

Course Code: CS8027

Course Title: Content Management System using WordPress

Course Credits: [Lecture: 03, Tutorial: 00, Practical: 01]

**Prerequisites:** Fundamentals of Programming, Foundations of Object-Oriented Programming, Essentials of Advanced Object-Oriented Programming.

**Objectives:** To introduce the concepts of Content Management System (CMS) to develop, customize, and maintain CMS sites using open-source CMS framework.

**Course Outcomes:** Upon completion of the course, students shall be able to

- CO1: Recognize the need for CMS, types, processes, its file structure along with configuration environment.
- CO2: Design, develop, and secure single and multisite in CMS.
- CO3: Design and develop content for social media platforms such as wikis and blogs along with content and data management.
- CO4: Integrate and develop customized features, and plugins to enhance the CMS functionalities.
- CO5: Implement and design tailored features and themes to optimize CMS capabilities.
- CO6: Develop best practices for secure content management and user authentication.

**Course Objective and Course Outcomes Mapping:**

- To introduce the concepts of Content Management Systems (CMS): CO1, CO2, CO6
- To develop, customize, and maintain CMS sites using open-source CMS framework, front-end and back-end scripting.: CO3, CO4, CO5

**Programme Outcomes:** The student will have

PO1: Proficiency in and ability to identify problems related to computer science as well as design and apply computational knowledge to solve them.

PO2: Ability to design, develop, test, and maintain system, component, product, or process as per needs and specifications.

PO3: Understanding of professional and ethical roles and responsibilities.

PO4: Recognition of the need for and an ability towards life-long learning.

PO5: Knowledge of programming languages, database systems, operating systems, software engineering, Web & Mobile technology and relevant modern issues.

PO6: Ability to demonstrate the use of modern tools, models, and languages to solve problems related to software development.

PO7: An ability to communicate and present knowledge effectively.

**Programme Outcomes and Course Outcomes mapping:**

Course Outcomes	Programme Outcomes						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	✓	✓		✓	✓	✓	✓
CO2		✓		✓			✓
CO3					✓	✓	✓
CO4			✓		✓	✓	✓
CO5					✓	✓	✓
CO6					✓	✓	✓

## **Curriculum Unit Titles**

<b>Units</b>	<b>Unit Description</b>	<b>Weightage</b>
1	<b>Content Management System</b> 1.1. Introduction and Need 1.2. Site Development: Essentials, Types: ECMS, WCMS, Components, Process 1.3. Site Stack holders: Types, Roles, and Capabilities 1.4. Directory and File Structure: Overview, File Types and Utility 1.5. Configuration Environment Management: Single site and Multisite 1.6. Core System: Functions and Working	[15%]
2	<b>Content and Data Management</b> 2.1. Data Management: Schema Reusability and Extension 2.2. Custom Post Types Post: Types, Registration, Customization, Functions 2.3. Taxonomy: Structure and Relationships, Types, Creation, Metadata Operation 2.4. Blog Content Creation, Wikis 2.5. Webpage Enhancement: Pages, Menus, Media Library Integration 2.6. Content Categorization: Web Parts Organization	[15%]
3	<b>Feeds, Podcasting, Social Media Integration</b> 3.1. General Site and Profile Settings 3.2. Feeds: Overview, Built-In, and Custom 3.3. Podcasting 3.4. Social Media Integration	[20%]
4	<b>Plugin Development</b> 4.1. Plugin Packaging 4.2. Plugin Security 4.3. Hooks: Actions and Filters 4.4. WordPress Plugin Integration	[20%]
5	<b>Theme Development</b> 5.1. Concepts and Essentials 5.2. Theme Configuration 5.3. Custom Theme Creation 5.4. Custom Page Templates 5.5. Theme Enhancement: Menu, Widget, Post	[15%]
6	<b>Securing WordPress</b> 6.1. Security Principles 6.2. Security Plugins 6.3. Application Framework: Overview	[15%]

## Course Units and Course Outcomes Mapping:

Unit No.	Unit	Course Outcomes					
		CO1	CO2	CO3	CO4	CO5	CO6
1	Content Management System	✓					
2	Content and Data Management	✓	✓				
3	Feeds, Podcasting, Social Media Integration			✓			
4	Plugin Development				✓		
5	Theme Development					✓	
6	Securing WordPress						✓

## Computing Environment:

A student must have the following computing environment in the laboratory and/or on his/her laptop.

- CE#1: XAMPP
- CE#2: MySQL
- CE#3: NetBeans
- CE#4: WordPress

## Text Books

1. Brad Williams, "Professional WordPress Design and Development", Wrox Pub, John Wiley & Sons, Inc.

## References :

1. Karol Krol, "WordPress 4.x Complete", PACKT Pub.
2. Aaron Brazell, "WordPress Bible", Wiley Pub, Inc.
3. <https://wordpress.org/support/>
4. <https://www.wpbeginner.com/wordpress-seo/>