



WEB DEVELOPMENT CURRICULUM

► **About** Digital Dreams

At Digital Dreams ICT Academy, we are dedicated to empowering individuals with the essential skills needed to thrive in today's digital landscape. With a focus on practical learning and industry-relevant curriculum, we offer a wide range of courses covering areas such as programming, digital marketing, data analysis, graphic design, and more.

Vision Statement

To be the driver of
ICT revolution in our
society

Mission Statement

To unlock the potential of people
who can make a difference in
society by training them to be
deep in skills and rounded in
knowledge to drive innovation

Benefit

When you register at Digital Dream ICT Academy, you avail yourself to several benefit, We would ensure that you have an excellent experience during and even after your training. you will have the oppotunity of work placement in other ICT firm and also get a discounted membership in our co-working space-Dreams Hub.



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@digitaldreamsNG



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www.digitaldreamsng.com

► Course Overview

This Web development course covers essential topics ranging from front-end technologies like HTML, CSS, and JavaScript to back-end frameworks like Laravel, along with database management, hosting, and optimization techniques. Students will learn how to design, build, and deploy fully functional web applications as well as market it.

Duration

12 WEEKS (3 Month)

Who is it designed for?

This course is designed for individuals aspiring to become proficient web developers, including beginners with no prior coding experience, looking to enhance their skills in frontend and backend web development.

Softwares



Desired outcome

Students will have acquired the knowledge and skills necessary to design, develop, and deploy dynamic and responsive websites and web applications.

Requirements

Students should have basic computer literacy and familiarity with navigating the internet. Access to a computer with internet connectivity is necessary for completing assignments and accessing course materials.

Web Development

Course Curriculum

Module Outcomes

Section A: WEBSITE DESIGN

INTRODUCTION TO WEB DESIGN

Students will grasp the fundamentals of web design, including website importance, history, technologies, and design principles.

- What is a website and why it is important
- History of the web and how websites work
- Different technologies used in web development
- What to consider while developing a website
- Website design principles
- Criteria for evaluating quality of websites

Assignment

Evaluate 3 websites based on given criteria

INTRODUCTION TO HTML

Students would become proficient in HTML, creating structured content and tables.

- Setting up your site folders
- Introduction to HTML
- HTML standards
- Understanding HTML tags
- Basic HTML tags
- Creating a data table
- Understanding attributes
- Rendering a web page in browsers

Assignment

Create a data table and implement merging of column and rows

BUILD BASIC FORMS

The Students will have mastered building basic forms with validation techniques.

- What are form elements
- Type of forms
- Using different Input types
- Handling selection
- Validating input
- Submitting a form

Assignment

Create a contact form

The student will gain expertise in CSS, designing page layouts and styling elements.

STYLING PAGES WITH CSS

- What is CSS
- Setting up your stylesheet
- Introduction to media query
- CSS Specificity Hierarchy
- The Box Model in CSS
- Page Layout Techniques

Assignment

Create a page layout using CSS

The student would have learnt to create various page components and design a functional landing page.

CREATING PAGE COMPONENTS

- Button
- Collection
- Header with navigation bar
- Hero Image
- Card
- Footer

Assignment

Create a landing page of a site

The student will advance their styling skills with CSS, implementing animations and transitions.

ADVANCED STYLING

- Creating rounded elements
- Shadows and transparency
- Handling Hover, Focus, and Other States
- Adding Transitions
- Keyframe animation

Assignment

Creating a pulsating Floating Action Button that drops down a content on click.

Student will understand design principles, color theory, and responsive design for effective website evaluation.

