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Resolution No:AC/II(22-23).3.RUS6

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**S. P. Mandali's**  
**Ramnarain Ruia Autonomous College**  
*(Affiliated to University of Mumbai)*



**Syllabus for**

**Program: F.Y.B.Sc.**

**Program Code: RUSCS**

(As per the guidelines of National Education Policy 2020-  
Academic year 2023-24)

(Choice based Credit System)



**PROGRAM OUTLINE**  
**B.Sc. Computer Science**  
**Vocational Skill Enhancement Courses**

YEAR	SEM	COURSE CODE	TYPE OF COURSE	COURSE TITLE	CREDITS
FY B.Sc.	I	RUSVSCC S.O101	Vocational Skill Enhancement Course	Web Fundamentals	1
	I	RUSVSCC SP.O101	Practical based on VSE	Practical of Web Fundamentals	1
FY B.Sc.	II	RUSVSCC S.E111	Vocational Skill Enhancement Course	Web Programming	1
	II	RUSVSCC SP.E111	Practical based on VSE	Practicals of Web Programming	1



## SEMESTER I

**Course Code: RUSVSCCS.O101**

**Course Title: Web Fundamentals**

**Type of Course: Vocational Skill Courses**

**Academic year 2023-24**

COURSE OUTCOME	DESCRIPTION A student completing this course will be able to:
<b>CO 1</b>	Design valid, well-formed, scalable, and meaningful pages using emerging technologies.
<b>CO 2</b>	Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites
<b>CO 3</b>	Develop and implement Database Driven Websites.

### DETAILED SYLLABUS

RUSVSCCS.O101	Web Fundamentals	CREDITS 1 / 15 HOURS
<b>Unit I</b>	<p><b>HTML:</b> Fundamental Elements of HTML, Formatting Text in HTML, Organizing Text in HTML, Links and URLs in HTML, Tables in HTML, Images on a Web Page, Image Maps, FORMS in HTML</p> <p><b>HTML5:</b> Working with Multimedia - Audio and Video File Formats, HTML elements for inserting Audio / Video on a web page</p> <p><b>CSS:</b> Understanding the Syntax of CSS, CSS Selectors, Inserting CSS in an HTML Document, Types of CSS.</p> <p><b>PHP with MySQL:</b> Intro, Syntax, Variables and Operators, Program Flow, Arrays, Working with Files and Directories, Working with Databases, Working with Cookies, Sessions and Headers</p>	15 Hrs

#### Textbooks:

1. HTML 5 Black Book, Covers CSS 3, JavaScript, XML, XHTML, AJAX, PHP and jQuery, 2ed, Dreamtech Press
2. Web Programming and Interactive Technologies, scriptDemics, StarEdu Solutions India(2017).
3. PHP: A Beginners Guide, Vikram Vaswani, TMH, 1st edition

#### Additional References:

1. HTML, XHTML, and CSS Bible Fifth Edition, Steven M. Schafer, WILEY
2. Learn to Master HTML 5, scriptDemics, StarEdu Solutions Pvt Ltd.
3. Learning PHP, MySQL, JavaScript, CSS & HTML5, Robin Nixon, O'Reilly
4. PHP, MySQL, JavaScript & HTML5 All-in-one for Dummies, Steve Suehring, Janet Valade Wiley



## PRACTICALS

<b>COURSE CODE: RUSVSCCSP.O101</b>	
<b>Sr. No.</b>	<b>PRACTICAL TITLE</b>
<b>1</b>	Design a webpage that makes use of a. Document Structure Tags b. Text Formatting Tags c. List Tags d. Table tags
<b>2</b>	Design a webpage that makes use of a. List Tags b. Table tags
<b>3</b>	Design a webpage that makes use of a. Navigation across multiple pages & Frame Tags b. Image and Image Maps
<b>4</b>	Design a webpage that makes use of a. Form Tags b. Embedded Multimedia elements
<b>5</b>	Design a webpage that make use of Cascading Style Sheets with a. CSS properties to change the background of a Page b. CSS properties to change Fonts and Text Styles c. CSS properties for positioning an element
<b>6</b>	Design a webpage that make use of Cascading Style Sheets with a. CSS properties to change the background of a Page b. CSS properties to change Fonts and Text Styles
<b>7</b>	Design a webpage that make use of Cascading Style Sheets with a. Internal / External CSS b. CSS properties for positioning an element
<b>8</b>	Write PHP scripts for a. Conditional Statements b. Functions
<b>9</b>	Write PHP scripts for a. Retrieving data from HTML forms b. Working with Arrays
<b>10</b>	Write PHP scripts for Working with Databases

