



**D Y P A T I L**  
COLLEGE *of*  
ENGINEERING & TECHNOLOGY  
(AN AUTONOMOUS INSTITUTE)  
KASABA BAWADA, KOLHAPUR

**T. Y. B. Tech. Curriculum**  
**w.e.f. 2022-2023**

**D. Y. Patil College of  
Engineering and Technology**  
Kasaba Bawada, Kolhapur

**(An Autonomous Institute)**

**Accredited by NAAC with 'A' Grade**

**Department of Computer Science and  
Engineering**

**Program Structure for**

**Minors Degree in**

**Web Development**



(To be implemented from academic year 2022-23)



## **T. Y. B. Tech. Curriculum w.e.f. 2022-2023**

### **Minor Degree details**

With a view to enhance the employability skills and impart knowledge in emerging areas which are usually not being covered in Undergraduate Degree credit framework, AICTE has come up with the concept of “Minor Degree” in emerging areas.

Minor specialization in EMERGING AREAS in Under Graduate Degree Courses is allowed where a student of another Department shall take the minimum additional Credits in the range of 18-20 and get a degree with minors in specialized area. These credits are in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline.

Knowledge of these emerging areas will help students in capturing the plethora of employment opportunities available in these domains. With the help of industry-academia experts, the institute has framed the curriculum of Minor Degrees. Following are the minor degrees offered by the various departments:

<b>Sr. No.</b>	<b>Department</b>	<b>Minor Degree Offered</b>
1	Architecture	Sustainable Energy Practices
2	Chemical Engineering	Food and Nutrition Technology
3	Civil Engineering	Environmental Sustainability
4	Mechanical Engineering	Robotics and Industry 4.0
5	Electronics & Telecommunication Engineering	Internet of Things (IoT)
6	Computer Science & Engineering	Web Development

Interested students studying in semester III can choose only one minor degree track offered by other department (excluding minors offered by their core undergraduate course). The final list of allocation will be displayed, following the eligibility criteria mentioned in the academic rules and regulations, before beginning of semester IV.



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The minor degree will be run only when the minimum students count is 30 for respective track. Students once enrolled for any minor degree are not permitted to change the track. However, a student can withdraw at any semester.

The fee for minor degree is to be paid in addition to the college fees. There will not be any fee concession/relaxation for any category student. The fee will not be refunded when withdrawn from the minor degree. Minor degree courses will begin from semester IV onwards as per the structure of the respective tracks.



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D.Y.PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR													
Department of Computer Science and Engineering													
Minors Degree in Web Development													
Sr. No	Course Code	Course Type	Name of the Course	Semester	Teaching Scheme per Week				Total Marks	Evaluation Scheme			
					Lecture	Tutorial	Practical	Credits		Type	Max. Marks	Min. Marks for Passing	
1	201CSMIL219	PCC	Introduction to Web Development	IV	3			3	100	ISE	20	20	40
										MSE	30		
										ESE	50		
2	201CSMIP220	LC	Introduction to Web Development Lab	IV			2	1	50	ISE	25	10	20
										ESE OE	25		
3	201CSMIL311	PCC	Web Structure Design	V	3			3	100	ISE	20	20	40
										MSE	30		
										ESE	50		
4	201CSMIP312	LC	Web Structure Design Lab	V			2	1	75	ISE	25	10	30
										ESE POE	50		
5	201CSMIL313	PCC	Client-Side Scripting	V	3			3	100	ISE	20	20	40
										MSE	30		
										ESE	50		
6	201CSMIL326	PCC	Advance Web Programming	VI	3			3	100	ISE	20	20	40
										MSE	30		
										ESE	50		
7	201CSMIP327	LC	Advance Web Programming Lab	VI			2	1	75	ISE	25	10	30
										ESE - POE	50		
8	201CSMIL408	PCC	Web development & Deployment	VII	2			2	100	ISE	20	20	40
										MSE	30		
										ESE	50		
9	201CSMIP409	LC	Web development & Deployment Lab	VII			2	1	50	ISE	25	10	20
										ESE - OE	25		
<b>Total</b>					<b>14</b>		<b>8</b>	<b>18</b>	<b>750</b>				