GOOD DESIGN PRINCIPLES

- Color theory
- Typography
- Principles of design
- Responsive design

	• Understanding UI Elements • Design Systems Assignment Evaluate a website on the design principles
The student would utilize Bootstrap to build responsive and visually appealing webpages.	BUILDING WITH BOOTSTRAP • Bootstrap overview • Bootstrap Environment setup • Bootstrap Basics • Bootstrap Grid • Bootstrap Basic Components • Bootstrap form Assignment: Create a webpage using Bootstrap
The student would learn to explore advanced Bootstrap components and integrate them into web projects.	ADVANCED BOOTSTRAP • Bootstrap Tooltip • Bootstrap Dropdown • Bootstrap Collapse • Bootstrap Modal • Bootstrap Slideshow • Bootstrap Scrollspy Assignment: Create a webpage incorporating Bootstrap advanced components
The student gains familiarity with the basics of SEO and learns how to implement strategies to enhance website visibility in search engine results.	WEBSITE OPTIMISATION • What is website optimisation • Optimising for social media • Search Engine Optimisation • Page speed optimization • Optimising for mobile devices • Page Speed Insight Assignment: Analyse a website suggest improvements and create your personal website
Digital Dreams ICT Academy	Web Development

WEBSITE PUBLICITY, MONETIZATION AND ANALYTICS

The student will delve into website publicity, monetization, and analytics, integrating marketing strategies and analytics tools.

- Understanding website traffics
- Ways to grow your website traffic
- Integrating Mailchimp Email Campaign
- Monetizing a website
- Integrating Google Adsense
- Analyzing website performance
- Integrating Google Analytics
- Understanding components of website performance

Assignment

Analyse a website performance in Google Analytics

Student will learn website hosting, including setup, domain management, and security measures.

WEBITE HOSTING

- Hosting your website with Github
- Understanding domain name, subdomain and addon domain
- Hosting your with Cpanel
- Understanding FTP
- Securing your site with SSL

Assignment: Host your web page on Github

Bonus lessons

- How to market yourself as a web designer
- Understanding Git and Github

PROJECT

Build a website for a hotel

Section B: JAVASCRIPT

Students will understand the basics of JavaScript and its role in web development. They will learn to manipulate the Document Object Model (DOM) and access objects within it and have the ability to create simple interactive web applications using JavaScript.

INTRODUCTION TO JAVASCRIPT

- Introduction to Javascript
- Javascript and the Document Object Model (DOM)
- Accessing an object in DOM
- Introduction to JQuery
- Introduction to HTML Canvas
- Introduction to Canvas coordinate System
- 'Hello World' app in Javascript
- Accessing object attributes

Assignment

Create an app to display a welcome message on screen when some submits a name

Students will grasp the concept of variables in JavaScript and develop Proficiency in utilizing variables and implementing basic animations in JavaScript applications.

VARIABLES

Project One: Creating A Paddle And Ball Game

- Introduction to variables in Javascript
- Creating shapes in canvas
- Introduction to animation and timers
- Animating ball movement in a screen
- Debugging javascript

Assignment

Make the speed of the ball to increase with time

Students will learn about conditional statements and how to create logical boundaries in their applications and develop Capability to implement game logic and customize game features using conditional statements in JavaScript.

CONDITIONS

- Introduction to conditions
- Creating boundaries in the ball animation
- Creating a paddle
- Scoring points in the game
- Simple jquery animation on game score

Assignment

Customise the game to have 5 lives

ARRAYS

Project Two: Creating A Simple Spreadsheet

Students will understand the concept of arrays and manipulate data within them and develop competence in managing and manipulating data using arrays in JavaScript applications.

- Introduction to arrays
- Manipulating data in an array
- Multi-dimensional arrays
- Fetching DOM elements into an array
- Designing a simple spreadsheet
- Iterating through array elements
- Using JQuery .each() function

Assignment

Finding the average of a row in a spreadsheet

FUNCTIONS

Students will grasp the concept of functions and their importance in JavaScript and develop ability to create and utilize functions effectively in JavaScript applications, including implementing custom filtering functions.

- Understanding functions
- Passing functions as argument
- Functions as object
- Variable scope
- Arrow and anonymous functions
- Using extend

Assignment

Create a function to filter an array based on a criteria

LOOPS

Students will learn about different types of loops and their applications in JavaScript and develop proficiency in utilizing loops to iterate through data and implement time-based actions in JavaScript applications.

- Introduction to loops
- Timers as loops
- Recursion

Assignment

Sum the rows and columns of the spreadsheet every 1 minute

Students will understand event handling in JavaScript, including mouse and keyboard events. Student will also have the Ability to implement interactive features and event-driven functionality in JavaScript applications.

