R.V.R & J.C College of Engineering (Autonomous)

Department of Computer Science and & Business Systems

Minor Degree (Industry Tracks)

Track 1-Cloud Computing

Subject Code	Subject Name	No of Hours		
Note: Students who completes C, Python are eligible		**Lecture**	**Tutorial**	**Practical**
CCMR1	Principles of Cloud Computing	3	1	-
CCMR2	Cloud Networking	2	-	2
CCMR3	Cloud Programming	2	-	2
CCMR4	Grid and Cluster Computing	3	1	-
CCMR5	Enterprise Storage System	2	-	2
CCMR6	Cloud Security	3	1	-
CCMR7	High Performance Computing	3	1	-
CCMR8	Cloud Computing and Distribution Systems (MOOCs)			
CCMR9	Block chain and its Applications (MOOCs)			

Track 2-Full Stack Development

Subject Code	Subject Name	No of Hours		
Note: Students who completes C, Python are eligible		**Lecture**	**Tutorial**	**Practical**
FSMR1	User Interface Design	3	1	
FSMR2	Client Side Scripting	2	-	2
FSMR3	React JS	2	-	2
FSMR4	MEAN stack (MongoDB, Express. js, AngularJS, and Node. Js)	2	-	2
FSMR5	C# (.Net Framework)	2	-	2
FSMR6	Web Application Development Using ASP	2		2
FSMR7	J2ME	2	-	2
FSMR8	Modern Application Development (MOOCs)			
FSMR9	Advanced Python Programming (MOOCs)			

CCMR1- PRINCIPLES OF CLOUD COMPUTING

Minor Degree

Course outcomes:

CO-1: Differentiate the parallel and distributed computing
CO-2: Demonstrate the virtualization
CO-3: select the type of cloud for different requirements of an organization.
CO-4: apply the cloud services to different applications

UNIT-I **CO1** **[15 periods]**

Basics: The vision of cloud computing, the cloud computing reference model, Characteristics and benefits and challenges
Historical developments: Distributed systems, Virtualization, web 2.0, Service-oriented computing, utility oriented computing
Building cloud computing environments: Application development, Infrastructure and system development, Computing platforms and technologies
Principles of Parallel and Distributed Computing: Eras of computing, Parallel vs. distributed computing, Elements of parallel computing, Elements of distributed computing, Technologies for distributed computing

UNIT-II **CO2** **[12 periods]**

Virtualization: Introduction, Characteristics of virtualized environments, Taxonomy of virtualization techniques, Virtualization and cloud computing, Pros and cons of virtualization,
Technology examples.

UNIT-III **CO3** **[12 periods]**

Cloud Computing Architecture: Introduction, The cloud reference model, Types of clouds, Economics of the cloud, Open challenges

UNIT-IV **CO4** **[12 periods]**

Cloud Platforms in Industry: Amazon web services, Google AppEngine, Microsoft Azure
Cloud Applications: Scientific applications, Business and consumer applications.

Text Books:

1. Mastering Cloud Computing Foundations and Applications Programming by RajkumarBuyya, Christian Vecchiola, S. ThamaraiSelvi, Morgan Kaufmann, 2013
2. Cloud Computing Principles and Paradigm by RajKumarBuyya, James Broberg and AndrzejGoscinski, John Wiley & Sons, 2011.

Reference Books:

1. https://cloud.google.com/ (Links to an external site.)
2. https://aws.amazon.com/training/awsacademy/

FSMR2: CLIENT SIDE SCRIPTING

Course Objectives:

At the end of the course the students will understand

- The technologies to develop web pages.
- DHTML and event handling mechanism.
- XML, Web Servers and AJAX.
- jQuery, AJAX with jQuery.

Course Outcomes:

After successful completion of the course, the students are able to

- Create web pages using HTML,CSS and Java Script.
- Design dynamic web pages using client side scripting.
- Create XML documents and work with web servers.
- Dive into java script libraries like jQuery.

UNIT-I **[CO1]** **(15 Periods)**

Introduction to HTML5: Part - I &Part - II.
Introduction to Cascading Style Sheets (CSS): Part - I &Part - II.
JavaScript: Introduction to Scripting, JavaScript: Control Statements I & II.

UNIT-II **[CO2]** **(15 Periods)**

JavaScript: Functions, Arrays, Objects.
Document Object Model (DOM): Objects and Collections, JavaScript Event Handling: A Deeper Look
HTML5: Introduction to canvas – Introduction, canvas coordinate System, Rectangles, Using paths to draw Lines, Drawing Arcs and Circles, Shadows, Quadratic Curves, Bezier Curves, Linear Gradients, Radial Gradients, Images, Image Manipulation, Patterns, Transformations, Text.

UNIT-III **[CO3]** **(15 Periods)**

XML–Introduction, Basics, Structuring Data, Namespaces, Document Type Definitions(DTDs), XML Vocabularies, Extensible Style sheet Language and XSL Transformations, DOM.

Web Servers: Introduction, HTTP Transactions, Multitier Application Architecture, Client-side scripting versus Server-side scripting, Accessing Web Servers, XAMPP and IIS Express

Ajax-Enabled Rich Internet Applications with XM and JSON: Introduction, RIAs with Ajax, “Raw” Ajax Example Using the XMLHttpRequest Object, Using XML and the DOM, Creating a Full-Scale Ajax-Enabled Application.

UNIT-IV **[CO4]** **(15 Periods)**

Introduction to jQuery, Selecting and filtering, Events, Manipulating content and attributes, Iteration of arrays and objects, CSS and AJAX.

Learning Resources

Text Books:

1. Paul Deitel, Harvey Deitel and Abbey Deitel "Internet & World Wide Web - How to Program", 5/e, Pearson Education.
2. “Web Development with jQuery”,Richard York,Wrox-a willy brand.

Reference Books:

1. Jason Cranford Teague "Visual Quick Start Guide CSS, DHTML & AJAX", 4/ e, "Pearson Education".
2. Tom NerinoDoli Smith "JavaScript & AJAX for the Web" Pearson Education, 2007
3. “jQuery Cookbook”, jQuery Community Experts,O’REILLY.

Web References:

1. www.deitel.com
2. www.w3schools.com
3. www.tutorialspot.com