

	Department/ Programme:	Course Code: CPT 115		Contact Hours: 45
	Subject/Course: Operating system I			Theoretical: 2 hours/week
	Year: Semester:	Pre-requisite:	COM 101	Practical: 2 hours /week

General Objectives: On completion of this course the student should be able to:

- 1.0 Know the different types of operating systems.**
- 2.0 Know the structure, functions, and philosophy of operating systems.**
- 3.0 Understand interposes communication.**
- 4.0 Know various scheduling techniques.**
- 5.0 Understand interrupt and masking traps.**
- 6.0 Understand Operating system nucleus (Kernel).**
- 7.0 Know the different operation system commands.**

	Course: Operating System I	Course Code: CPT 115		Contact Hours:45		
				Theoretical: 2 hours/week		
	Year: One	Semester: One	Pre-requisite:		Practical: 2 hours /week	
	Theoretical Content			Practical Content		
	1.0 General Objective 1.0: Know the different types of operating systems.					
Wee k/s	Specific Learning Outcomes	Teacher's activities	Resources	Specific Learning Outcomes	Teacher's activities	Resources
1	To comprehend the meaning, importance and the classes of operating system.	<ul style="list-style-type: none"> Describe operating system(OS) Explain the importance of OS, using real life examples Micro and mainframe Computers 	PC's with different Operating system such as Manual on the operating system in 2 above Text books on operating systems Projectors.	Ability to manipulate different types of operating systems	Guide students using different operating systems	PC's with varying operating systems
2	Know the importance of OS	<ul style="list-style-type: none"> Classify OS into batch, real time, time-sharing and 	PC's with different Operating	Ability to manipulate	Guide students	PC's with varying

		<p>networking.</p> <ul style="list-style-type: none"> List some examples of OS, in 1.3 above. List some OS, on 	<p>system such as</p> <p>Manual on the operating system in 2 above</p> <p>Text books on operating systems Projectors.</p>	<p>different types of operating systems</p>	<p>using different operating systems</p>	<p>operating systems</p>
3	Understand different types of Operating system	<ul style="list-style-type: none"> Describe the concept of mono programming multiprogramming processing. Give example of OS having feature, in 1.6 	<p>PC's with different Operating system such as</p> <p>Manual on the operating system in 2 above</p> <p>Text books on operating systems Projectors.</p>	<p>Ability to manipulate different types of operating systems</p>	<p>Guide students using different operating systems</p>	<p>PC's with varying operating systems</p>

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Week/s	1.0 General Objective 2.0: Know the structure, functions, and philosophy of operating systems.					
4	Be able to <ul style="list-style-type: none"> • Discuss the resource management function of OS 	To state and explain <ul style="list-style-type: none"> • The function of OS in relation to memory management, management and interrupt handling, information management. • the characteristic of OS: concurrency, sharing, non- reliable, etc • 	ditto	Be able to understand the design of operating systems.	To assist students to Carry out operating system design.	ditto
5	<ul style="list-style-type: none"> • Discuss the design philosophy of OS with the advantages 	To know the plan		Be able to understand	To assist students to	

		<ul style="list-style-type: none"> • features of OS: efficiency; reliabilities, main tanalistic and size • the attributes of monolithic 	ditto	the design of operating systems.	Carry out operating system design.	ditto
6	Be able to <ul style="list-style-type: none"> • understand the layers 	<ul style="list-style-type: none"> • Explain the layers system • Attributes of a layers Concept of value machines				
Week/s	General Objective 3.0: Understand_inter_process_communication					
7	To be able to <ul style="list-style-type: none"> • Discuss the process concepts 	To be able to describe and explain <ul style="list-style-type: none"> • A process • The process states • the process table • Inter process 	PC with OHP	To identify processes involved in real life problems such as making a cup of tea.	To provide the students with identifiable processes involved in	PC with multimedia resources.

		<ul style="list-style-type: none"> communication 			real life problems	
8	<ul style="list-style-type: none"> Discuss the interprocess communication techniques 	<ul style="list-style-type: none"> To be able to describe and explain Inter process communication Process creation and process terminations <p>watt signal, semylose and deadlock</p>	PC with OHP		To provide the students with identifiable processes involved in real life problems	PC with multimedia resources.
Weeks	General Objective 4: Know various scheduling techniques					
9	To be able to understand the various process/processor scheduling techniques and highlight their relative advantages and the disadvantages.	<ul style="list-style-type: none"> To Describe LIFO, FIFO, round robin priority, SJN, SRJN, etc Explain traffic density Explain facilities utilization. 	Ditto	To make students develop schedules with operating system.	Demonstrate how schedules can be developed with operating system. Allow students to develop schedules.	Networked PC's.
10	To be able to recognize the need	<ul style="list-style-type: none"> Explain the necessity for purity, re-entreaty of codes for multiprogramming in the UN, processor system. 	Ditto	To make students develop schedules with operating system.	Demonstrate how schedules can be developed with operating system. Allow	Networked PC's.

					students to develop schedules.	
11	To be able to differentiate	<ul style="list-style-type: none"> Distinguish between pages and segment. 	Ditto	To make students develop schedules with operating system.		Networked PC's.
Weeks	General Objective 5: Understand interrupt and masking traps					
12	To discuss the meaning and effect of interrupt and masking traps.	<ul style="list-style-type: none"> Define interrupt vector Describe the use of interrupt vector State the use of masking in relation to interrupt Describe traps 	PC with OHP	Ability to recognise the existence of interrupt and masking traps.	Demonstrate using relevant examples concept of interrupt and masking traps.	PC and OHP
13	To be able understand the difference	<ul style="list-style-type: none"> Differentiate between traps and interrupt Explain levels of interrupt Differentiate between S/O interrupt timers, Hardware error and programming interrupt 	PC with OHP	Ability to recognise the existence of interrupt and masking traps.	Demonstrate using relevant examples concept of interrupt and masking traps.	PC and OHP
Week/s	General Objective 6: Understand OS nucleus (Kernel)					
14	Discuss the component of OS nucleus	<ul style="list-style-type: none"> Define OS nucleus (Kernel) 	PC and OHP	Carry out operations on	Assign students	PC's

		<ul style="list-style-type: none"> Describe the component of OS system, dispatch etc 		different components of OS system.	specific operations on OS systems.	
Weeks	General Objective: 7.0 Knows the different operation system commands					
15	Discuss the system commands for carrying out number of operating in the computer in the OS environment.	<ul style="list-style-type: none"> State the system commands of MS-DOS, WINDOWS, UMX WINDOW NT, PC-DOS ETC. 	PC with OHP	Apply the commands in appropriate OS.	Assist students to apply the commands in a chosen OS environment.	PC's

Assessment: Give details of assignments to be used:
 Coursework/ Assignments 20 %; Course test 10 %; Practical 20 %; Projects %; Examination 50%

Type of Assessment	Purpose and Nature of Assessment (COM 311)	Weighting (%)
Examination	Final Examination (written) to assess knowledge and understanding	50
Test	At least 2 progress tests for feed back.	10
Practical	To be set and assessed by the teacher	20
Coursework/ assignment		20
Total		100

Recommended Textbooks & References
Different Operating System manuals.