



SYLLABUS OF DIPLOMA IN WEB DESIGNING (DWD) Academic Session 2017-18

Objective:

This programme has been designed to provide background knowledge and programming skills required to innovatively design and implement web applications using latest tools and technologies like HTML5, XML, Java Scripts, CSS3, PHP etc. Upon the completion of this programme the learners will acquire knowledge and skill sets on design components, technology, and tools and apply those to successfully design and implement Web Based Applications.

DURATION: 1 YEAR

TOTAL CREDITS: 32

COURSE CODE	CREDITS (T+L)*	COURSE TITLE
1ST SEMESTER		
DWD-01	6 (4+2)	OPERATING SYSTEMS
DWD-02	4 (2+2)	PROGRAMMING IN JAVA
DWD-03	4 (2+2)	INTERNET AND WEB TECHNOLOGIES
DWD-04	4 (2+2)	WEB DESIGNING (HTML, CSS, JAVA SCRIPT)
2ND SEMESTER		
DWD-05	4 (2+2)	DATABASE MANAGEMENT SYSTEMS
DWD-06	4 (2+2)	APPLICATION DEVELOPMENT USING PHP
DWD-07	6	PROJECT

* T - Theory, L- Laboratory

Detailed Syllabus

DWD-01 - OPERATING SYSTEMS (6 Credit)

Block-1	Windows
Unit-1	Introduction, Types Of Operating System, My Computer, Recycle Bin, Desktop, Drives; Creating, Renaming a directory/folder, Make a file read only, hidden, Editing a file; Delete a file.
Unit-2	Listing the files in the directory, Create a file, Copy a file from one directory to the other, Deleting all files from a directory/folder, Deleting a director/folder, Formatting a hard disk and loading operating system, Domain, workgroup, Active Directory, User Management, Network Setting, Services, IIS Configuration
Block -2	Linux
Unit -1	Introduction, History of Linux, Distributions of Linux, Devices and drivers, File system hierarchy, The components: Kernel, Distribution, XFree86, Sawfish, Gnome, The command line commands, File, management commands, Working with nano, Working with help (man).
Unit -2	SSH and X-forwarding, Managing compressed archives with zip and tar, Working with GNU screen, How to add users and groups, working with su, working with sudo, Changing user password, Printing, Installing software with Yum, Yast, Rpm, Installing webmin.

DWD-02 - Programming in Java (4 Credit)

Block-1	Introduction to Programming in Java
Unit-1	Overview of Java: Introduction, Programming paradigm, OOPS Concepts, Evolution of Java, Features of Java, C++ Vs Java, Java and Internet, Java and WWW, Java support systems, Java Environment
Unit-2	Key Features Of Java: Introduction, Java Program Structure, Simple Java Program, Tokens, Java Statements, Java Virtual Machine, Constants and Variables, Declaration of Variables, Scope of Variables, Data types, Symbolic Constants, Type Casting, Commandline arguments.
Unit-3	Operators: Operators, Arithmetic Operators, Relational Operators, Logical Operators, Bitwise Operators, Increment and Decrement, Conditional Operators, Special Operators, Assignment Operators, Expression & its evaluation
Unit-4	Control Statements: Introduction, Control Statements, Sequence Control Statement, Decision Control Statement, Case Control Statement, Iteration Control Statement, Jump in loops, Labeled Loops
Block-2	OOPs Concepts in Java
Unit-1	Arrays And Strings: Introduction, ARRAY , Need of Array, Types of Array, One dimensional Array, Two-Dimensional Array, Multidimensional Array, Strings , Concatenation of Strings, Methods for String Comparison, Methods for searching Strings, Changing the case of characters, String Buffer.
Unit-2	Classes: Introduction, Defining a Class, Adding Variables, Adding Methods, Creating Objects, Accessing Class members, Call-by-value and call by reference, Recursion, Access Control Constructors, Method over Loading, Constructor Overloading, Garbage Collection, finalize() method, this keyword, Static Members, Nesting of Methods
Unit-3	Inheritance: Inheritance, Single Inheritance, Multilevel Inheritance, Multiple Inheritance, Hierarchical Inheritance, Using Super, Constructor - Order of Execution in Inheritance, Overriding methods, Final variables and methods, Final Classes, Abstract methods and Classes, Containership, Visibility Control
Unit-4	Wrapper Classes And Vectors: Introduction, Wrapper Classes, Number Class, Byte class, Short class, Integer class, Long class, Converting Numbers to and from Strings, Float class, Double class, Character class, Boolean class, Vectors, Creating a vector
Block-3	Advanced Java
Unit-1	Exception Handling: Introduction, Exceptions, Using try& catch, Multiple catch clauses, Finally, Throw, Throws

