



SEC-302(A) Website Frameworks (Joomla, Ruby on Rails)

Course Title:	Website Frameworks (Joomla, Ruby on Rails)
Course Code:	SEC-302
Course Credit:	3
Session Per Week:	3
Total Teaching Hours:	40 Hours

AIM

This course enables the students to build web sites and powerful online applications using Joomla. It provides students with the opportunity to set up a Joomla community web site in the real world. Ruby on Rails (RoR) course provides the knowledge necessary to design and develop dynamic web pages using Ruby. This course introduces briefly the most important features of Ruby and some of the essentials of Rails.

LEARNING OUTCOMES

The student would be able

- 1) To create different types of online applications.
- 2) To create online magazines, newspapers, and publications.
- 3) To configure Joomla templates and populate the site with content and extensions.
- 4) To learn the basics of the Ruby language.
- 5) To understand fundamentals of Rails.

DETAIL SYLLABUS

Unit-1

10 Hours

Introduction to Joomla, sections, articles, categories in Joomla

Introduction to Joomla, sections, articles, categories in Joomla 10 Hours

Understanding Joomla!

- What is Joomla?
- Comparing static websites and content management system
- Choosing the right solution

Planning your website

- Determining the goal of an organization or project
- How will the website help to achieve the goal?
- Who will visit the website?
- What do the website visitors want? Identifying and organizing the website's information
- Identifying important functionality

A tour of the Joomla! Administrator interface

- Logging in
- Joomla!'s Menus: Site menu, Menus, Content, Components, Extensions, Tools, Help
- Common Interface buttons: New, Edit
- Publish and Unpublish

Defining section and category structure

- Making sections and categories useful
- Assigning sections and categories to your site map

Creating, editing and deleting sections

- Creating sections
- Editing sections
- Deleting sections

Creating, editing and deleting categories

- Creating categories
- Editing categories
- Category parameters
- Deleting categories

Creating, editing and deleting articles

- Creating articles
- Editing articles
- Deleting and restoring articles: Filtering articles

Adding articles to the home page

- Toggling the front page state of an article
- Working the front page manager
- Into text vs. full article text

Using advanced article options

- Adjusting TinyMCE settings
- Paste from world
- Creating links to other pages on the website
- Creating a link to another website
- Setting a start and finish publishing date
- Setting a different author name
- Accessing the article manager options

Including media in articles

- Joomla!'s Media manager
- Inserting images into articles
- Including video from youtube in your article

Unit-2

10 Hours

Joomla Menus, Templates and Modules Linking articles to the menu

- Linking an individual article to the menu
- Creating a category blog
- Creating article lists from a category

Using advanced menu options: articles

- Section layout and category list layout
 - o Parameters (Basic)
 - o Parameters (Advanced)
- Sections and category blog
 - o Parameters (Basic)
 - o Parameters (Advanced)
- Create article
- Archived articles

Using advanced menu options: creating new menus

- Creating new menu
- Moving menu items
- Displaying the menu module

Using advanced menu options: wrappers and external links

- Wrappers
- External links

Choosing and installing templates

- Joomla!'s default template
 - o Template parameters
 - o Assigning a template
- Which templates are better: free or commercial?
- Downloading and installing templates from other sites

Configuring Latest News and Newsflash

- Creating and configuring the latest news module
- Creating and configuring the newsflash module

Configuring Random Images

- Image consideration
- Configuring your photos
- Creating and editing the random image module
- Reordering Modules

Configuring search

- Creating and configuring the search module
- Specific Search components settings

Configuring Contacts

- Creating the contact category
- Creating the contact
- Menus: Displaying a single contact
- Menus: Displaying contacts within a category

Configuring Web Links

- Creating categories
- Creating links
- Menus: Displaying links

Unit-3

10 Hours

Extending Joomla! and Introduction to Ruby Adding extensions to Joomla!

- Introducing the Joomla! Extension directory
- Choosing a good extension
- Paid vs. Free: which is better?

Changing the editor in Joomla! To JCE

- Downloading JCE
- Installing JCE
- Assigning JCE as the default editor globally
- Assigning JCE as the Editor for specific users
- Using JCE
 - o Creating and editing links to site articles
 - o Uploading documents and creating links to them
- JCE configuration

Installing and configuring simple image gallery

- Downloading simple image gallery
- Installing simple image gallery
- Configuring simple image gallery
- uploading images
- displaying simple image gallery in an article

Creating and editing users

- Creating a user
- Understanding groups
- Editing and deleting users
- The importance of good passwords

Introduction to Ruby

- Ruby Basics
- Hello, Matz
- Interactive Ruby

A quick tour of Ruby

- Ruby is object-oriented
- Ruby's reserved words
- Comments and variables
- Strings
- Numbers and operators
- Conditional statements
- Arrays and hashes
- Methods and blocks
- symbols

Conditional Love

- The if statement
- The case statement
- The while loop
- The loop method
- The for loop
- Execution before or after a program

Unit-4

10 Hours

Strings, math, arrays and guide to ruby on rails

Strings

- Creating, Concatenating, Accessing, comparing, manipulating strings
- Case conversion and managing white spaces
- Incrementing and converting strings
- Regular expressions

Math

- Converting numbers
- Basic math operations

Arrays

- Creating arrays
- Accessing elements
- Concatenation
- Set operations
- Unique elements
- Comparing arrays
- Changing elements
- Deleting elements
- Arrays and blocks
- Sorting things and about face

A short guide to ruby on rails

- Where did rails come from?
- Why rails?
- Learning rails

- A brief tutorial

Note: It is desirable to teach Joomla and Ruby on Rails preferably in laboratory or through extensive demonstrations in classrooms.

TEXTBOOKS:

1. Joomla! 24-Hour Trainer

Publisher : WILEY- INDIA

By Jen Lramer

2. Learning Ruby

Publisher : O'REILLY

By Michael Fitzgerald