



Gyanmanjari
Innovative University

Syllabus
Gyanmanjari College of Computer Application
Semester - I(MCA)

Subject : CMS Development Using Wordpress - MCA2XX11303

Type of course: Value added Courses

Prerequisite: Student should have Basic knowledge of computers and internet usage ,Fundamental understanding of websites and web browsers, Basic knowledge of HTML and CSS concepts. Familiarity with file and folder management in operating systems,Basic understanding of database concepts and web hosting terminology

Rationale: This course is designed to introduce students to modern Content Management System (CMS) development using WordPress. The course provides practical and industry-oriented knowledge for designing, developing, customizing, optimizing, and launching professional websites without extensive coding requirements. Students learn website creation using themes, plugins, page builders, SEO tools, e-commerce integration, and website deployment techniques. The course emphasizes hands-on learning, responsive web design, website optimization, security, and real-world business website development, enabling students to build dynamic and scalable web solutions suitable for industry and freelance environments.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks		Total Marks
CI	T	P	C	SEE	CCE	
0	0	4	2	50	50	100

Legends: CI-Classroom Instructions; T-Tutorial; P -Practical; C –Credit; SEE -Semester End Examination; MSE-Mid Semester Examination; V–Viva; CA-Continuous Assessment; ALA-Active Learning Activities.



Course Content:

Sr. No	Course content	Hrs	% Weigh tage
1	Introduction to CMS and WordPress: What is a Content Management System (CMS). Types of CMS (Open-source vs Proprietary). Introduction to WordPress. WordPress.com vs WordPress.org differences. Installing XAMPP/WAMP for local server setup. Installing WordPress on Local Server, Installing WordPress on Live Hosting (cPanel). WordPress folder and file structure overview. Introduction to MySQL and phpMyAdmin, WordPress database structure basics. Practical: 1. Install XAMPP/WAMP and configure a local Apache server environment successfully. 2. Install WordPress on local server, set up the database, and complete the installation. 3. Install WordPress on live hosting via cPanel using Softaculous auto-installer. 4. Explore and navigate the WordPress Admin Dashboard and understand each menu section. 5. Configure General Settings, Reading Settings, Writing Settings, and Discussion Settings in WordPress. 6. Explore the WordPress database using phpMyAdmin: view tables (wp_posts, wp_users, wp_options) and understand their roles. 7. Change the WordPress site URL and home URL from both the Admin Dashboard and the wp_options table in phpMyAdmin. 8. Set up permalink structure to Post Name format and verify that post URLs update correctly across the site. 9. Reset a forgotten WordPress admin password directly through phpMyAdmin by updating the MD5 hash in the wp_users table. 10. Compare WordPress.com and WordPress.org by creating a free site on WordPress.com and documenting the limitations vs. self-hosted WordPress.org.	10	20%



Evaluation Method:

Sr. No	Evaluation Method	SEE	CCE
1	WordPress Deployment and Initial Setup Assessment . Students will install and deploy WordPress on a local server or live hosting environment, configure the database connection, complete the installation process, customize essential settings, and verify proper website functionality through administrative and database operations.	10	-
2	Evaluating CMS Platforms: A Comparative Study Compare three CMS platforms (WordPress, Joomla, Wix, Magento) across 5 parameters and present findings.	-	10
	Total	10	10

Examination Style:**1. WordPress Deployment and Initial Setup Assessment [10 Marks] :**

Students will install and deploy WordPress on a local server or live hosting environment, configure the database connection, complete the installation process, customize essential settings, and verify proper website functionality through administrative and database operations.

- Installation and configuration of XAMPP/WAMP
- WordPress installation on a local server or live hosting (cPanel/Softaculous)
- MySQL database creation and WordPress database connection
- WordPress Admin Dashboard navigation and management
- Basic database operations using phpMyAdmin
- Verification of successful WordPress deployment and website functionality