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<b>Course Code</b>	<b>Definition</b>
BSC	Basic Science Course
ESC	Engineering Science Course
HSMC	Humanity and Social Science including Management Course
PCC	Professional Core Course
PEC	Professional Elective Course
OEC	Open Elective Course
LC	Laboratory Course
MC	Mandatory Course
PROJ	Project

**Abbreviations:**

**ISE: In Semester Evaluation,**  
**MSE: Mid semester Examination,**  
**ESE: End Semester Examination**

**Note:**

**ESE will be conducted for 100 marks and converted to 50 marks**



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**Course Plan**

<b>Course Title: Introduction to Web Development</b>	
<b>Course Code: 201CSMIL219</b>	<b>Semester: IV</b>
<b>Teaching Scheme: L-T-P: 3-0-0</b>	<b>Credits :3</b>
<b>Evaluation Scheme: ISE + MSE Marks: 20 + 30</b>	<b>ESE Marks :50</b>

**Prerequisite:** Fundamentals of internet, web, WWW.

**Course Description:**

Web Development course aims to learn about front-end, back-end, and full-stack Web Development and focuses on web designing. It covers various points regarding web, web site and web development for various types of applications.

**Course Objectives:**

1. To provide basic knowledge of web, www & internet.
2. To introduce emerging web technology concepts and tools.
3. To Introduce students with front end web designing.
4. To develop the ability to logically plan and develop web pages.

**Course Outcomes:**

At the end of the course the student should be able to

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Understand</b> basic concept of web technology	L2
2	<b>Discuss</b> various web technology languages and tools	L2
3	<b>Explain</b> front end web designing	L2
4	<b>Develop</b> static web pages by using HTML	L3



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**Course Content**

<b>Content</b>	<b>Hours</b>
<b>Unit 1: Introduction to Web Development</b> Brief History, Basic Concepts of Web such as Web, Internet, WWW, and Web development life cycle, HTTP Protocol, Web Development Tools	04
<b>Unit 2: Hyper Text Markup Language-HTML</b> HTML History, Basic HTML Structure, Text formatting on Web Pages, HTML Editors, HTML documents, The <!DOCTYPE> Declaration, HTML Headings, HTML Paragraphs, HTML Links, HTML images, HTML Elements, HTML Attributes, HTML comments.	07
<b>Unit 3: HTML Table</b> Define an HTML Table, Table Cells, Table Rows, Table Headers, HTML Table Tags, HTML Table Borders, HTML Table Sizes, Table Headers, Table Padding & Spacing, Table Colspan & Rowspan, Table Styling	06
<b>Unit 4: HTML Frames, List</b> HTML <frame> Tag, <iframe> tag, <frameset> tag, HTML Lists, Unordered HTML List, Ordered HTML List, HTML Description Lists, HTML List Tags, HTML Links – Hyperlinks, HTML Links - The target Attribute, Absolute URLs vs. Relative URLs, Use an Image as a Link, Button as a Link	07
<b>Unit 5: HTML Forms</b> The <form> Element, The <input> Element, Text Fields, The <label> Element, Radio Buttons, Checkboxes, The Submit Button, The Name Attribute for <input>, HTML Form Attributes, The Action Attribute, The Target Attribute, The Method Attribute, HTML <form> Elements, HTML Input Types, HTML Input Attributes	08
<b>Unit 6: HTML Media</b> HTML Multimedia, HTML Video, The HTML <audio> Element, HTML <audio> Autoplay, HTML Audio Formats	04



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**Textbook:**

1. “Pro HTML5 and CSS3 Design Patterns” Michael Bowers, Dionysios Synodinos and Victor Sumner, Apress edition
2. “A Smarter Way to Learn HTML and CSS” by Mark Myers

**Reference Books:**

1. “Web Development with Node and Express” Ethan Brown Published by O’Reilly Media
2. “HTML, CSS, and JavaScript: All In One” by Jennifer Kyrnin and Juli Meloni, Pearson Publication

**Online resources:**

1. <https://www.javascript.com/>
2. <https://www.w3schools.com>



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**Course Plan**

<b>Course Title: Introduction to Web Development Lab</b>	
<b>Course Code: 201CSMIP220</b>	<b>Semester: IV</b>
<b>Teaching Scheme: L-T-P: 0-0-2</b>	<b>Credits :1</b>
<b>Evaluation Scheme: ISE Marks: 25</b>	<b>ESE (OE) Marks :25</b>

**Prerequisite:** Fundamentals of HTML.

**Course Description:**

The course is focused on study, demonstration and hands on experience on static web site design and development using HTML.

