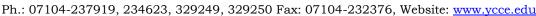
Nagar Yuwak Shikshan Sanstha's





(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)
Hingna Road, Wanadongri, Nagpur - 441 110

NAAC A++





Department of Computer Technology

Vision of the Department

To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department

To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary area by developing Problem-solving skills through emerging technologies.

Session 2025-2026

Vision: To harness the power of artificial	Mission: To acquire skills through
intelligence and data science to solve real-world	coursework, projects, and internships, while
problems and enhance human potential.	actively engaging in research and
	collaboration with peers to innovate and
	apply AI solutions.

Program Educational Objectives of the program (PEO): (broad statements that describe the professional and career accomplishments)

PEO1	Preparation	P: Preparation	Pep-CL abbreviation
PEO2	Core Competence	E: Environment	pronounce as Pep-si-lL
		(Learning Environment)	easy to recall
PEO3	Breadth	P: Professionalism	
PEO4	Professionalism	C: Core Competence	
PEO5	Learning	L: Breadth (Learning in	
	Environment	diverse areas)	

Program Outcomes (PO): (statements that describe what a student should be able to do and know by the end of a program)

Keywords of POs:

Engineering knowledge, Problem analysis, Design/development of solutions, Conduct Investigations of Complex Problems, Engineering Tool Usage, The Engineer and The World, Ethics, Individual and Collaborative Team work, Communication, Project Management and Finance, Life-Long Learning

PSO Keywords: Cutting edge technologies, Research

"I am an engineer, and I know how to apply engineering knowledge to investigate, analyse and design solutions to complex problems using tools for entire world following all ethics in a collaborative way with proper management skills throughout my life." <u>to contribute to the development of cutting-edge</u> technologies and Research.

Integrity: I will adhere to the Laboratory Code of Conduct and ethics in its entirety.

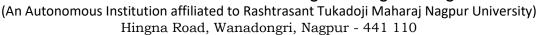
Prerana Bijekar 28 August 2025

Name and Signature of Student and Date
(Signature and Date in Handwritten)





Yeshwantrao Chavan College of Engineering





NAAC A++

Ph.: 07104-237919, 234623, 329249, 329250 Fax: 07104-232376, Website: www.ycce.edu

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Session	2025-26 (ODD)	Course Name	HPC Lab
Semester	7	Course Code	22ADS706
Roll No	11	Name of Student	Prerana Bijekar

Practical Number Course Outcome	CO1: Understand and Apply Parallel Programming Concepts CO2: Analyze and Improve Program Performance. CO3: Demonstrate Practical Skills in HPC Tools and Environments.		
Aim	Measuring Program Performance		
Theory (100 words)	 Definition: Program performance refers to how efficiently a program uses system resources (CPU, memory, I/O) to complete tasks. Key Metrics: Execution time (response time / latency). Throughput (tasks completed per unit time). CPU utilization. Memory usage. I/O performance. Measurement Tools: Profilers (gprof, perf), timers, benchmarking frameworks. Performance Factors: Algorithm efficiency, coding style, compiler optimizations, hardware limitations. Bottlenecks: Identified in CPU, memory, or I/O that slow down execution. Optimization: Achieved through better algorithms, parallelization, and resource management. 		
Procedure and Execution (100 Words)	Algorithm: • nano filename.extension: open file in editor • gcc –o filename filename.extension: compile file • ./filename: run file Code:		

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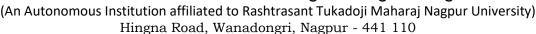
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Nagar Yuwak Shikshan Sanstha's



Yeshwantrao Chavan College of Engineering





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