



**Diploma Program in
'Web Development'**

Duration: 52 weeks

AMM

Sr. No.	Name of the Programme	Details About the Programme	Remarks
1.	<p style="text-align: center;">Diploma certificate course in 'Web Development'</p>	<p>Mission of AIIITS: The mission of AIIITS is to advance knowledge and educate students in information Technology and other areas that will best serve the nation.</p> <p>Vision of AIIITS: To position AIIITS as a premier institute responsive to emerging needs of industry. To produce high skilled graduates and contribute towards sustainable development of the industry and nation.</p>	
		<p style="text-align: center;">1. <u>Introduction to the Programme:</u></p> <p>Web development is the work involved in developing a web site for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing a simple single static page of plain text to complex web-based internet applications (web apps), electronic businesses, and social network services.</p> <p>The course aims at utilizing fully the capabilities of the free and open source software. The participants will get hands-on training.</p> <p style="text-align: center;">2. <u>Objectives of the Programme:</u></p> <p>The course aims at developing logics and algorithms, imparting relevant programming abilities and develop web based applications, this program also develop capabilities to manage database and generate queries to extract details from a dataset. It also equips the participants to develop websites, and web based software.</p> <p><u>Objectives:</u> the objectives of the proposed course are to impart knowledge on the following:</p> <ol style="list-style-type: none"> 1. Building concepts of developing web based software and websites. 2. Developing logics and algorithms and programming skills to develop software and its connectivity with database. 3. Developing skills to develop websites and web applications. 4. Learn skills which can give a very promising career. 	
		<p style="text-align: center;">3. <u>Target Group of Learners:</u></p>	

		<p>Diploma in Web-development is meant for anyone who want to make their career in IT and software development. Career options will be there for website development as a database engineer and as a software developer. Any students after completion of this program can get placed in industry as website developer or database engineer or software developer and with experience they can grow in their career path. It also helps to build a promising career in every aspects.</p>	
		<p>4. Instructional Design: The course will consist of live lectures, videos and assignments for every modules. After every module doubt-clearing sessions will be arranged where students will be free to clear their doubts. After completion of all modules projects will be allotted to students.</p>	
		<p>5. Instructional Design:</p> <p>i. <u>Duration of the Programme: 8</u> months</p> <p>ii. <u>Course delivery</u></p> <p>The course will be entirely delivered <i>online or offline.</i> There are six modules in the course which will be conducted by expert faculties having experience and expertise in respective technologies. Each week's menu will cover the following:</p> <ol style="list-style-type: none"> 1. <u>Interactive lectures:</u> These sessions will be conducted in Classroom or on_Microsoft team or Google meet or Zoom in case situation arises. The session link will be shared with the students. 2. <u>Lecture(s):</u> the theoretical and applied parts of the topic will be covered in lectures. 3. <u>Exercises and data:</u> Assignments will be allocated to the participants which they need to complete and submit and assessments on any particular module will be done based on the assignments. 4. <u>Doubt-clearing:</u> There will be an interactive forum as a platform to interact with each other and with the resource persons. Here the participants can discuss their difficulties, can ask questions and get the doubts clarified. 	
		<p>6. <u>Eligibility:</u></p>	

		Students with any bachelor's/Master's degree in Science/ Information Technology/ Computer Science/ Engineering/ from any recognized universities in India or other countries.	
		<p>7. Scheme and Evaluation:</p> <p>There would be three types of assessment for evaluating the performance of the participants - short and long answer questions, multiple type questions and practical exercises.</p> <p>Each participant will be given assignments and projects. After completion of the training, online examination will be conducted and Certificate will be jointly issued by AIIITS and Jain University only after completion of all the assignments, project and after qualifying the exam.</p>	
		<p>1. Procedure for admission, Curriculum transaction and evaluation:</p> <p>Admission will be based on prerequisite degree of any recognized universities in India. The Course is affiliated to the Jain University.</p>	
		<p>8. Fee structure:</p> <p>The fees should be paid in one installment only, before the commencement of the course*.</p> <p>Rs. 50,000/-</p> <p>*Installment options can be provided with additional 8% on the course fees. The students can pay it in 4 easy installments</p>	
		<p>10. Syllabus:</p> <p>Topic 1: Sql- Introduction to Basic Database Concepts, E-R Modelling and Diagram, Normalization, Introduction to SQL, DDL and DML Statements, Working with Queries (DQL), Aggregate Functions, Joins and Set Operations, Implementation of Data integrity, Working with Constraints, Implementing Views, Data Control language (DCL), Working with Indexes, Writing Transact-SQL (T-SQL), Working with Stored Procedures and Functions, Implementing Triggers (Duration-4 Weeks)</p> <p>Topic 2: PHP- PHP Introduction, Install PHP, PHP Echo, PHP print Php Variable, PHP constant, PHP comments, Control Statement, PHP If else, Php switch, PHP For Loop, PHP while loop, PHP Do While Loop, PHP Break, PHP Functions, PHP Array, PHP Indexed Array, PHP Multidimensional Array, PHP Associative Array, PHP</p>	

Array Functions, PHP Strings, PHP Strings, PHP String Function, PHP Math Function, PHP Form Handling, PHP Include and require, PHP Files, PHP Open File, PHP Read File, PHP Write File, PHP Append File, PHP Delete File, PHP MYSQLI, MYSQLI Connect, MYSQLI Create DB, MYSQLI Create Table, MYSQLI Insert, MYSQLI Update, MySQLI Delete, MYSQLI Select,