**Course Objectives:**

1. To teach basic of web technology.
2. To demonstrate the design pattern using HTML.
3. To demonstrate various types of HTML tags.
4. To demonstrate use of multimedia tags.

**Course Outcomes:**

At the end of the course the student should be able to

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Use</b> basic concept of web technology in their applications.	L2
2	<b>Demonstrate</b> various web technology languages and tools	L2
3	<b>Design</b> front end for a web application.	L2
4	<b>Develop</b> static web pages by using HTML	L3



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<b>List of Assignments/Experiments</b>			
<b>Sr. No.</b>	<b>Name of Assignments/Experiment</b>	<b>Type</b>	<b>Hrs.</b>
1	Study of Web Technology basics along with different web technology languages	S	2
2	Create a static WebPages by using HTML tags	O	2
3	Create a web page which defines all text formatting tags	O	2
4	Create a webpage using list tags of HTML	O	2
5	Create webpage to include image using HTML tag.	O	2
6	Create webpage to include frames using HTML tag	O	2
7	Demonstrate the use of link tags in HTML	O	2
8	Demonstrate the use of list tags in HTML	O	2
9	Create employee registration webpage using HTML form objects.	O	2
10	Create resume as webpage using HTML tags.	O	2
11	Demonstrate the use of audio tags in HTML	O	2
12	Demonstrate the use of video tags in HTML	O	2

❖ S-STUDY, O-OPERATIONAL

**Textbook:**

1. "Pro HTML5 and CSS3 Design Patterns" Michael Bowers, DionysiosSynodinos and Victor Sumner, Apress edition
2. "A Smarter Way to Learn HTML and CSS" by Mark Myers

**Reference Books:**

1. "Web Development with Node and Express" Ethan Brown Published by O'Reilly Media
2. "HTML, CSS, and JavaScript: All In One" by Jennifer Kyrnin and Juli Meloni, Pearson Publication

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**Course Plan**

<b>Course Title: Web Structure Design</b>	
<b>Course Code: 201CSMIL311</b>	<b>Semester: V</b>
<b>Teaching Scheme: L-T-P: 3-0-0</b>	<b>Credits :3</b>
<b>Evaluation Scheme: ISE + MSE Marks: 20 + 30</b>	<b>ESE Marks :50</b>

**Prerequisite:** Basic knowledge in HTML tags & skill of creating web pages should be known.

**Course Description:**

This course focuses on making the web pages more attractive by using CSS. The course contains basics of XML, advanced XML, bootstrap, XML Transformations, DTD and Namespaces. This course will enable the students to structure the data easily.

**Course Objectives:**

1. To provide the basic knowledge of CSS and XML.
2. To learn and implement the DTD (internal and External) in XML.
3. To demonstrate the use of XSLT.
4. To learn how to use the XPath language in XML.

**Course Outcomes:**

At the end of the course the student should be able to

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Understand</b> the basic concepts of CSS, XML.	L2
2	<b>Understand</b> how to design a XML page.	L2
3	<b>Understand</b> how XML documents can be transformed into other format by using XSLT.	L2
4	<b>Understand</b> how to use XPath Expressions in XML.	L2



