

Government of Pakistan

National Vocational and Technical Training Commission

Prime Minister Hunarmand Pakistan Program
"Skills for All"



Course Contents/ Lesson Plan

Course Title:Advance Web Application Development

Duration: 6 Months

Trainer Name	
Course Title	ADVANCE WEB APPLICATION DEVELOPMENT
Objective of Course	Course provides participants an opportunity to build a Great Career in web application development world, a best web development program in KICSUET to learn web development all in one, course start from basic level and moved toward advanced tools and techniques of web development. Program is covering HTML5, CSS, JS, JQ, PHP, MySQL, AJAX, LARAVEL and Website Design Concepts and common tasks need for deployment and administration of a website.
Learning Outcome of the Course	<p>Knowledge Proficiency Details</p> <ul style="list-style-type: none"> • Knowledge to build REAL world creative and modern website from very scratch using modern web technologies • Knowledge to new ways of coding, tips & tricks and modern best practices to build a professional website. • Knowledge of wire-framing, HTML5, CSS3, JQuery and Bootstrap (+BS 4) Framework • Knowledge to build a fully responsive website which will look perfect on all the small & wide screens. • Knowledge of PHP, OOP, AJAX, MySql • The basic of Laravel such as installation, routing, template, controller, model, migration, seeder etc • You will make your first crud app with Laravel • You will make Restful Api • You will make Gallery app with Laravel and JQuery • You will learn blade template in Laravel <p>Skills Proficiency Details</p> <ul style="list-style-type: none"> • Students of web development • Anyone who wants to learn how to build websites using PHP • Anyone interested in a proper certification in PHP course in Lahore or any other city • People already working as web developers who want to learn the latest techniques and tricks in PHP based web development • Employees of web development companies and software houses who want to polish their skills further in Web Development especially with focus on PHP • Business owners who want to build and run their own websites themselves

Course Execution Plan	Total Duration of Course: 6 Months (26 Weeks)
	Class Hours: 4 Hours per day
	Theory: 20% Practical: 80%
	Weekly Hours: 20 Hours Per week
	Total Contact Hours: 520 Hours
Companies Offering Jobs in the respective trade	<ol style="list-style-type: none"> 1. Upwork 2. Freelancing 3. Fiverr 4. Government Institutes 5. Software Houses 6. Crossover 7. All Private Institutes who are managing software
Job Opportunities	<p>All over the world there is a high demand in the Information Technology industry for developers in various field such as mobile application developer, web developer and graphic designer. Smartphone have brought about revolution; Animation technology has come a long way since the early days of hand-drawn cartoons. Nowadays you will find websites and apps on everything. This increase in usage of websites, apps android smart devices has created new opportunities for all to earn big and make a career out of this field. With the help of this course, we will be able to give technical trainings of Information Technology to our youth. There are also opportunities for start-up entrepreneurship due to the high demand in the market in following designated jobs;</p> <ul style="list-style-type: none"> • Software Engineers • Mobile App Developers • DBAs • Web Developers • Network Administrator • IT Support Officer • Manager / Assistant Manager IT
No of Students	25
Learning Place	Classroom/Lab KICS UET Lahore, Model Town
Instructional Resources	<ul style="list-style-type: none"> • https://www.php.net/ • https://www.w3schools.com/ • https://www.tutorialspoint.com/ • https://laravel.com/ • Beginning Laravel • Build Websites with Laravel 5.8 (Sanjib Sinha) • Laravel 5.8 Learn A to Z Best PHP Framework (Linus Torvalds) • Laravel Up & Running: A Framework for Building Modern PHP AppsMatt Stauffer

