



SESSION PLAN

***Lecture / Tutorial / Laboratory / Workshop**

(* DELETE AS APPROPRIATE)

COURSE PARTICULARS	
#:AE- S317.....	Title: New Trends(Operating system)

SESSION PARTICULARS		
#: ...1...	Title: Background	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Computer architecture evolution
2	Digital VS analog representation
3	Basic elements of computers
4	I/O communication Techniques
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Prepared by
 Designation
 Name Ms.Lamiaa Mostafa
 Sign
 Date 15/8/2010

Approved by
 Designation
 Name Dr.Walid Abdelmoez
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 Date 15/8/2010

Lecture

Source Material :

Operating systems ,Internals and Design Principles – William Stallings, ,5th Edition

Supplementary Material: Projector, white board.

Educational Resources: Handouts, presentations, assignments.

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COURSE PARTICULARS	
#:AE- S317.....	Title: New Trends(Operating system)

SESSION PARTICULARS		
#: ...2...	Title: computer system overview	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Processor registers
2	Instruction execution
3	interrupts
4	The memory hierarchy
5	Cache memory
6	Exceptions
7	Supervisor calls - software interrupts
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#:AE- S317.....	Title: New Trends(Operating System)

SESSION PARTICULARS		
#: ...3...	Title: Operating System Overview	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Operating system objectives and functions
2	The evolution of operating systems
3	Major achievements
4	Characteristics of modern operating systems
5	
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#:AE- S317	Title: New Trends (Operating system

SESSION PARTICULARS		
#: ...4...	Title: Process Description	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Process states
2	Process description
3	Process VS Program
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COURSE PARTICULARS	
#:AE- S317	Title: New Trends (Operating system

SESSION PARTICULARS		
#: ...5...	Title: Process control and context switching mechanisms.....	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Process control
2	Process Creation
3	Process Termination
4	PCB
5	CPU VS I/O bound processes
6	Context switching description and mechanisms
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COURSE PARTICULARS	
#:AE- S317.....	Title New Trends(Operating system)

SESSION PARTICULARS		
#: ...6...	Title: Schedulers ,Threads,mutiprocessing	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Short term scheduler
2	Medium Term schedule
3	Long Term Scheduler
4	Scheduling techniques
5	State transitions
6	Threads Vs Process
7	User lever Threads VS Kernel lever Threads
8	Multiprocessing description
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COURSE PARTICULARS	
#:AE- F613.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...7...	Title: Midterm Exam	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Exam
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COURSE PARTICULARS	
#:AE- S317.....	Title: New Trends(Operating system)

SESSION PARTICULARS		
#: ...8...	Title: Concurrency and mutual exclusion	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Principles of concurrency
2	Process Interaction
3	Mutual exclusion: software approaches
4	IPC and RPC
5	Critical section problem
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COURSE PARTICULARS	
#:AE- S317.....	Title: New Trends(Operating system)

SESSION PARTICULARS		
#: ...9...	Title: Messaging and synchronization	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Message passing
2	Messaging protocols
3	Synchronization
4	Producer/Consumer problem
5	Readers / writers problem
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COURSE PARTICULARS	
#:AE- S317.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...10...	Title: Concurrency deadlock and starvation	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Principles of Deadlock
2	Conditions for deadlock
3	RAG
4	The Dining Philosophers Problem
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COURSE PARTICULARS	
#:AE- S317.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...11...	Title: Deadlock prevention and deadlock detection	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Deadlock Prevention
2	Deadlock Avoidance
3	Banker Algorithm
4	Deadlock Detection
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COURSE PARTICULARS	
#:AE- S317.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...12...	Title: Deadlock prevention and Deadlock Detection Contd.	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Deadlock prevention and Deadlock Detection Contd.
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COURSE PARTICULARS	
#:AE- S317.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...13...	Title: Memory Management and organization	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Memory management requirements
2	Operating system software
3	Real storage VS Virtual storage
4	The Fetching Problem
5	The Placement Problem
6	The replacement problem
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COURSE PARTICULARS	
#:AE- S317.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...14...	Title: Memory Management Techniques	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	User's memory request versus usage
2	The basic blocking architectures
3	Paging organization
4	Segmentation organization
5	Hybrid organization
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COURSE PARTICULARS	
#:AE- S317.....	Title: ...New Trends (Operating System)

SESSION PARTICULARS		
#: ...15...	Title: Memory contd.: Paging and Revision.	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Logical VS Physical address
2	Paging technique
3	Frame description
4	Revision
5	Post allocation
6	Memory Security and sharing
7	Revision
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COURSE PARTICULARS	
#:AE- S317.....	Title: New Trends (Operating System)

SESSION PARTICULARS		
#: 16...	Title: Final Exam	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Exam
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