2. Evaluating CMS Platforms: A Comparative Study [10 Marks] :

In this activity, students will research and compare three CMS platforms — WordPress, Joomla, and Wix — based on parameters such as ease of use, plugin



	ecosystem, pricing, SEO capabilities, and customization flexibility. Students will analyze the features and limitations of each platform and prepare a comparison table along with a short conclusion recommending the most suitable CMS for different website requirements. Students are required to upload a properly formatted PDF or DOCX report on the GMIU portal containing the introduction, comparison table, observations, and final conclusion/recommendation.		
2	Posts, Pages, and Content Management Understanding Posts vs Pages in WordPress. Creating and Managing Blog Posts, Categories and Tags for content organization. WordPress Gutenberg Block Editor overview, Working with the Media Library. Adding and managing images, videos, and documents, Creating Static Pages (Home, About, Contact, Services), Setting up Navigation Menus, Managing User Roles and Permissions (Admin, Editor, Author, Subscriber), Comment Management and Moderation, Revision History and AutoSave features. <u>Practical</u> 11. Create minimum five blog posts with proper categories, tags, featured images, and excerpts. 12. Create static pages: Home, About Us, Services, Contact Us — with appropriate content and layout. 13. Use the Gutenberg Block Editor to add Columns, Image Galleries, Buttons, Quotes, and Tables to a post. 14. Create and assign a custom navigation menu with dropdowns to the header and footer locations. 15. Manage user roles by adding an Editor and Author account and testing their access permissions. 16. Enable comment moderation, add spam filtering using Akismet, and approve or reject sample comments on blog posts. 17. Use Post Revision History to compare two versions of a post and restore a previous version. 18. Schedule a blog post to publish automatically at a future date and time using the Gutenberg editor's scheduling feature. 19. Build a complete blog homepage using Gutenberg: add a Cover block, Query Loop block for posts, and a Subscribe button block. 20. Export all WordPress posts and pages using the built-in Export tool and import them into a second WordPress installation.	12	20%

Evaluation Method:

Sr. No	Evaluation Method	SEE	CCE
1	Content-Rich Blog Website Creation Create a fully functional WordPress blog with posts, pages, categories, menu, and media.	10	-
2	Blog Content Audit. Evaluate a peer's WordPress blog against a 10-point quality checklist.	-	10
	Total	10	10

Examination Style:**1. Content-Rich Blog Website Creation [10 Marks] :**

Create a complete WordPress blog website with a minimum of five posts, three static pages, organized categories, featured images, and a working navigation menu. The website must have proper permalink structure and a functional contact page.

Tasks

1. Create 5 categorized blog posts with featured images
2. Design 3 static pages with Gutenberg blocks
3. Build navigation menu with dropdown sub-items

2. Blog Content Audit [10 Marks] :

Students are given a WordPress website link to audit. Access a peer's WordPress blog assigned by your professor and evaluate it against a 10-point quality checklist covering aspects such as Design & Theme, Navigation, Content Quality, SEO Settings, Mobile Responsiveness, Plugin Usage, Page Speed, Image Optimization, Contact Form, and Overall User Experience. Rate each parameter out of 10, add 2-3 lines of feedback per point, and suggest improvements wherever needed.

Compile all findings — cover page, peer's blog URL, checklist table with ratings and feedback, overall score, and final improvement suggestions — into a single PDF upload it on the GMIU.

Themes and Website Customization

- 3 Introduction to WordPress Themes and Theme Repository, Installing and Activating Free and Premium Themes, Using the WordPress Theme Customizer, Introduction to Elementor Page Builder, Building pages with Elementor drag-and-drop editor, Understanding Child Themes and why they are

important. Creating a Basic Child Theme, Adding Custom CSS to WordPress, Responsive Design and Mobile Preview, Importing and using Starter Templates, Customizing Header, Footer, Colors, Typography, and Widgets.

Practical

21. Install and activate three different free themes from the WordPress repository and compare their layouts.
22. Use the WordPress Theme Customizer to modify site identity, colors, fonts, header, and footer settings.
23. Install Elementor Page Builder and create a fully designed Home Page using drag-and-drop widgets.
24. Build an About Us page and a Services page using Elementor with sections, columns, and design elements.
25. Create a Child Theme of an active parent theme and apply custom CSS modifications through it.
26. Import a Starter Template using Elementor or Astra Theme and customize it for a specific business type.
27. Preview and optimize the website for mobile and tablet responsiveness using Elementor's responsive controls.
28. Create a reusable Elementor global widget (e.g., a Call-to-Action banner) and embed it across three different pages.
29. Build a custom 404 Error Page using Elementor and configure it as the site's default 404 template.
30. Add custom CSS in the child theme's style.css to override heading fonts, button hover colors, and link colors site-wide.
31. Design a custom Header and Footer using Elementor Pro (or Hello Theme) and apply it globally across all pages.
32. Install and activate two premium starter templates, compare their layouts, and customize one for a fitness or education business.

