, T.M.H

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Focal Point for the Semester

1. Effort will be made to make the student conversant with the syllabus of the Subject & the importance of the subject on the first day. Books on the subject available in the library & market will be listed.
2. Effort will be made so that Student should remain present in the class mentally not physically. Questions will be asked on the topic taught in the class & presence(attendance) will be given to those students who will reply satisfactorily.
3. Regular test will be conducted.
4. Assignment will be given as per schedule.
5. Practical aspects of the student will be taught.

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COURSE OBJECTIVE

The Course emphasizes on advancement in the different types of steel structure. The complete details about steel section together with respective types of their use will be explained rigorously. After completion of course student will able to understand.

METHODOLOGY

The pedagogy will be lectures, presentations, Tutorials, assignments of class work and Practical work in the field.

ACHIEVEMENT

After the completion of course, all student will have detailed knowledge of steel structure, design of different steel members and plate girders.

EVALUATION

Besides the semester end – examination, the students will be continuously assessed during the course on the following basis

A. Mid Term Examinations 20 Marks

B. Attendance 10 Marks

C. Assignment &behavior 20 Marks

D. End Semester Examination 100 Marks

Total 150 Marks

Session: 2018-2019
Department: CSE
Subject code: CSE-301-F

Course- CSE
Semester: 5th
Faculty Name : Ms. Sonal

Name of the Faculty	:	Ms. Sonal (Theory & Practical)
Discipline	:	CSE
Semester	:	5th
Subject	:	Operating System (CSE-301-F)
Lesson Plan Duration	:	15 Weeks (from Aug., 2018 to Nov., 2018)

** Work Load (Lecture/Practical) per week (in hours): Lectures-03, Practicals-06

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical day	Topic
1st	1st	**Introduction:** Introduction to Operating System Concepts (including Multitasking, multiprogramming, multi user, Multithreading etc)	1st	Study of WINDOWS 2000 Operating System.
	2nd			
	3rd			
	4th	Types of Operating Systems: Batch operating system,		
2nd	5th	Time-sharing systems, Distributed OS, Network OS, Real Time OS;	2nd	Administration of WINDOWS 2000 (including DNS,LDAP, Directory Services)
	6th			
	7th	Various Operating system services, architecture, System programs and calls.		
	8th			
3rd	9th	**Process Management:** Process concept, process scheduling,	3rd	Study of LINUX Operating System (Linux kernel, shell, basic commands pipe & filter
	11th			
4th	12th	operation on processes;	4th	Administration of LINUX Operating System
	13th	CPU scheduling, scheduling criteria,		
	14th	scheduling algorithms -First Come First Serve (FCFS), Shortest-Job-First (SJF),		
	15th			
5th	16th	Priority Scheduling, Round	5th	Writing of Shell Scripts

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	17th	Robin(RR), Multilevel Queue Scheduling.		(Shell programming).
	18th	**Memory Management:** Logical & Physical Address Space,		
	19th	swapping, contiguous memory		
6th	20th	allocation, non-contiguous memory allocation	6th	
	21st	paging and segmentation techniques, segmentation with paging; virtual memory management.		AWK programming. commands).
	22nd			
	23rd			
7th	24th	Demand Paging & Page- Replacement Algorithms;		
	25th			
	26th	Demand Segmentation		
	27th	**File System:** Different types of files and their access methods		
8th	28th			
	29th	directory structures,		
	30th	various allocation methods, disk scheduling and management		
	31st			
9th	32nd			
	33rd	its associated algorithms		
	34th	Introduction to distributed file system		
	35th			
10th	36th	**Process-Synchronization & Deadlocks:**		
	37th	Critical Section Problems		
	38th	semaphores;		
	39th	methods for handling deadlocks- deadlock prevention		
	40th			
11th	41st	avoidance & detection; deadlock recovery.		
	42nd			
	43rd			
	44th	**I/O Systems:** I/O Hardware		
12th	45th	Application I/O Interface, Kernel		
	46th			
	47th	Transforming I/O requests		
	48th	Performance Issues and Thresds		
13th	49th	**Unix System And Windows NT Overview**		
	50th	Unix system call for processes and file system management, Shell interpreter		
	51st			

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	52nd	Windows NT architecture overview, Windows NT file system		
14th	52nd	Revision of syllabus		
	53rd	Revision of syllabus		
	54th	Revision of syllabus		
	55th	Revision of syllabus		
15th	56th	**Pre-University Exams**		