## SEMESTER II

**Course Code: RUSVSCCS.E111**

**Course Title: Web Programming**

**Type of Course: Vocational Skill Courses**

**Academic year 2023-24**

<b>COURSE OUTCOME</b>	<b>DESCRIPTION</b>
	<b>A student completing this course will be able to:</b>



<b>CO 1</b>	Design valid, well-formed, scalable, and meaningful pages using emerging technologies.
<b>CO 2</b>	Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites
<b>CO 3</b>	Develop and implement Database Driven Websites.

### DETAILED SYLLABUS

RUSVSCCS.E111	Web Programming	CREDITS 1 / 15 HOURS
<b>Unit I</b>	<p><b>XML:</b> Comparing XML with HTML, Advantages and Disadvantages of XML, Structure of an XML Document, DTD</p> <p><b>JavaScript:</b> Using JavaScript in an HTML Document, Programming Fundamentals of JavaScript – Variables, Operators, Popup Boxes, Defining Function arguments, JavaScript Objects - String, RegExp, Math, Date, Form Validation using JavaScript.</p> <p><b>AJAX:</b> AJAX Web Application Model, How AJAX Works, XMLHttpRequest Object – Properties and Methods, Handling asynchronous requests using AJAX.</p> <p><b>Introduction to jQuery:</b> Fundamentals, Selectors, methods to access HTML attributes, events, effects.</p>	<b>15 Hrs</b>

#### Textbooks:

1. HTML 5 Black Book, Covers CSS 3, JavaScript, XML, XHTML, AJAX, PHP and jQuery, 2ed, Dreamtech Press
2. Web Programming and Interactive Technologies, scriptDemics, StarEdu Solutions India(2017).
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3. Learning PHP, MySQL, JavaScript, CSS & HTML5, Robin Nixon, O'Reilly
4. PHP, MySQL, JavaScript & HTML5 All-in-one for Dummies, Steve Suehring, Janet Valade Wiley

### PRACTICALS

Practical to be added if applicable

COURSE CODE: RUSVSCCSP.E111	
Sr. No.	PRACTICAL TITLE
1	Create a XML file to view the file on browser.



<b>2</b>	Create a XML file with Internal / External DTD and display the data
<b>3</b>	Create a XML file with CSS and display the data
<b>4</b>	Write JavaScript code for Mathematical operations
<b>5</b>	Write JavaScript code for demonstrating different JavaScript objects such as String, RegExp, Math Date
<b>6</b>	Write JavaScript code for Validating the various Form Elements
<b>7</b>	Design a webpage to handle asynchronous requests using AJAX on Button click
<b>8</b>	Design a webpage to handle asynchronous requests using AJAX on Mouseover
<b>9</b>	Design a webpage using AJAX & PHP of a particular data
<b>10</b>	Design a webpage with some jQuery animation effects.



## Modality of Assessment

### Vocational Skill Enhancement Courses (1 Credit)

#### A) Total Marks

- a. Theory – 25 Marks
- b. Practical – 50 Marks

#### B) Theory Internal Assessment (40%) - 10 Marks

Sr No	Evaluation type	Marks
1	Class Test/ Project / Assignment / Presentation	10
	<b>TOTAL</b>	<b>10</b>

#### C) Theory External Assessment (Semester End Examination) 60% - 15 Marks

1. Duration – The duration for these examinations shall be of **45 Minutes**.
2. Theory question paper pattern:

Question	Options	Marks	Questions Based on
1	Two out of three	15	Unit I
	<b>TOTAL</b>	<b>15</b>	

#### D) Practical Examination (Semester End): 50 marks

- a. **Practical Internal Assessment (40%) 20 Marks:** Students have to acquire at least 40% marks in each paper individually.
- b. **Practical Sem End Exam (60%) 30 Marks.**

Particulars	Practical
Internal Assessment	20
Laboratory work	30
<b>Total</b>	<b>50</b>