Scheduled Week	Module Title	Learning Units	Remarks
Week 1	Introduction	<ul style="list-style-type: none"> • Motivational Lecture • Course Introduction • Success stories • Job market • Course Applications • Institute Ethics • Introduction to World Wide Web • Web Generations • Compare Static websites with Dynamic websites • Architecture of static and dynamic Webpages 	
Week 2	Module 1 Front End Development (Basics)	<ul style="list-style-type: none"> • Install Chrome Browser • Chrome Web Developer Tools • Install Brackets Code Editor • Learn About Wire-framing • Let's First Create Website Wireframe • Complete Website Wireframe Know About Wireframing Tools 	
Week 3	Module 2 HTML & CSS	<ul style="list-style-type: none"> • Setup Website Folder File Structure • What Is HTML? • Create Basic HTML5 Page Structure • Add Important Meta Tags • Add Website Title & Favicon • What Is CSS? • Link CSS To HTML • Basic CSS Selectors • CSS Classes & IDs • CSS Box Model • CSS Positioning 	
Week 4	Module 2 HTML & CSS	<ul style="list-style-type: none"> • CSS Colors • CSS Backgrounds • CSS Borders • CSS Margins • CSS Padding • CSS Height/Width • CSS Box Model • CSS Outline • CSS Text • CSS Fonts • CSS Icons • CSS Links • CSS Lists 	

		<ul style="list-style-type: none"> • CSS Tables • CSS Display • CSS Max-width • CSS Position • CSS Overflow • CSS Float 	
Week 5	Module 3 Java Script	<ul style="list-style-type: none"> • What Is JavaScript? • Link Script To HTML • JavaScript Basics 	
Week 6	Module 4 jQuery	<ul style="list-style-type: none"> • What Is jQuery? • Add jQuery Library • How To Use jQuery 	
Week 7	Module 5 Bootstrap	<ul style="list-style-type: none"> • Bootstrap Framework • Bootstrap Framework Version • What Is Bootstrap? • Add Bootstrap Library • Bootstrap Grid System • Bootstrap Grid Examples Know About Web Development Resources 	
Week 8	Module 5 Bootstrap	<ul style="list-style-type: none"> • Choose Right Fonts • Important Note Before You Go Ahead • Choose Right Icons • Choose Right Colors. 	
Week 9	Module 6 Websites	<ul style="list-style-type: none"> • Creative Responsive Website 	
Week 10	Module 7 PHP	<ul style="list-style-type: none"> • Overview of PHP • Variables • Constants • Operators • Statement Block 	
Week 11	Module 7 PHP	<ul style="list-style-type: none"> • Decision Making • Loop Types • String • Arrays • Functions • OBJECT ORIENTED PROGRAMMING • Class • Object • Member Variable • Member function • Inheritance 	
Week 12	Module 7 PHP	<ul style="list-style-type: none"> • Parent class • Child Class • Polymorphism • Overloading 	

		<ul style="list-style-type: none"> • Data Abstraction • Encapsulation • Destructors 	
Week 13	Module 7 PHP	<ul style="list-style-type: none"> • Creating Objects in PHP • Calling Member Functions • Constructor Functions • Destructor • Inheritance • Function Overriding 	
Week 14	Module 7 PHP	<ul style="list-style-type: none"> • Public Members • Private members • Protected members • Interfaces • Constants • Abstract Classes • Static Keyword 	
Week 15	Mid-Term Assignment		
Week 16	Module 7 PHP	<ul style="list-style-type: none"> • Calling parent • constructors • File Inclusion • PHP FORMS • File Uploading 	
Week 17	Module 8 MYSQL	<ul style="list-style-type: none"> • MYSQL basics. • Creating a database using Console and PHP MY ADMIN. • DDL, DML & DRL operations in SQL. 	
Week 18	Module 8 CRUD Operations	<ul style="list-style-type: none"> • CRUD Operations using MYSQL. • Connecting database • PHP LOGIN SYSTEM - 1 	
Week 19	Module 9 PHP login System	<ul style="list-style-type: none"> • PHP LOGIN SYSTEM - 2 	
Week 20	Module 10 Laravel	<ul style="list-style-type: none"> • Laravel Basics 	
Week 21	Employable Project/Assignment (6 weeks i.e. 21-26) in addition of regular classes. OR On job training (2	<ul style="list-style-type: none"> • Guidelines to the Trainees for selection of students employable project like final year project (FYP) • Assign Independent project to each Trainee • A project based on trainee's aptitude and acquired skills. • Designed by keeping in view the emerging trends in the local market as well as across the globe. • The project idea may be based on Entrepreneur. 	