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**Course Content**

<b>Content</b>	<b>Hours</b>
<b>Unit 1: Introduction to Website structure</b> Types of website structure- hierarchical, sequential, matrix, database, Importance of Website structures, Principles of Good Web Design	04
<b>Unit 2: CSS</b> Introduction to CSS, Creating Style Sheet, importance of CSS, CSS building blocks, CSS Syntax, CSS selectors, The CSS element Selector, The CSS id Selector, The CSS class Selector, The CSS Universal Selector, The CSS Grouping Selector	07
<b>Unit 3: CSS Box Model</b> Box Model: Display, Box Model, Inline Box, Inline-Block Box, Block Box, Table Box, Absolute Box, Floated Box Box Extends: Width, Height, Sized, Shrink, wrapped, Stretched, Box Margin, Border, Padding,	06
<b>Unit 4: Bootstrap</b> Introduction to Bootstrap, What is Bootstrap?, Why Use Bootstrap?, Grid basic, Bootstrap Tables, Images, Alerts, Buttons, Bootstrap List Groups, Progress Bar, Pagination, Pager, Panels, Bootstrap Dropdowns, Bootstrap Forms, Bootstrap Form Inputs.	05
<b>Unit 5: XML</b> <b>Basics of XML:</b> The benefits of XML, What XML Is Not, Portable Data, How XML Works, The Evolution of XML, XML Documents and XML Files, XML Elements Attributes, XML Names, Comments, Processing Instructions, The XML Declaration, <b>DTD and Namespaces:</b> Validation, Element Declarations, Attribute Declaration, General Entity Declarations, Conditional Inclusion, Two DTD Example, The need for namespaces, Namespace Syntax, How Parsers Handle Namespaces	08
<b>Unit 6: XML Transformations</b> An Example Input Document, xsl:stylesheet and xsl:transform, Stylesheet Processors, Templates and Template Rules, Calculating the value of an Element with xsl:value-of, XSLT Elements <b>XPath :</b> The Tree Structure of an XML Document, Location Paths, Compound Location Paths, General Xpath Expressions	06



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**Textbook:**

1. “Pro HTML5 and CSS3 Design Patterns” Michael Bowers, Dionysios Synodinos and Victor Sumner, Apress edition
2. XML in a Nutshell by Elliotte Rusty Harold, W. Scott Means O’Reilly Publication, 3<sup>rd</sup> Edition

**Reference Books:**

1. XML Technologies by Atul Kahate., 3rd Edition

**Online resources:**

1. <https://www.w3schools.com>



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**Course Plan**

<b>Course Title: Web Structure Design Lab</b>	
<b>Course Code: 201CSMIP312</b>	<b>Semester: V</b>
<b>Teaching Scheme: L-T-P: 0-0-2</b>	<b>Credits :1</b>
<b>Evaluation Scheme: ISE Marks: 25</b>	<b>ESE (POE) Marks :50</b>

**Prerequisite:** Fundamentals of HTML.

**Course Description:**

The course is focused on study, demonstration and hands on experience on static web site design and development by using CSS, Bootstrap and XML. It also covers the concept of client side scripting language and dynamic behavior of websites.

**Course Objectives:**

1. To teach basic of CSS.
2. To demonstrate the design patterns using XML, XSLT.
3. To use Javascript for developing real life web applications.
4. To perform the validation using regular expression.

**Course Outcomes:**

At the end of the course the student should be able to

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Understand</b> basic concept CSS	L2
2	<b>Design</b> an application to demonstrate XML and XSLT.	L2
3	<b>Apply</b> the client side scripting to design an application	L2
4	<b>Demonstrate</b> the use of regular expressions in validation	L3



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<b>List of Assignments/Experiments</b>			
<b>Sr. No.</b>	<b>Name of Assignments/Experiment</b>	<b>Type</b>	<b>Hrs.</b>
1	Apply and design the created HTML pages using CSS	O	2
2	Create different types of valid XML documents	O	2
3	Creating XML document using DOM and Search information from XML document using SAX parser	O	2
4	Create webpage with different buttons, tables alerts using Bootstrap	O	2
5	Create webpage to include image in different format using Bootstrap.	O	2
6	Write XSLT styles-sheet to convert XML document to HTML	O	2
7	Study of JavaScript basics.	S	2
8	Implementation of JavaScript Variables, operators, Expression, control structure, functions	O	2
9	Implementation of JavaScript array and its methods	O	2
10	Implementation of JavaScript object and DOM	O	2
11	Implementation of JavaScript mouse and key events	O	2
12	Design a program for validating the user input using regular expression.	O	2

❖ S-STUDY, O-OPERATIONAL

**Textbook:**

1. “Pro HTML5 and CSS3 Design Patterns” Michael Bowers, DionysiosSynodinos and Victor Sumner, Apress edition
2. “A Smarter Way to Learn HTML and CSS” by Mark Myers

**Reference Books:**

1. “Web Development with Node and Express” Ethan Brown Published by O’Reilly Media
2. “HTML, CSS, and JavaScript: All In One” by Jennifer Kyrnin and Juli Meloni, Pearson Publication