Unit-2	Applets: Introduction, Local & remote applets, Applet vs. applications, Writing applets, Life cycle of an applet, Creating source code of applet, Creating an executable applet, Creating applet tag, Adding applet tag to html, Running the applet, Detailed form of applet tag, Passing parameters to applet, Aligning the display, HTML tags, Getting input from user.
Unit-3	Swing : Overview of Java Swing, Swing Environment, Swing Controls, Swing Event handling, Swing Event Classes, Swing Event Listeners, Swing Event Adapters, Swing Layout, Swing Menu, Swing containers
Unit-4	Interface & Packages: Introduction, Interfaces, Defining interface, Implementing interface, Accessing interface method, Accessing interface variable, Extending interfaces, Packages, System packages, Using system packages, User defined packages, Adding class to a package, Accessing and using package

DWD-03 - INTERNET & WEB TECHNOLOGY (4 Credit)

Block-1	Internet Technology
UNIT-1	Internet : Introduction , Requirement for Internet , Hardware Requirements, Software Requirements, Evolution of Internet, Tasks performed by Internet, Working on Internet, Internet Connections- Dial up connection , Leased line connection, DSL Connection, Cable Modem Connection, VSAT connection, Internet Service Provider (ISP), www & its Evolution, Searching & Surfing, Search Engine , Web Browser, Client & Server
UNIT-2	Protocol : Introduction ,Types of Internet protocol- TCP / IP, FTP, HTTP, PPP, TELNET, UDP, NNTP, Mail Protocol-SMTP, POP3, IP Address, Domain Name System, URL, IPV ₄ /IPV ₆ , Voice over internet Protocol (VoIP)
UNIT-3	Internet Application : Introduction, Webpage, website , How website is different form portal, Components of website, Elements of website, Construction of website , Website Development & publishing, Website Designing , Website Development Language , Website Publishing, Website URL Registration, Website hosting, Electronic Mail , E-mail Features , E-mail structure , Components of e-mail, Field Associated with an e-mail message , How e-mail serviced used?, Chat & IRC, Videoconferencing, Online Banking, Online shopping, E-learning , E-Reservation , Mobile Technology, Social Network
UNIT-4	Internet Security & privacy: Understanding basic internet security, secure your computer, keeping passwords safe, encrypting passwords with a password manager, protecting your internet passwords, Introduction to e-mail safety, introduction to securing personal data, introduction to mobile phone security.
Block-2	Web Technology
UNIT-1	Website Development: Websites Overview, Websites Types, Website Designing, Websites Development, Website Publishing, Website URL Registration, Website Hosting, Website Security.
UNIT-2	HTML-5 : Overview, Syntax, Attributes, Events, SVG, MathML, Web Storage, Web SQL, Server-Sent Events, Web Socket, Canvas, Audio & Video, Geolocation, Microdata, Drag & drop, Web Workers, Indexed DB, Web Messaging, Web CORS, Web RTC. XHTML :What is XHTML ,Why use XHTML , HTML vs XHTML , XHTML Syntax , XHTML Events , XHTML Doc types , XHTML Attributes, Difference between HTML4 and HTML5, Difference between HTML and XHTML.