14

20%

Evaluation Method:

Sr. No	Evaluation Method	SEE	CCF
1	Business Website Design using Elementor Design a professional business website using Elementor with a minimum of 4 custom-designed pages.	10	-



2	Theme Customization & Transformation Showcase Customize two different themes and present a before-and-after comparison with explanation.	-	10
	Total	10	10

Examination Style:**1. Business Website Design using Elementor [10 Marks] :**

Design a professional business website using Elementor Page Builder with a minimum of four fully designed pages: Home, About, Services, and Contact. The website must use a consistent color scheme, custom typography, and be responsive on mobile devices.

Tasks

1. Home Page with Hero Section, Features, and Call-to-Action
2. About Page with Team Section and Company Mission
3. Services Page with Icons and Pricing Table

2. Theme Customization & Transformation Showcase [10 Marks] :

Install and customize two different WordPress themes by modifying elements such as color scheme, typography, header/footer, homepage layout, widgets, and logo — take clear screenshots before and after each customization step. For each theme, write a 3-4 line explanation describing what changes you made, why you made them, and how it improves the overall look and user experience. Compile all findings — cover page, before & after screenshots of both themes with explanations, comparison summary, and conclusion stating which customized theme you prefer and why — into a single PDF upload it on the GMIU Portal

4

Plugins and Extended Functionality

What is a WordPress Plugin and how does it work. Installing, Activating, Deactivating, and Deleting Plugins from the Plugin Repository, Overview of Essential Plugins: Yoast SEO, Contact Form 7, WooCommerce, WP Super Cache, UpdraftPlus, Introduction to Yoast SEO: Adding meta titles, descriptions, and enabling the XML sitemap, Creating Simple Contact Forms using Contact Form 7 and embedding them on pages, Introduction to WooCommerce: Installing the plugin and setting up a basic online store, Adding Simple Products with name, price, image, and description in WooCommerce, Understanding the WooCommerce Orders and Products dashboard, Improving



website speed using WP Super Cache (enabling basic caching). Taking a manual backup using UpdraftPlus and restoring it.

Practical

33. Install and activate Yoast SEO plugin: set the site title, meta description, and turn on the XML sitemap.
34. Create a simple contact form using Contact Form 7 with fields for Name, Email, and Message, and embed it on the Contact page.
35. Install WooCommerce and complete the basic setup wizard (currency, store location, and shipping country).
36. Add a minimum of three simple products in WooCommerce with product name, price, image, and a short description.
37. Explore the WooCommerce dashboard: view the Orders section, check the Products list, and navigate the Store settings.
38. Install WP Super Cache, enable caching, and compare the page load time before and after using a free speed test tool.
39. Install UpdraftPlus, take a manual backup of the WordPress site, and confirm the backup files are saved.
40. Use Yoast SEO to fill in the focus keyword and meta description for three blog posts and check if the SEO status turns green.

12

20%

Evaluation Method:

Sr. No	Evaluation Method	SEE	CCE
1	E-Commerce Store Setup and Configuration Set up a basic WooCommerce store with at least three simple products, install Yoast SEO and Contact Form 7, and configure a backup using UpdraftPlus.	10	-
2	Plugin Showdown: Security & Speed Audit Students install Wordfence + WP Super Cache, run a full security scan, block a suspicious IP, then test page speed before & after caching using PageSpeed Insights — submit a comparison report with screenshots.	-	10
	Total	10	10