**Online resources:**

1. <https://www.javascript.com/>
2. <https://www.w3schools.com>



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**Course Plan**

<b>Course Title : Client side Scripting</b>	
<b>Course Code : 201CSMIL313</b>	<b>Semester : V</b>
<b>Teaching Scheme : L-T-P : 3-0-0</b>	<b>Credits : 3</b>
<b>Evaluation Scheme : : ISE + MSE Marks: 20 + 30</b>	<b>ESE Marks : 50</b>

**Prerequisite:** Basic Knowledge of HTML,CSS.

**Course Description:**

This course provides the knowledge about the JavaScript code. It powers dynamic behavior of websites and plays an important role in many fields, like front- and back-end engineering, game and mobile development, virtual reality, and more. In this course, student is able to learn JavaScript fundamentals that will be helpful as one dives deeper into more advanced topics.

**Course Objectives:**

1. To introduce the JavaScript basic concepts.
2. To expose the students with array and objects using JavaScript.
3. To develop real life web applications using DOM and event handling.
4. To build the foundations of validating the inputs using the regular expressions

**Course Outcomes (COs):**

Upon successful completion of this course, the students will be able to:

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Understand</b> the basic concepts of the JavaScript.	L2
2	<b>Use</b> the array and objects while designing the java script.	L2
3	<b>Apply</b> the knowledge of DOM and Event handling for developing the real life web applications.	L2
4	<b>Build</b> the web application using regular expression validations.	L3



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**Course Content**

<b>Content</b>	<b>Hours</b>
<b>Unit 1: Introduction to JavaScript</b> What is JavaScript, Features, History, Applications of JavaScript, First JavaScript Code, Whitespace and Line Breaks, Case Sensitivity, Comments, JavaScript in <head>...</head> section, JavaScript in <body>...</body> section, JavaScript in <body> and <head> Sections, JavaScript in External File, Datatypes, Variables, Variable Scope, Keywords.	4
<b>Unit 2: Operators, Control Structures and functions</b> Operators, If...Else, switch, while, for, for...in, loop control, functions, Functions - Defining Functions, Invoking Functions, Function Arguments and Parameters, Functions As Values, Functions As Namespaces, Closures, Function Properties, Methods, and Constructor, Functional Programming	8
<b>Unit 3: Array</b> Creating Arrays, Reading and Writing Array Elements, Sparse Arrays, Array Length, Adding and Deleting Array Elements, Iterating Arrays, Multidimensional Arrays, Array Methods, ECMAScript, Array Methods, Array Type, Array-Like Objects, Strings As Arrays.	6
<b>Unit 4: Objects, classes and DOM</b> Creating Objects, Querying and Setting Properties, Deleting Properties, Testing Properties, Enumerating Properties, Property Getters and Setters, Property Attributes, Object Attributes, Serializing Objects, Object Methods, Classes and Prototypes, Classes and Constructors, Java-Style Classes in JavaScript, Augmenting Classes, Object-Oriented Techniques in JavaScript, Document Object Model, Properties of document object, Methods, Accessing field value, getElementById, GetElementsByClassName(), getElementsByName, getElementsByTagName, JS innerHTML property, JS innerText property	8
<b>Unit 5: Event Handling</b> Types of events, Registering Event Handlers, Event Handler Invocation, Document Load Events, Mouse Events, Mousewheel Events, Drag and Drop Events, Text Events, Keyboard Events.	6
<b>Unit 6: Regular Expressions and Exception Handling</b> Defining Regular Expressions, String Methods for Pattern Matching, The RegExp Object, Exception Handling- What is Exception Handling, try, catch, throw, finally statements.	4



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**Text Books:**

1. David Flanagan, “JavaScript: The Definitive Guide”, O’ reilly Press
2. Douglas Crockford, “JavaScript: The Good Parts”, O’ reilly Press
3. Terry McNavage, “JavaScript for Absolute Beginners”, Apress.

**Reference Books:**

1. David Herman, “Effective JavaScript: 68 Specific Ways to Harness the Power of JavaScript (Effective Software Development Series)”, Paperback
2. Mark Myers, “A Smarter Way to Learn JavaScript: The new approach that uses technology to cut your effort in half”.

