



SECOND-YEAR OF BACHELOR OF COMPUTER SCIENCE MAJOR REVISED SYLLABUS ACCORDING TO CBCS NEP 2020

COURSE TITLE: PRACTICAL OF CJ & DBMS
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

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	:	Practical of CJ & DBMS
Course Code	:	S304CSP
Name of the Vertical in adherence to NEP 2020	:	Major and Minor
Eligibility for Admission	:	Any 12 th 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)		

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

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: Practical of CJ & DBMS

No. of Credits - 02

Type of Vertical: Major and Minor

COURSE CODE: S304CSP

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	Identify and recall key terms and basic principles related to the practical
CLO-02	Apply	Solve problems by applying theoretical concepts to practical scenarios.
CLO-03	Analyze	Analyze data sets using appropriate tools and techniques.
CLO-04	Create	Communicate effectively through written reports or documentation.

Syllabus for Second Year of Bachelor of Science in Computer Science

(With effect from the academic year 2024-2025)

SEMESTER-III

Paper No.– 3

Course Title: Practical of CJ & DBMS

No. of Credits - 02

Type of Vertical: Major and Minor

COURSE CODE: S303CSP

COURSE CONTENT			
Module No.	Content	Credits	No. of Lectures
1	<p style="text-align: center;">Practical Of Core Java</p> <ol style="list-style-type: none"> 1. Accept integer values for a, b and c which are coefficients of quadratic equation. Find the solution of quadratic equation. 2. Accept two n x m matrices. Write a Java program to find addition of these matrices. 3. Accept n strings. Sort names in ascending order. 4. Create a package: Animals. In package animals create interface Animal with suitable behaviors. Implement the interface Animal in the same package animals. 5. Demonstrate Java inheritance using extends keyword. 6. Demonstrate method overloading and method overriding in Java. 7. Demonstrate creating your own exception in Java. 8. Using various swing components design Java application to accept a student's resume. (Design form) 9. Write a Java List example and demonstrate methods of Java List interface. 10. Design simple calculator GUI application using AWT components. 11. Design simple program for client server communication using socket programming 	01	15
2	<p style="text-align: center;">Practical of Database Management System</p> <ol style="list-style-type: none"> 1. Creating and working with Insert/Update/Delete Trigger using Before/After clause. 2. Writing Procedures in PL/SQL Block <ol style="list-style-type: none"> a. Create an empty procedure, replace a procedure and 	01	15

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	<p>call procedure</p> <p>b. Create a stored procedure and call it</p> <p>c. Define procedure to insert data</p> <p>d. A forward declaration of procedure</p> <p>3. Sequences: a. Creating simple Sequences with clauses like START WITH, INCREMENT BY, MAXVALUE, MINVALUE, CYCLE NOCYCLE, CACHE NOCACHE, ORDER NOORECER. b. Creating and using Sequences for tables</p> <p>4. Writing PL/SQL Blocks with basic programming constructs by including following:</p> <p>a. Sequential Statements</p> <p>b. unconstrained loop</p> <p>5. Writing PL/SQL Blocks with basic programming constructs by including following:</p> <p>a. If...then...Else, IF...ELSIF...ELSE... END IF</p> <p>b. Case statement</p> <p>6. Writing PL/SQL Blocks with basic programming constructs for following Iterative Structure:</p> <p>a. While-loop Statements</p> <p>b. For-loop Statements.</p> <p>7. Writing PL/SQL Blocks with basic programming constructs by including a GoTO to jump out of a loop and NULL as a statement inside IF</p> <p>8. Writing Functions in PL/SQL Block.</p> <p>a. Define and call a function</p> <p>b. Define and use function in select clause,</p> <p>c. Call function in dbms_output.put_line</p> <p>d. Recursive function</p> <p>e. Count Employee from a function and return value back</p> <p>f. Call function and store the return value to a variable</p> <p>9. Writing a recursive Functions in PL/SQL Block</p> <p>10. Study of transactions and locks</p>		
	Total	02	30

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:

- Herbert Schildt, Java The Complete Reference, Ninth Edition, McGraw-Hill Education, 2014
- Abraham Silberschatz, Henry F. Korth, S. Sudarshan, Database System Concepts, 6th Edition
- Ivan Bayross, "SQL, PL/SQL - The Programming language of Oracle", B.P.B. Publications

Text book:

- Techmax publication book

Additional References:

- E. Balagurusamy, Programming with Java, Tata McGraw-Hill Education India, 2014
- Programming in JAVA, 2nd Ed, Sachin Malhotra & Saurabh Choudhary, Oxford Press
- Ramez Elmasri & Shamkant B. Navathe, Fundamentals of Database Systems, Pearson Education
- Robert Sheldon, Geoff Moes, Beginning MySQL, Wrox Press.