Students will comprehend the concept of objects in JavaScript and how to work with them. they will also be proficiency in creating and working with objects, implementing object-oriented programming principles in JavaScript applications.

Students will understand asynchronous programming concepts in JavaScript. They will also have the ability to work with asynchronous operations and fetch data from external APIs in JavaScript applications.

EVENTS

Project Three: Creating The Tik Tac Toe Game

- Understanding events
- Mouse events
- Keyboard events
- Implementing drag and drop
- Event listeners

Assignment

Create Drag and drop of the game

JAVASCRIPT OBJECT

- What is an object in Javascript
- Introduction to JSON
- Object Oriented Programming
- Encapsulation using module pattern
- Javascript Inheritance

Assignment

Completing the game logic

ASYNCHRONOUS JAVASCRIPT

Project Four: Creating A Weather App

- Understanding the concept of asynchronous
- Callbacks and events
- Modern asynchronous programming with async functions and await:
- Error handling with try ... catch.
- Understanding promises
- Chaining promises and resolving errors.
- Understand that fetch() for asynchronous network requests
- Concept of RESTful API

Assignment

Build a weather app that displays current weather information

ALGORITHM AND DATA STRUCTURE

Project Five: Creating A Hangman Game

Students will learn about common data structures and algorithms used in JavaScript. They will also understand of fundamental data structures and algorithms, ability to solve algorithmic problems using JavaScript.

- What is data structure
- Types of data structure
- Understanding algorithm
- Types of algorithm problems
- Time and space complexity
- Big O notation
- Common data structure and algorithm - Fibonacci rabbit problem

Assignment

Implementing a binary tree

IN-BUILT JAVASCRIPT OBJECT

Project Six: Create A Date Picker Widget

Students will be proficiency in utilizing built-in JavaScript objects and creating custom widgets for web applications.

- Working with the calendar object
- Introduction to Maths object
- Introduction to String Object
- Introduction to Regex
- Concept of widgets

Assignment

Creating a date picker widget

DATA STORAGE

Project Seven: Phone Directory

Students will learn about different data storage options in JavaScript, including cookies and local storage.

- Introduction to Cookies
- File Reader Object
- Introduction to local storage

Assignment

Create a phone directory

PROJECT

A platform game with sprite animation

Section C: BACKEND WEB DEVELOPMENT

INTRODUCTION TO CLIENT – SERVER ARCHITECTURE

Students will understand the fundamentals of client-server architecture, including different types of servers and server configurations. The assignment will reinforce their understanding by requiring them to create a program to calculate the area of a circle.

- Introduction to servers
- Types of servers
- Server configurations
- Installing and configuring PHP
- Introduction to PHP
- 'Hello World' in PHP
- Introduction to PHP variables and constants
- Operators in PHP

Assignment

Create a program to calculate area of a circle

ARRAYS AND HANDLING FORM REQUESTS

Students will have a strong grasp of arrays and their applications in PHP, including maps, hash tables, and handling form requests. The assignment will challenge them to create an application that retrieves all instances of a name from a contact JSON.

- Introduction to Arrays
- Maps and hash tables
- Handling form requests
- Handling server information
- Handling file upload
- Array functions
- Encoding and decoding JSON

Assignment

Create an application that return all instances of a name in a contact JSON

CONTROL STRUCTURES

Students will master PHP control structures, including conditionals and loops, and learn to create functions for better code organization and reusability.

- Conditionals
- Handling Loops
- Creating functions

Students will be proficient in handling files and directories in PHP. They will understand file reading and writing operations and be capable of resizing images and drawing shapes using GD functions.

FILE AND IMAGE HANDLING

- Understanding the filesystem
- Creating, navigating and modifying directories
- Including Files
- Reading and Writing data to files
- Understanding GD functions
- Resizing an image
- Drawing shapes using PHP

Assignment

Create an App that creates an ID card from form data

Students will grasp the fundamentals of object-oriented programming (OOP) in PHP, including concepts such as classes, objects, constructors, destructors, and inheritance.