	<u>Examination Style:</u> 1. E-Commerce Store Setup and Configuration [10 Marks] : Install and configure three essential plugins on a WordPress site: Yoast SEO (set meta title and enable sitemap), Contact Form 7 (create a contact form and embed on a page), and WooCommerce (add at least three simple products). Submit a local or live URL with a short walkthrough. Tasks 1. Yoast SEO – Set meta title, description, and XML sitemap 2. Contact Form 7 – Create and embed a simple contact form 3. WooCommerce – Add three simple products with name, price, and image 2. Plugin Showdown: Security & Speed Audit [10 Marks] : Each student independently Install and configure Wordfence Security and WP Super Cache plugins on your WordPress site — run a full security scan using Wordfence, review the scan report, and manually block one suspicious IP from the Live Traffic Monitor. Then test your website's page load speed before and after enabling WP Super Cache using Google PageSpeed Insights and record the scores with screenshots at each step. Compile all findings — cover page, Wordfence scan report screenshot, blocked IP screenshot, PageSpeed scores before & after caching with screenshots, and a short conclusion of 4-5 lines explaining what improved and what you learned — into a single PDF upload it on the GMIU Portal		
5	Advanced WordPress and Website Launch What is On-Page SEO and why it matters for a WordPress website, Using Yoast SEO to add focus keywords, meta descriptions, and improve readability, Why images should be compressed before uploading and how to do it using the Smush plugin, What is SSL and why every website should have HTTPS enabled, Using the Really Simple SSL plugin to force HTTPS on a WordPress site, What is Google Analytics and how it helps track website visitors, Connecting a WordPress site to Google Analytics using the Site Kit plugin, What is Google Search Console and how to submit a sitemap for indexing, Migrating WordPress from local server to live hosting using All-in-One WP Migration, Pre-launch checklist: checking links, forms, mobile view, speed, and security before going live. <u>Practical</u> 41. Implement complete on-page SEO for a WordPress website using Yoast SEO: focus keywords, readability, schema.	12	20%



42. Optimize website images using Smush or ShortPixel plugin and measure performance improvement using GTmetrix.
43. Migrate a complete WordPress website from local server (XAMPP) to live hosting using All-in-One WP Migration.
44. Set up Google Analytics 4 on WordPress using Site Kit plugin and verify data collection in the GA dashboard.
45. Connect WordPress website with Google Search Console and submit XML sitemap for indexing.
46. Run a complete pre-launch checklist: check all links, forms, mobile responsiveness, loading speed, and security.
47. Enable HTTPS on the WordPress site using the Really Simple SSL plugin and check that all pages show a padlock in the browser.
48. Connect the WordPress site to Google Search Console, verify site ownership, and submit the XML sitemap generated by Yoast SEO.
49. Generate, configure, and validate the XML sitemap using the Yoast SEO plugin, ensuring all relevant website pages are included and accessible for search engine indexing.
50. Perform a comprehensive website performance and SEO audit using Google PageSpeed Insights and Yoast SEO, implement recommended optimizations, and document the improvements achieved.

Evaluation Method:

Sr. No	Evaluation Method	SEE	CCE
1	Complete Website Launch Project launch a fully functional WordPress website from scratch, optimized and ready for the public.	10	-
2	Website Audit and SEO Report Perform a comprehensive SEO and performance audit of a given WordPress website and submit a written improvement report.	-	10
	Total	10	10

Examination Style:**1. Complete Website Launch Project [10 Marks] :**

Plan, design, and build a complete WordPress website for an assigned business or personal topic. The website must be fully functional on a local server or live hosting, include a minimum of four pages built with Elementor, have Yoast SEO

	set up on all pages, Google Analytics connected using Site Kit, SSL enabled, and a completed pre-launch checklist submitted. Tasks 1. Four-page website designed with Elementor (Home, About, Services, Contact) 2. Yoast SEO set up, Google Analytics connected, and SSL enabled 3. Pre-launch checklist completed and submitted 2. Website Audit and SEO Report [10 Marks] : Perform a comprehensive audit of a given WordPress website by evaluating key areas such as SEO settings, meta titles & descriptions, XML sitemap, mobile responsiveness, page speed, image optimization, broken links, and overall content quality — use tools like Google PageSpeed Insights, Yoast SEO, and Google Search Console to gather data and take screenshots of all findings. For each issue identified, write 2-3 lines explaining the problem, its impact on the website, and a clear actionable improvement suggestion. Compile all findings — cover page, website URL, audit checklist with screenshots, issue-wise analysis with improvement suggestions, overall performance score, and a final summary paragraph concluding the website's current state and top 3 priority fixes — into a single PDF upload on the GMIU.		
--	--	--	--

Suggested Specification table :

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	N/A	N/A	N/A	N/A	N/A	N/A

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.



