S. P. Mandali's
Ramnarain Ruia Autonomous College

(Affiliated to University of Mumbai)

Syllabus for

Program: S.Y.B.Sc.

Program Code: RUSCS

(As per the guidelines of National Education Policy
2020-Academic year 2024-25)

(Choice based Credit System)

PROGRAM OUTLINE

B.Sc. Computer Science

Skill Enhancement Courses

YEAR	SEM	COURSE CODE	TYPE OF COURSE	COURSE TITLE	CREDITS
SY B.Sc.	IV	RUSSECCSPE 211	Skill Enhancement Course	Modern Application Development	2

<u>SEMESTER IV</u>

Course Code: – RUSSECCSPE211
Course Title: Modern Application Development
Academic year 2024-25

Skill Enhancement Course

COURSE OUTCOMES:

COURSE OUTCOME	DESCRIPTION **After Completing this course student will be able to :**
CO 1	**Identify and define the need of Node.js in Web Development.**
CO 2	**Implement MVC pattern of efficient and quick application development.**
CO 3	**Develop secure cloud based applications.**
CO 4	**Use Modern Database technology like MongoDB.**
CO 5	**Design responsive and interactive web sites.**

DETAILED SYLLABUS

Course Code	No	Modern Application Development	Lectures
	1	**Write a program to implement MongoDB data models**	
	2	Develop a simple CRUD (Create, Read, Update, Delete) application using Node.js and a MongoDB database	
	3	Design and implement web pages with its various features on various case studies like: ● Online shopping portal ● E-school portal ● Online learning platform etc... Students should be able to implement a new idea after doing all the Make use of various technologies like MongoDB, NodeJS and ReactJS.	
	4	Demonstrate how to send various HTTP status codes and response headers in Node.js.	
	5	Explain the concept of the event loop and its role in managing asynchronous tasks in Node.js.	
	6	Demonstrate how to import and use a custom module in another Node.js file.	
	7	Implement basic routing to handle different HTTP requests for CRUD operations.	
	8	Create React First app & display Hello world with the help of components	
	9	Using components to display set of data together on screen. Also create a CSS for the same.	
	10	Creating a form in react js using components properties & state	
	11	Programming with different data structures and functions using Typescript	
	12	Programming with classes and inheritance	
	13	Programming based on Vue js	
	14	Programming based on Vue js	
	15	Development of a web application with a combination of all	

Modality of Assessment

Skill Enhancement Courses (2 Credit)

Practical – 50 Marks

Practical Examination (Semester End): 50 marks
   a. **Practical Internal Assessment 10 Marks:** Students have to acquire at least 40% marks in each paper individually.
   b. **Practical Sem End Exam 40 Marks**.

Particulars	Practical
Internal Assessment(Journal & Regularity)	10
Laboratory work	40
Total	**50**