SECOND-YEAR OF BACHELOR OF COMPUTER SCIENCE VOCATIONAL SKILL COURSE SYLLABUS ACCORDING TO CBCS NEP 2020

COURSE TITLE: LAB SKILL OF OPERATING SYSTEM

SEMESTER-III, W.E.F. 2024-2025

Recommended by the Board of Studies in Computer Science
And
Approved by the Academic Council
Devrukh Shikshan Prasarak Mandal's
Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and
Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh.
Tal. Sangameshwar, Dist. Ratnagiri-415804, Maharashtra,
India

Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce and Vid. Dadasaheb Pitre Science College, Devrukh (An Autonomous College Affiliated with University of Mumbai)

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Academic Council Item No: _____

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangameshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Science
Name of the Department	:	Computer Science
Name of the Class	:	Second Year
Semester	:	Three
No. of Credits	:	02
Title of the Course	:	Lab skill of Operating System
Course Code	:	CSVS201
Name of the Vertical in adherence to NEP 2020	:	Vocational Skill Courses (VSC) connected to Major
Eligibility for Admission	:	Any 12th Pass seeking Admission to Degree Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Formative and Summative
Level	:	UG
Pattern of Marks Distribution for TE and CIA	:	60:40
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2024-2025
Ordinances /Regulations (if any)		

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Syllabus for Second Year of Bachelor of Science in Computer Science

(With effect from the academic year 2024-2025)

SEMESTER-III   **Paper No.– 4**

Course Title: Lab skill of Operating System   **No. of Credits - 02**

Type of Vertical: Vocational Skill Courses (VSC) **COURSE CODE: S304CSP**

connected to Major

Learning Outcomes Based on BLOOM's Taxonomy:

After completing the course, the learner will be able to…		
Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	**Remember**	provide a understanding of operating system, its structures and functioning
CLO-02	**Apply**	understanding of algorithms used by operating systems for various purposes.
CLO-03	**Understand**	Understand the background role of memory management

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Syllabus for Second Year of Bachelor of Science in Computer Science

(With effect from the academic year 2024-2025)

SEMESTER-III   **Paper No.– 1**

Course Title: Lab skill of Operating System   **No. of Credits - 02**

Type of Vertical: Vocational Skill Courses (VSC)   **COURSE CODE: CSVS201**

connected to Major

\begin{tabular}{} \end{tabular}	COURSE CONTENT		
Module No.	**Content**	**Credits**	**No. of Lectures**
1	1. Installation of any one operating system(windows/linux) 2. Solve FCFS scheduling algorithm with the help of examples. 3. Solve SJF (with no preemption) scheduling algorithm with the help of examples. 4. Solve SJF (with preemption) scheduling algorithm with the help of examples 5. Solve priority based scheduling algorithm with the help of examples. 6. Solve RR scheduling algorithm with the help of examples 7. Solve Banker's algorithm with the help of examples 8. Solve FIFO page-replacement algorithm with the help of examples 9. Solve LRU page-replacement algorithm with the help of examples. 10. Solve Optimum page-replacement algorithm with the help of examples. 11. Solve FCFS disk scheduling algorithm with the help of examples. 12. Solve SSTF disk scheduling algorithm with the help of examples. 13. Solve SCAN disk scheduling algorithm with the help of examples. 14. Solve CSCAN disk scheduling algorithm with the help of examples. 15. Understanding the working of storage disk	02	30
	Total	02	30

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Required Previous Knowledge:

Students should know the types of basic computer handling and computer applications

Access to the Course

The course is available for all the students who have selected Computer Science as a major DSC.

Methods of Assessment:

Vocational Skill Courses, Skill Enhancement Courses and the courses having laboratory session shall be assessed at the end of each semester.

Reference book:
- Abraham Silberschatz, Peter Galvin, Greg Gagne, Operating System Concepts, Wiley, 2021

Text book:
- Techmax publication book

Additional References:
- Achyut S. Godbole, AtulKahate, Operating Systems, Tata McGraw Hill, 2017 2.
- Naresh Chauhan, Principles of Operating Systems, Oxford Press, 2014 3.
- Andrew S Tanenbaum, Herbert Bos, Modern Operating Systems, 4e Fourth Edition, Pearson Education, 2016

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