Web Development Syllabus

Frequency: Three times a week, 4 hours per class

Week 1

Fundamentals of Computer Science.

Introduction and definition, Hardware Systems, Operating Systems, Programming Languages, Computer Applications, Software Development, Networks, Computer Graphics, Digital Media, Computer Animation, Artificial Intelligence

Introduction to the Internet.

Internet Resources, Newsgroups, File transfer protocol, World Wide Web, Netiquette, Accessing the Internet, Hypertext and hyperlinks, Uniform resource locator, Search techniques, Boolean phrases, Viruses, Virus protection software

Introduction to Web Site Development WordPress.

Uploading WordPress to your web server, Installing WordPress, Database Connectivity, Theme Customization, Configuring WordPress, Creating and managing content, Installing and updating plugins, WordPress Security / backup / domain transfers, Migration From Different Platforms, (Joomla, Magento) Optimization of WordPress Website, On Page SEO

Week 2

Back / Front End Web Site Development.

HTML5, New elements and their use, Page structure, CSS3 Preprocessors, CSS frameworks bootstrap, foundation, JavaScript, Script fundamentals, 3rd party libraries, jQuery libraries and patterns, W3C validation, Deployment & DevOps , SSH / SFTP, C Panels, Moving a CMS to a different server, Heroku

Week 3

Back / Front End Web Site Development Cont.

Databases, Data Relationships Designing a Data Model, Relational Databases, Alternative Databases, Entity Relationship Modeling (ERM), SQL, NoSQL, NodeJS, Express + APIs, JSON, AJAX

Week 4

Computer Programming Languages

Java, object-oriented language, Java virtual machine, syntax, C#, multi-paradigm language, NET Framework., PHP, syntax, Visual Basic, Python, Perl, Ruby, Ruby on Rails**.**

Week 5

Server Side, Apache Web Server

HTTP Overview, Caching, Compressing, Custom Error Pages, Redirects, HTTPS / TLS, Cookies, PHP Overview, PHP Web Application

Week 6

Server Side, Apache Web Server Cont.

HTTP Overview, Caching, Compressing, Custom Error Pages, Redirects, HTTPS / TLS, Cookies, PHP Overview, PHP Web Application

Week 7

Mobile/ Responsive web site design.

Units of Measurement, Media Queries, Making Images and Videos Responsive, Designing Responsive Forms, Providing an App-Like Experience, Web App Interface, Widgets with Bootstrap, Collapsible Content for Mobile

Week 8

Mobile/ Responsive web site design. Cont.

Units of Measurement, Media Queries, Making Images and Videos Responsive, Designing Responsive Forms, Providing an App-Like Experience, Web App Interface, Widgets with Bootstrap, Collapsible Content for Mobile

Week 9

Design Thinking User-Interface UI

Interface Concept Ideation, User Journey, Information Architecture and User Experience, Interface Design

Week 10

User Experience and Design UX

Workflow for designing a site, user experience principles, design principles