OBJECTS AND CLASSES

- Introduction to OOP
- Creating objects and classes
- Constructors and destructors
- Understanding inheritance
- Multiple inheritance
- Implementing a CSV Parser in OOP

Assignment

Create an app that draws a bar chart using data from a CSV

Upon completing this module, students will understand the fundamentals of databases, relational database management systems, and MySQL installation. The assignment will require them to store form data into a database.

INTRODUCTION TO DATABASE

- Introduction to databases
- Why relational database management systems
- Mysql Installation
- Database Design
- Database normalization
- Introduction to PHPMyAdmin
- Creating a database
- Creating database users
- Assigning user privileges
- Connecting to a database
- Running a simple INSERT query

Assignment

Store the data from a form to a database



Students will master SQL operations such as SELECT, filtering, grouping, aggregating, JOIN, and data manipulation. The assignment will provide them with hands-on experience in creating a simple CRUD phonebook application.

STRUCTURED QUERY LANGUAGE

- Introduction to SQL
- SELECT queries
- Filtering data
- Grouping and aggregating
- Performing JOIN
- Updating data
- Deleting data
- Altering a table

Assignment

Create a simple CRUD phonebook application

Students will understand advanced OOP concepts such as statics, polymorphism, namespaces, and PHP iterables. They will implement a simple chat system using OOP principles, demonstrating their understanding of best practices.

ADVANCED OOP CONCEPTS

- Understanding Statics
- Implementing Polymorphism
- Using Namespace
- PHP Iterables
- OOP best practices
- Implementing a simple chat system

Assignment

Create a simple chat system using OOP

Students will gain knowledge of common design patterns and understand their applications in PHP development.

DESIGN PATTERNS

- Introduction to Design Patterns
- categories of Design patterns
- Common design pattern
- Understanding MVC Pattern
- Understanding MVVM Pattern

Assignment

Creating an MVC application



Students will understand the importance of server security and be familiar with best practices for securing PHP applications. They will implement secure login systems with user privileges and learn techniques to prevent common security vulnerabilities like SQL injection and cross-site scripting.

SERVER SECURITY

- Understanding Https
- Introduction to .htaccess
- SQL injection
- Cross-site scripting
- Input validation and sanitisation
- Security controls
- Broken access authentication
- Password hashing
- Server security best practices

Assignment

Implement secure login with user privileges

Students will gain a comprehensive understanding of RESTful API principles and be able to design, implement, and test APIs for web applications.

RESTFUL API

- Introduction to API
- User authentication and authorization
- Implementing routing
- Implementing API endpoints
- Testing API using curl

Assignment

Create a RESTful API for employee data

Students will understand the essentials of web hosting configurations, including database setup, .htaccess usage, email handling, CRON setup, and domain configurations.

WEB HOSTING CONFIGURATIONS

- Configuring database
- Handling .htaccess
- Sending emails
- Setting up CRON
- Understanding domain configurations

PROJECT

Create a fully functional e-commerce website

SECTION D : LARAVEL

Students will understand the significance of Laravel as a PHP framework, learn how to set it up, configure debugging tools, and navigate the project directory, including configurations and environment variables.

INTRODUCTION TO LARAVEL

- What is Laravel and its importance
- How to set up Laravel
- Setting up Laravel Debugbar
- Laravel Project Directory Explained
- .Configurations & Environment Variables

Students will grasp the concept of controllers in Laravel, be able to create them, and understand the concept of single-action controllers for organizing application logic.

CONTROLLERS

- What are controllers
- Creating controllers in Laravel
- Single Action Controllers

Students will gain proficiency in Laravel routing, including basic and advanced techniques, handling route parameters and expressions, and configuring route names and fallback routes.

ROUTING

- Advanced routing techniques
- Understanding route parameters
- Using route parameters in Laravel
- Using route expressions in Laravel

Students will learn advanced route handling techniques such as naming routes, prefixing routes, grouping with prefixes, and configuring fallback routes to enhance application routing.

ADVANCED ROUTE HANDLING

- Assigning names to routes
- Using named routes in Laravel
- Prefixing routes in Laravel
- Grouping routes with prefixes
- Configuring fallback routes in Laravel
- Handling undefined routes



Students will master database configuration in Laravel, connecting to various databases, understanding database migrations, and executing migrations for efficient database management.

