



Yogoda Satsanga Mahavidyalaya

JAGANNATHPUR, DHURWA, RANCHI – 834004

Email address: ysmranchi4@gmail.com

(NAAC Accredited, Grade: B++, CGPA: 2.89)

COURSE PLAN

NAME OF THE DEPARTMENT:	BCA/IT
NAME OF THE FACULTY:	Prof. GOUTAM SANYAL AND Prof. PRIYANKA KUMARI
ACADEMIC SESSION:	2023-24
YEAR:	2024
PROGRAMME:	BCA/IT
SEMESTER:	III
COURSE TYPE:	HONS.
COURSE NAME:	OS
COURSE CODE:	C6
TOTAL CREDIT:	6



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PROGRAMME OUTCOMES (PO):

PO1: Scientific & Computational Knowledge: - Apply the information on scientific & computational ideas, software engineering and innovation basics.

PO2: Problem Analysis, Design & Implementation: - Identify, formulate and analyze real world problem. Design solution for Software, Hardware & Networking problems and implementation using Software & Network tools.

PO3: Modern tool usage: - Ability to select modern computing tools, skills and techniques necessary for innovative software solutions.

PO4: Project Management: -Comprehend Software Engineering and Technology standards and apply these to prepare own project and system as a part and pioneer in a group.

PO5: Career Development & Entrepreneurship: Classify opportunities, private enterprise dream and use of original thoughts to build worth and means for the betterment of the human being and the world.

PO6: Communication: Communicate effectively on computational & information Technology activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO7: Ethics: Ability to apply and commit professional Ethics, cyber regulations & control on software piracy in a global economic environment.

PO8: Preparing students for future aspects: Building and improving their creativity, social awareness, and general knowledge.

PO9: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological changes.

PROGRAMME SPECIFIC OUTCOMES (PSO):

PSO1: An ability to apply technical comprehension in varied areas of Computer Applications and experience a conducive environment in cultivating skills for thriving career and higher studies.

PSO2: Understand the concept of Programing logic, Web designing logic, Signal processing, Image processing, Mobile Applications, Multimedia Media.



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PSO3: Develop competencies in various disciplines of technologies such as Server-side Web applications, computer networking, software engineering, database concepts and programming

A. COURSE OUTCOMES (COs):

CO1: Learn the basic of OS functions, resource abstraction, types of operating systems—multiprogramming systems, batch systems, time sharing systems; operating systems for personal computers & workstations, process control & real time systems.

CO2: Understand the Processor and user modes, kernels, system calls and system programs.

CO3: Understand System view of the process and resources, process abstraction, process hierarchy, threads, threading issues, thread libraries; Process Scheduling, non-pre-emptive and pre-emptive scheduling algorithms; concurrent and processes, critical section, semaphores, methods for inter-process communication; deadlocks.

CO4: Applying process scheduling, non-pre-emptive and pre-emptive scheduling algorithms; concurrent and processes, critical section, semaphores, methods for inter-process communication; deadlocks.

CO5: Analysis Directory structure, file operations, file allocation methods, device management.

CO6: Understand Physical and virtual address space; memory allocation strategies -fixed and variable partitions, paging, segmentation, virtual memory

CO7: Evaluating Policy mechanism, Authentication, Internal access Authorization.

COURSE TEACHING AND LEARNING ACTIVITIES

A. PEDAGOGY

- i. Whiteboard √
- ii. Flipped Class √
- iii. PPT √

B. COURSE COMPLETION PLAN

UNIT	NO. OF LECTURES		TEST	QUIZ	ASSIGNMENT
	THEORY	PRACTICAL/TUTORIAL			
1	15		√		√
2	15		√		√
3	30		√		√
4	10		√		√
5	14		√		√



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6	8		√		√
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B. COURSE DELIVERY PLAN:

UNIT	TOPIC/SUBTOPIC	LECTURE REQUIRED (Theory & Practical)	CO ADDRESSED	ASSIGNMENT/ TEST/ QUIZ
1	Basic OS functions, resource abstraction, types of operating systems– multiprogramming systems, batch systems , time sharing systems; operating systems for personal computers & workstations, process control & real time systems.	15	CO1	√
2	Processor and user modes, kernels, system calls and system programs.	15	CO2	√
3	System view of the process and resources, process abstraction, process hierarchy, threads, threading issues, thread libraries; Process Scheduling, non-pre-emptive and pre-emptive scheduling algorithms; concurrent and processes, critical section, semaphores, methods for inter-process communication; deadlocks.	30	CO3,CO4	√



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4	Physical and virtual address space; memory allocation strategies -fixed and variable partitions, paging, segmentation, virtual memory	10	CO6	√
5	Directory structure, file operations, file allocation methods, device management.	14	CO5	√
6	Policy mechanism, Authentication, Internal access Authorization.	8	CO7	√

C. COURSE OUTCOME ASSESSMENT PLAN

a. DIRECT ASSESSMENT

(Please tick the appropriate column)

COURSE OUTCOME	ASSESSMENT				REMARKS
	QUIZ	TEST	MID SEMESTER	END SEMESTER	
CO1		√	√		
CO2		√	√		
CO3		√	√		
CO4		√	√		
CO5		√	√		
CO6		√	√		
CO7		√	√		

b. INDIRECT ASSESSMENT (STUDENT SURVEY)

Rate the following aspects of course outcomes. Use the scale 1-3



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S. No	Course Outcome	1	2	3
1.	CO1	√		
2.	CO2	√		
3.	CO3			√
4.	CO4		√	
5.	CO5		√	
6.	CO6			√

1. Average
2. Good
3. Very Good

D. SUGGESTED READINGS

a. TEXT BOOKS

- A Silberschatz, P.B. Galvin, G. Gagne, Operating Systems Concepts, 8Edition, John Wiley Publications

b. REFERENCE BOOKS

- A.S. Tanenbaum, Modern Operating Systems, 3rd Edition, Pearson Education 2007.
- Internals & Design Principles , 5th Edition, Prentice Hall of India.

c. VIDEO RESOURCE

- Operating system by Dr. P.K.Biswas , IIT Kharagpur

<https://www.youtube.com/playlist?list=PLLDC70psjvq5hIT0kfr1sirNuees0NIbG>

Neso Academy

https://www.youtube.com/playlist?list=PLBlnK6fEyqRiVhbXDGLXdk_OQAeuVcp2O

d. E-RESOURCES

<https://drive.google.com/drive/u/0/folders/1i4suqsHSfxqn4MT8hQSRAZGHyi4t9Xrn>