**Online resources:**

1. <https://www.javascript.com/>
2. <https://www.w3schools.com>



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**Course Plan**

<b>Course Title : Advance Web Programming</b>	
<b>Course Code : 201CSMIL326</b>	<b>Semester : VI</b>
<b>Teaching Scheme : L-T-P : 3-0-0</b>	<b>Credits : 3</b>
<b>Evaluation Scheme : ISE + MSE Marks: 20 + 30</b>	<b>ESE Marks : 50</b>

**Prerequisite:** Basic knowledge HTML and C language

**Course Description:**

This course provides the knowledge about creation of static, dynamic and interactive web application with the help of PHP. It is used for server-side web pages for their specific web applications. This course will help to gain the skills and project-based experience needed for entry into full stack web application and development careers.

**Course Objectives:**

1. To introduce the PHP basic concepts.
2. To expose the students with object oriented concepts using PHP.
3. To develop real life web applications using HTML and PHP.
4. To build the foundations of MySQL database handling mechanism.

**Course Outcomes (COs):**

Upon successful completion of this course, the students will be able to:

<b>CO</b>	<b>Statements</b>	<b>BTL</b>
1	<b>Understand</b> the basic concepts of the PHP.	L2
2	<b>Use</b> the object oriented concept while designing the web application.	L2
3	<b>Apply</b> the knowledge of HTML and PHP for developing the real life web applications.	L2
4	<b>Build</b> the web application using the MySQL and PHP.	L3



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**Course Content**

<b>Content</b>	<b>Hours</b>
<b>Unit 1: Introduction to PHP</b> History, General Language Features, Installation and configuration of PHP environment, Setting up development server, PHP basics - Embedding PHP Code in Your Web Pages, Commenting Your Code, Outputting Data to the Browser, PHP's Data Types, Identifiers, Variables, Constants.	4
<b>Unit 2: Expressions, Control Structures, Functions</b> Expressions, Control Structures, Functions - Invoking a Function, Creating a Function, Function Libraries, Anatomy of an Array, Creating index based and Associative array Accessing array, Element Looping with Index based array, Looping with associative array using each () and foreach(), array functions.	8
<b>Unit 3: Object-oriented PHP</b> The Benefits of OOP, Key OOP Concepts, Class, Objects, Constructors and Destructors, Inheritance	6
<b>Unit 4: HTML Form Handling and File Handling</b> Designing HTML forms, retrieving submitted data using \$_GET and \$_POST, Creating files, opening, reading, writing and closing operations with files.	8
<b>Unit 5: Introduction to MySQL</b> Introducing of SQL, introduction to MySQL, installation and configuration of MySQL, database creation, table creation, field creation, data types, different SQL queries – create, insert, update, delete, select.	5
<b>Unit 6: Database Connectivity with MySQL</b> Interacting with the Database with mysqli, Connection with MySQL Database, Performing basic database operations - Insert, Delete, Update, Select, Executing Database Transactions.	5



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**Text Books:**

1. W. Jason Gilmore, “Beginning PHP and MySQL: From Novice to Professional”, Fourth Edition
2. Learning PHP, MySQL, ‘O’ riley Press

**Reference Books:**

1. Steven Holzner, “PHP: The Complete Reference”, by McGrawHill

**Online resources:**

1. <http://www.php.net>
2. <https://www.w3schools.com>



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**Course Plan**

<b>Course Title : Advance Web Programming Laboratory</b>	
<b>Course Code : 201CSMIP327</b>	<b>Semester : VI</b>
<b>Teaching Scheme : L-T-P : 0-0-2</b>	<b>Credits : 1</b>
<b>Evaluation Scheme : ISE – 25 Marks</b>	<b>ESE (POE) Marks : 50</b>

**Prerequisite:** Basic knowledge HTML

**Course Description:**

This course provides the knowledge about development of static and dynamic web application with the help of PHP and MySQL. This course will help to gain the hands-on skills and project-based experience needed for entry into full stack web application and development careers.

**Course Objectives:**

1. To Configure the PHP web development environment.
2. To develop the PHP applications using the file handling.
3. To develop real life web applications using HTML and PHP.
4. To install and configure MySQL for database handling.