Course Outcome:

After learning the course the students should be able to:	
CO1	Understand the fundamentals of Content Management Systems (CMS), WordPress architecture, hosting environments, database structure, and WordPress installation processes.
CO2	Develop and manage WordPress website content using posts, pages, media management, menus, user roles, and Gutenberg editor features.
CO3	Design and customize responsive WordPress websites using themes, Elementor page builder, child themes, widgets, and custom CSS techniques
CO4	Implement extended website functionality using WordPress plugins for SEO, contact forms, caching, backup management, and e-commerce store development using WooCommerce.
CO5	Optimize, secure, analyze, migrate, and launch professional WordPress websites using SEO tools, SSL configuration, Google Analytics, Search Console, website migration, and pre-launch auditing techniques.

Instructional Method:

The course delivery method will depend upon the requirement of content and need of students.

A minimum of 20–30% of the course content shall be suggested to deliver through Flipped Learning, where students study digital learning resources before the classroom session.

Classroom time shall be utilized for discussion, problem-solving, practical applications, and higher-order learning activities.

Students shall be encouraged to use AI-powered learning platforms, simulation software, virtual laboratories, digital libraries, research databases, online certification courses, NPTEL, SWAYAM, MOOCs, and other technology-enabled learning resources to strengthen conceptual understanding and practical competence.

Continuous assessment shall be conducted through Active Learning Assignments (ALAs), quizzes, skill demonstrations, presentations, practical exercises, projects, case studies, innovation activities, peer assessment, reflective learning, and industry-oriented tasks instead of relying primarily on conventional written assignments.

Reference Books:

- [1] **WordPress for Beginners** – Dr. Andy Williams / ezSEONews 2023.
- [2] **WordPress All-in-One For Dummies (4th Edition)** / Lisa Sabin-Wilson Wiley Publishing 2022
- [3] **Modern WordPress Development** – Brad Schiff / Self-Published / LearnWebCode 2022
- [4] **Professional WordPress Plugin Development** – Deepak Vohra BPB Publications 2023
- [5] **Learning WordPress 6** / Subhasish Dasgupta Packt Publishing 2023



Suggested Assessment Guidelines:**Module 1: Introduction to CMS and WordPress**

Program Implementation Task (10 Marks):		
Criteria	Description	Marks
WordPress Installation & Database Configuration	Installation and configuration of XAMPP/WAMP or deployment on live hosting, creation of MySQL database, database connection, and successful completion of the WordPress installation process.	5
WordPress Administration & Website Verification	Navigation of the WordPress Admin Dashboard, configuration of essential website settings, basic phpMyAdmin operations, verification of website functionality, and practical demonstration/report presentation.	5
Total		10

Module 2: Posts, Pages, and Content Management:

Program Implementation Task (10 Marks):		
Criteria	Description	Marks
Blog Content Creation & Organization	Creation of a minimum of five categorized blog posts with featured images, proper permalink structure, and effective content organization.	5
Website Structure & Navigation	Design of three static pages using Gutenberg blocks, creation of a functional navigation menu with dropdown sub-items, implementation of a working contact page, and overall website functionality and presentation.	5

Module 3: Themes and Website Customization

Program Implementation Task (10 Marks):		
Criteria	Description	Marks
Website Design & Elementor Implementation:	Creation of a minimum of four custom-designed pages using Elementor with appropriate layouts, widgets, sections, images, and a consistent visual design.	5
Website Functionality & User Experience	Implementation of responsive design, proper navigation, essential business website sections (such as Home, About, Services, Contact), overall usability, and professional presentation of the website.	5
Total		10

Module 4 : Plugins and Extended Functionality

Program Implementation Task (10 Marks):		
Criteria	Description	Marks
WooCommerce Store Setup & Product Configuration	Installation and configuration of WooCommerce, creation of a basic online store, and addition of a minimum of three simple products with appropriate product details.	5
Plugin Configuration & Website Functionality	Installation and configuration of Yoast SEO, Contact Form 7, and UpdraftPlus, verification of plugin functionality, website backup configuration, and overall website performance and presentation.	5
Total		10

Module 5 : Advanced WordPress and Website Launch

Program Implementation Task (10 Marks):		
Criteria	Description	Marks
Website Development & Design:	Planning and development of a fully functional WordPress website with a minimum of four Elementor-designed pages (Home, About, Services, Contact), ensuring proper layout, navigation, responsiveness, and content organization.	5
Website Optimization & Launch Readiness	Configuration of Yoast SEO on all pages, integration of Google Analytics using Site Kit, SSL enablement, completion of the pre-launch checklist, and successful verification of website functionality and deployment readiness.	5
Total		10