SETUP A DATABASE FOR LARAVEL

- Database configuration in Laravel
- Connecting Laravel to different databases
- Introduction to database migrations
- Creating and running migrations in Laravel

Students will delve deeper into database operations, including seeding databases, creating data factories, and utilizing the Laravel Query Builder for advanced database queries.

DEEPER DIVE INTO DATABASE

- Seeding databases in Laravel
- Generating and running seeders
- Creating data factories in Laravel
- Using factories to generate test data

Students will understand the basics of the Laravel Query Builder and learn advanced query operations.

THE QUERY BUILDER

- Basics of the Laravel Query Builder
- Advanced query operations

Students will integrate Tailwind CSS into Laravel projects, understand the Blade template engine, work with variables and control structures in Blade, and grasp conventions for naming and structuring Eloquent models.

TEMPLATES AND CSS INTEGRATION

- Installing Tailwind CSS in Laravel
- Introduction to the Blade Template
- Understanding variables in Blade templates
- Using control structures in Blade
- Introduction to Eloquent models
- Conventions for naming and structuring models

Students will learn to manipulate data using Eloquent models, perform basic and advanced data retrieval operations, display data in Blade templates, and handle record insertion, modification, and deletion.

DATA MANIPULATION

- Basics of retrieving data with Eloquent
- Advanced Eloquent queries
- Displaying data in Blade templates
- Using Blade directives for output
- Adding records to the database with Eloquent
- Best practices for data insertion
- Modifying records with Eloquent
- Handling updates in Laravel
- Removing records with Eloquent
- Soft deletes and permanent deletion

Students will learn to create and handle form requests, implement form validation, customize validation rules, manage error messages, handle file uploads, and implement pagination in Laravel applications.

HANDLING FORM REQUESTS

- Creating and handling form requests
- Form validation in Laravel
- Customizing form request validation
- Displaying error messages in views
- Handling file uploads in Laravel
- Storing and retrieving uploaded images
- Implementing pagination in Laravel
- Customizing pagination views

Students will understand and implement various types of relationships in Laravel, including one-to-many, one-to-one, and many-to-many relationships, optimizing queries and leveraging advanced relationship features.

RELATIONSHIPS

- Eager loading and optimizing queries
- Setting up and utilizing one-to-one relationships
- Best practices for one-to-one relationships
- Implementing many-to-many relationships in Laravel
- Pivot tables and advanced relationship features

Students will gain proficiency in middleware usage in Laravel, implementing and customizing authentication middleware for secure user authentication and authorization.

AUTH MIDDLEWARE

- Introduction to middleware in Laravel
- Implementing and customizing authentication middleware

PROJECT

Create a Patient Record management application in Laravel

Other Courses you might instrested in

- VB.NET
- Peach Tree
- JSP
- SPSS
- C++
- Oracle
- Java Script
- Ajax/CSS
- Python
- Motion Graphics
- Video Editing
- Web Development
- Digital Marketing
- Android Development
- Animation
- Web Animations
- Auto CAD
- PHP/MySQL
- Cyber Security
- ASP.Net
- Video Editing
- Web Development
- Digital Marketing
- Android Development
- Animation
- Web Animations
- Auto CAD
- PHP/MySQL
- Cyber Security
- ASP.Net

Our Location

Anambra



44, New Market Road, Onitsha
Anambra State.
09157062091



KM 08 Old Enugu Onitsha Road,
Onitsha ANambra State.
08076172758



Umuzocha Plaza, Enugu/Onitsha
Express Way, Opposite CBN Awka.
09057119729

Enugu



86/76, Zik Avenue, Uwani, Enugu
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08076173622



1A Nwodo Street, GRA, Enugu State.
09064660137



299 Nike Lake Road Trans Ekulu,
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08076173021



72 Nike Lake Road Trans Ekulu, Enugu
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08078360956



1A Chime Avenue, New Haven Enugu
07034237417



Maredec House, 185, Agbani Road.
07064286765



DON CHY Plaza, Beside Fidson Filling
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08071301818

Ebonyi



Awolowo Street, off Waterworks RD,
Abakaliki
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