**Course Outcomes (COs):**

Upon successful completion of this course, the students will be able to:

<b>CO</b>	<b>Statements</b>	<b>BTL</b>
1	<b>Configure</b> the PHP web development environment (WAMP, XAMPP, LAMP).	L2
2	<b>Develop</b> the file handling applications.	L3
3	<b>Apply</b> the knowledge of HTML and PHP for developing the real life web applications.	L2
4	<b>Install</b> and configure the MySQL database.	L3



**T. Y. B. Tech. Curriculum**  
**w.e.f. 2022-2023**

<b>List of Assignments/Experiments</b>			
<b>Sr. No.</b>	<b>Name of Assignment/Experiments</b>	<b>S/O</b>	<b>Hours</b>
1	Study of PHP basics along with different modern tool installation and configuration.	S	2
2	Implementation of PHP Variables, Expression, control structure	O	4
3	Implementation of PHP functions	O	2
4	Implementation of PHP associative array.	O	2
5	Implementation of PHP array with different functions.	O	2
6	Implementation object-oriented concepts in PHP.	O	2
7	Implementation of form and extract the user input using \$_GET or \$_POST	O	2
8	Design and develop an application for file operations using PHP.	O	2
9	Study of the SQL language.	S	2
10	Study of MySQL along with installation and configuration.	S	2
11	Design and develop an application for handling different database operations (Insert, delete and Update) using PHP.	O	4
12	Design and develop an application for fetching the database contents using select query of PHP.	O	2

S-STUDY, O-OPERATIONAL

**Text Books:**

1. W. Jason Gilmore, "Beginning PHP and MySQL: From Novice to Professional", Fourth Edition.
2. Learning PHP, MySQL, 'O' riley Press.

**Reference Books:**

1. Steven Holzner, "PHP: The Complete Reference", by McGrawHill

**Online resources:**

1. <http://www.php.net>
2. <https://www.w3schools.com>



**T. Y. B. Tech. Curriculum**  
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**Course Plan**

<b>Course Title: Web Development &amp; Deployment</b>	
<b>Course Code: 201CSMIL408</b>	<b>Semester: VII</b>
<b>Teaching Scheme: L-T-P: 2-0-0</b>	<b>Credits :2</b>
<b>Evaluation Scheme: ISE + MSE Marks: 20 + 30</b>	<b>ESE Marks :50</b>

**Prerequisite:** Basic knowledge HTML,CSS,Javascript,PHP.

**Course Description:**

The basic aim of the course is to expose the students to fundamental concepts of WordPress. WordPress enables student to create and maintain a website. Student can also create a new website or blog, or manage an existing WordPress website. The course covers general, writing, reading and discussion settings and creation of image, audio and video contents.

**Course Objectives:**

1. To introduce basic concepts of WordPress.
2. Learn the general, writing, reading and discussion settings of WordPress.
3. Design contents and use themes for a given application.
4. Design website, blogs using various contents and themes.

**Course Outcomes:**

At the end of the course the student should be able to

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Understand</b> and learn installation steps of the WordPress.	L2
2	<b>Apply</b> the general, writing, reading and discussion settings.	L3
3	<b>Create</b> the various contents and use themes in WordPress web development.	L3
4	<b>Create</b> and deploy website, blogs using various contents and themes using local and migration plugins.	L3



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**Course Content**

<b>Content</b>	<b>Hours</b>
<b>Unit 1: Getting Started with WordPress</b> <b>Introduction</b> , Why WordPress, wordpress.com vs. wordpress.org, features of WordPress, Sites Built with WordPress	02
<b>Unit 2: Installing and Upgrading WordPress</b> System Requirements, Installation Using the Web Interface, Initial Settings Troubleshooting the Blank White Page, Installing Themes, Installing Plugins, Upgrading WordPress, Themes, and Plugins	04
<b>Unit 3: Dashboard and Settings</b> The Dashboard, The Administration Menu and the Admin Bar, Settings, General Settings , Writing Settings, Comments, Comments vs. Trackbacks, Other Comment Settings, Uploading Files	04
<b>Unit 4: Working with Content and Themes</b> <b>Content:</b> Posts, Post Formats, The Visual Editor, Shortcodes, Permalinks, Publish Settings, Revisions, Pages, Posts vs. Pages: Same, but Different, Editing Posts and Pages, Quick Edit, Bulk Edit, Media Files, Inserting an Image from a URL, Editing Images, Galleries, Audio, Video, Other File Types, Feeds <b>Themes:</b> Using the Customizer, Using Widgets, Using Menus, Using Header and Background Images, Making Other Changes to Themes, Starter Themes and Theme Frameworks	08
<b>Unit 5: Working with Plugins and Users</b> Plugin: How Plugins Work, Evaluating Plugins, Troubleshooting Plugins Users: Changing Profile Fields with a Plugin, Roles, Roles in Action: Notifications, Moderation, and Workflow	03
<b>Unit 6: Deployment</b> Configure repository, Configure deployment environments, Export the Local site database, Importing site database on remote server, Pros and cons of deploying via SFTP, Deploy Site from Local Using a Migration Plugin	03