Working with Objects

Object Overview, Object Oriented Programming, Object creation, Adding Properties to Objects, Adding Methods to Objects, Javascript Conditional Statements, Javascript Loops & Iteration, Enumerating properties, Callbacks,

JSON

Environmental setup

MVC Architecture

Model-View-Controller explained

Why MVC matters

MVC - the AngularJS way

Directives

Introduction to Directives, Directive lifecycle, Using AngularJS built-in directives, Binding controls to data, Matching directives, Creating a custom directive

Expressions

Controllers

Role of a Controller, Attaching properties and functions to scope, Nested Controllers, Using filters in Controllers, Controllers in External Files, Controllers & Modules

Filters

Built-in filters, Using AngularJS filters, Creating custom filters, Tables

HTML DOM

Modules

Introduction to AngularJS Modules

Bootstrapping

Forms

Working with Angular Forms

Model binding

Form controller

Validating Angular Forms

Form events

Updating models with a twist

\$error object

Scope

What is scope
Scope lifecycle
Two way data binding
Scope inheritance
Scope & controllers
Scope & directives
\$apply and \$watch
Rootscope
Scope broadcasting

Dependency Injection & Services

What is Dependency Injection
Using Dependency Injection
What are services
Creating services
Factory, Service & Provider
Using AngularJS built in services

Single Page Application(SPA)

What is SPA
Pros & Cons of SPA
Installing the ngRoute module
Configure routes
Passing parameters
Changing location
Resolving promises
Create a Single Page Application
(Duration- 20 weeks)

Topic 3: Web Development-

HTML-

Introduction, Understanding & using HTML, HTML headings, HTML Comment, HTML Paragraphs, HTML Line Breaks & Rules, HTML Tags, HTML Tables, HTML Nesting, HTML Forms

DHTML-

Introduction to DHTML, DHTML JavaScript, DHTML, HTML DOM, DHTML Events, DHTML CSS, DHTML Examples

CSS-

What is CSS? CSS Comments, Three Ways to Insert CSS, Multiple Style Sheets, CSS properties used for background effects, Text, CSS Font Families, CSS Links, CSS Lists, Table Borders, CSS Padding

JavaScript-

Introduction to JavaScript, Statements and Variables, Operators, Conditional Statements, Popup Boxes,

Arrays, Events and Functions, JavaScript Form, Validation, JavaScript

(Duration-10 weeks)

Topic 4: Angular-X-

Components, Using Custom Components, Creating Components with the CLI & Nesting Components, Working with Component Templates, Working with Component Style, Practicing Components, What is Databinding, String Interpolation, Property Binding, Property Binding vs String Interpolation, Event Binding, Bindable Properties and Events, Passing and Using Data with Event Binding, Two-Way-Databinding, Important: FormsModule is Required for Two-Way-Binding, Combining all Forms of Databinding, Practicing Databinding, Understanding Directives, Using ngIf to Output Data Conditionally, Enhancing ngIf with an Else Condition, Components & Databinding Deep Dive, Splitting Apps into Components, Property & Event Binding Overview, Binding to Custom Properties, Assigning an Alias to Custom Properties, Binding to Custom Events, Assigning an Alias to Custom Events, Custom Property and Event Binding Summary, Understanding View Encapsulation, More on View Encapsulation, Using Local References in Templates, Getting Access to the Template & DOM with @ViewChild, Understanding the Component Lifecycle Lifecycle Hooks, Practicing Property & Event Binding and View Encapsulation, Directives Deep Dive, ngFor and ngIf, ngClass and ngStyle, How to create a Basic Directive, Using Services & Dependency Injection, Why would you Need Services? Creating a Logging Service, Injecting the Logging Service into Components, Creating a Data Service, Understanding the Hierarchical Injector, How many Instances of Service Should It Be? Injecting Services into Services, Using Services for Cross-Component Communication

(Duration-10 weeks)

Projects: For 8 weeks-

Projects will be assigned to students with assistance in handling the projects.

Key Reference Books

		<ol style="list-style-type: none"> 1. Fundamentals of Information Technology by Deepak Bharihoke. 2. SQL the complete reference, 3rd Edition by James R Groff and Paul N Weinberg 3. Php: the complete reference by Steven Holzner 4. Fundamentals of Database systems by Ramez Elmasri 5. Ng-book: The complete guide to Angular by Felipe Coury, Ari Lerner, Carlos Taborda 	
		<p>12. Quality Assurance:</p> <p>IQAC (Internal Quality Assurance Cell) is in place to oversee the Programme delivery mechanism and suggest changes specific to industry requirements.</p> <p>The quality of the programme will be ensured through strict monitoring by an executive committee including the Co-ordinator of the programme, the subject experts, Director. The Co-ordinator of the programme shall ensure the regular student feedback of courses, teachers and programme in the prescribed format towards the end of the semester and the same shall be analyzed to draw conclusions for effecting improvement.</p> <p>Periodical review meetings on the programme efficacy will be held in which the remarks of teachers on curriculum, syllabi and methods of teaching and evaluation will be given due importance. Moreover, the progress and the quality of the programme will be monitored by the Internal Quality Assurance Cell of AIIITS from the outcome and feedback of the learners as well as the proper documentation maintained in the Centre.</p>	
		<p>13. SLM:</p> <p>Self-Learning Material is available in English</p>	