	weeks)	<ul style="list-style-type: none"> Leading to the successful employment. The duration of the project will be 6 weeks Ideas may be generated via different sites such as: https://1000projects.org/ https://nevonprojects.com/ https://www.freestudentprojects.com/ https://technofizi.net/best-computer-science-and-engineering-cse-project-topics-ideas-for-students/ Final viva/assessment will be conducted on project assignments. At the end of session the project will be presented in skills competition The skill competition will be conducted on zonal, regional and National level. The project will be presented in front of Industrialists for commercialization The best business idea will be placed in NAVTTC business incubation center for commercialization. <p style="text-align: center;">-----</p> <p style="text-align: center;">OR</p> <p>On job training for 2 weeks:</p> <ul style="list-style-type: none"> Aims to provide 2 weeks industrial training to the Trainees as part of overall training program Ideal for the manufacturing trades As an alternate to the projects that involve expensive equipment Focuses on increasing Trainee's motivation, productivity, efficiency and quick learning approach. 	
Week 22	Module 10 Laravel	<ul style="list-style-type: none"> Laravel Blade Template Guide 	
Week 23	Module 10 Laravel	<ul style="list-style-type: none"> Laravel Collections Guide sum(),min(),max() and avg() Chunk() and Collapse() Pluck() Contains() take() method filter() method 	
Week 24	Module 10 Laravel	<ul style="list-style-type: none"> Relationships One to one relationship One to many relationship One to many inverse relationship Many to many relationship - store data in pivot table Many to many relationship - fetch data Polymorphic relationship(one to many) 	

Week 25	Module 11 Projects	<ul style="list-style-type: none"> • [Project 1] crud application • [Project 2] Rest API • [Project 3] Gallery App 	
Week 26	Entrepreneurship and Final Assessment in project	<ul style="list-style-type: none"> • Job Market Searching • Self-employment • Freelancing sites • Introduction • Fundamentals of Business Development • Entrepreneurship • Startup Funding • Business Incubation and Acceleration • Business Value Statement • Business Model Canvas • Sales and Marketing Strategies • How to Reach Customers and Engage CxOs • Stakeholders Power Grid • RACI Model, SWOT Analysis, PEST Analysis • SMART Objectives • OKRs • Cost Management (OPEX, CAPEX, ROCE etc.) • Final Assessment 	

List of Machinery / Equipment

Sr. No	Name of item as per curriculum	Quantity physically available at the training location
1	Computers / Laptops Minimum Corei3	25
3	Internet Connection (Minimum 1 MB)	Available on every PC
4	Accessories/Devices <ul style="list-style-type: none">• Connectors• Multimedia• Printer• White Board• Hard copy of Training Material	Available
5	Wires, data cables, power plugs, power supply	For every PC
6	UPS	Available
7	Air Conditioner	Available

Software List

Sr. No	Software Name
1.	Operating System (Windows)
2.	MS Office Word (Installed on each PC)
3.	Sublime / Brackets / PHP Storm
4.	XAMP
5.	Web browser including Internet Explorer, Google Chrome, Mozilla Firefox, Netscape or Opera (installed on each PC)
6.	Security scanning tools including Antivirus (each PC)
7.	Adobe Acrobat Reader

Minimum Qualification of Teachers / Instructor

The qualification of teachers / instructors of this course should be minimum of Bachelors Degree with minimum **3 years of development and 2 years of teaching experience** in relevant trade.

- Bachelors of Computers Science (Hons)
- MCS / MIT

Plot no. 38, Kirthar Road, H-9 Islamabad
051-9044250