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**T. Y. B. Tech. Curriculum**  
**w.e.f. 2022-2023**

**Textbook:**

1. WordPress for web developers, Stephanie Leary, Apress
2. WordPress tutorialspoint

**Online resources:**

1. [https://wpengine.com/resources/local-wordpress-development-migrations-and-deployment/#Deploy\\_Your\\_Site\\_from\\_Local\\_Manually\\_via\\_Sftp\\_or\\_cPanel](https://wpengine.com/resources/local-wordpress-development-migrations-and-deployment/#Deploy_Your_Site_from_Local_Manually_via_Sftp_or_cPanel)
2. <http://guides.beanstalkapp.com/deployments/deploying-wordpress.html>



**T. Y. B. Tech. Curriculum**  
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**Course Plan**

<b>Course Title: Web Development &amp; Deployment Lab</b>	
<b>Course Code: 201CSMIP409</b>	<b>Semester: VII</b>
<b>Teaching Scheme: L-T-P: 0-0-2</b>	<b>Credits :1</b>
<b>Evaluation Scheme: ISE Marks: 25</b>	<b>ESE (OE) Marks :25</b>

**Prerequisite:** Basic knowledge HTML,CSS,Javascript,PHP.

**Course Description:**

WordPress is an open source Content Management System (CMS), which allows the users to build dynamic websites and blog. WordPress is the most popular blogging system on the web and allows updating, customizing and managing the website from its back-end CMS and components. This course will aim to learn basics of WordPress using which student can create websites with ease. The practical is divided into various sections for convenience.

**Course Objectives:**

1. Perform the installation steps of the WordPress.
2. Demonstrate the general, writing, reading and discussion settings.
3. Create various contents and use themes.

**Course Outcomes:**

At the end of the course the student should be able to

<b>CO</b>	<b>Statement</b>	<b>BTL</b>
1	<b>Install</b> and use the WordPress.	L2
2	<b>Apply</b> the general, writing, reading and discussion settings.	L3
3	<b>Create</b> the various contents and use themes in WordPress web development.	L3
4	<b>Create</b> and deploy website, blogs using various contents and themes using local and migration plugins.	L3



**T. Y. B. Tech. Curriculum**  
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<b>List of Assignments/Experiments</b>			
<b>Sr. No.</b>	<b>Name of Assignments/Experiment</b>	<b>Type</b>	<b>Hrs.</b>
1	Installation of WordPress	O	2
2	Demonstrate the general settings	O	2
3	Demonstrate the writing settings	O	2
4	Demonstrate the reading settings	O	2
5	Demonstrate the discussion settings	O	2
6	Create different contents and demonstrate it.	O	4
7	Demonstrate various themes	O	2
8	Create website using various plugins, themes and contents	O	4
9	Deployed the website on local and migration Plugins	O	4

❖ **S-STUDY, O-OPERATIONAL**

**Textbook:**

1. WordPress for web developers, Stephanie Leary, Apress
2. WordPress tutorialspoint

**Online resources:**

1. [https://wpengine.com/resources/local-wordpress-development-migrations-and-deployment/#Deploy\\_Your\\_Site\\_from\\_Local\\_Manually\\_via\\_Sftp\\_or\\_cPanel](https://wpengine.com/resources/local-wordpress-development-migrations-and-deployment/#Deploy_Your_Site_from_Local_Manually_via_Sftp_or_cPanel)
2. <http://guides.beanstalkapp.com/deployments/deploying-wordpress.html>