UNIT-3	XML: Introduction to XML - eXtensible Markup Language ,XML for data centric files ,Displaying XML on the web, Displaying XML with CSS ,XSLT - eXtensible Style Sheet Language ,Displaying XML with XSLT
UNIT-4	Macromedia Flash: What is flash?, Starting of Flash., The workspace, Using the Tools panel, Selection Tool, Coloring Tool, Text Tool., Create a new Flash Document, Animate using Frame, Symbols and Animation, Crate a Motion Tween, Shape Tween, Motion Guide Tween, Working with layers
Block-3	Advanced Web Technology
UNIT-1	AJAX : AJAX - What is AJAX?, AJAX – Technologies, Understanding, Synchronous vs Asynchronous, AJAX - Browser Support, AJAX – Action, AJAX – XMLHttpRequest, How AJAX works?, Ajax First Program With Explanation, Ajax Request, open() and send() methods, Ajax Server Response, responseText and ResponseXML, Java AJAX, AJAX – Examples, Email Finder , Comment Form , Search Example, AJAX - Database Operations, AJAX – Security, AJAX – Issues, AJAX JSON
UNIT-2	JSP : JSP – Overview, JSP - Environment Setup, JSP – Syntax, JSP – Directives, JSP – Actions, JSP - Implicit Objects, JSP - Client Request, JSP - Server Response, JSP - Http Status Codes, JSP - Form Processing, JSP - Writing Filters, JSP - Cookies Handling, JSP - Session Tracking, JSP - File Uploading, JSP - Handling Date, JSP - Page Redirect, JSP - Hits Counter, JSP - Auto Refresh, JSP - Sending Email
UNIT-3	ASP : ASP.NET – Introduction, ASP.NET – Environment, ASP.NET - First Example, ASP.NET - Event Handling, ASP.NET - Server Side, ASP.NET - Server Controls, ASP.NET - HTML Server, ASP.NET - Client Side, ASP.NET - Basic Controls, ASP.NET – Directives, ASP.NET - Managing State, ASP.NET - Database Access, ASP.NET - ADO.net, ASP.NET - File Uploading, ASP.NET – Calendars, ASP.NET - Multi Views, ASP.NET - Panel Controls, ASP.NET - Custom Controls
UNIT-4	PHP : Overview of PHP, What is PHP?, PHP Setup, Syntax of PHP, variable, constant, data types, operator, control statement, PHP date and time, PHP form, PHP file upload and download, PHP Mail, PHP and My SQL connectivity, PHP login, PHP Facebook Login.

DWD-04 - WEB DESIGNING [HTML, CSS, JAVA SCRIPT] (4 Credit)

Block-1	HTML
UNIT-1	Getting Started: Introduction of HTML, Writing my first HTML Page Basic tags used in HTML , Elements In HTML , Attributes In HTML, Formatting In HTML , Meta Tags and their use , Commenting a HTML Code Images and incorporating images , working with Tables ,Working with Lists , Working with hyperlinks , Frames and frame management , Working with Block elements.
UNIT-2	HTML Advanced: Background images, How to get a colour text and colour background, Working with fonts(Various fonts, size, colour), Form designing and Form Management, Using Multimedia inside HTML, Marquee Tag, Headers, Working with Layouts, Role of Tags in Html, Attributes in Html, Event Handling, Mime Media Types
Block-2	CSS
UNIT-1	Getting Started with CSS: Introduction of CSS, CSS Syntax , CSS Selectors , Ways to Insert CSS , Background image handling , Background colour management using CSS , Text management using CSS, Font management using CSS , Managing Hyperlinks using CSS , Managing Lists using CSS , Designing Tables using CSS , Working with the BOX Model , Designing Borders using CSS , Designing Outline using CSS , Setting Page Margin using CSS
UNIT-2	CSS Advanced: Padding using CSS , Setting Display Using CSS , Setting Width And Max Width using CSS , Setting Position using CSS , Setting the Float Property using CSS , Inline Block property , Horizontal Alignment in CSS , Working With Combinatory , Working with Pseudo-class , working with Pseudo-elements, Creating a navigation bar , Working with images ,Working with Attribute selectors.
Block-3	JavaScript
UNIT-1	Getting Started: Introduction to Java Script , JavaScript Syntax, Enabling JavaScript in Browsers, Placing JavaScript, Variables, Operators, IF ...ELSE, Switch Case, Loops, Functions, Events and event handling, Cookies, Page Redirection, Dialog Box, Void Keyword, Printing webpage using JavaScript.
UNIT-2	Advanced Java script: Working With Objects, Working With Numbers, Working With Boolean, Working With Strings, Arrays And Array Management, Working with Date, Doing Mathematical operations, Working With Regular Expressions, Document Object Model, Errors and Error Handling, Client Side Validation, Animations in Webpages, Multimedia in Webpages, Image Map.

DWD-05 -DATABASE MANAGEMENT SYSTEMS (4-Credit)

Block-1	Database System Concepts
Unit-1	Introduction To Database Systems
Unit-2	Database System Architecture
Unit-3	Data Models
Unit-4	Relational Data Modeling Using Entity Relationship Model
Block-2	Relational Database Design
Unit-1	Relational Database Operations
Unit-2	Relational Query Languages
Unit-3	Functional Dependency Decomposition
Unit-4	Normalization
Block-2	Relational Database Design with MySQL
Unit-1	Introduction to SQL and MySQL
Unit-2	Working with SQL
Unit-3	PL-SQL

DWD-06 - APPLICATION DEVELOPMENT (4 Credit)

Block -1	Getting Started
Unit-1	Introduction to programming
Unit-2	PHP Basics-1
Block -2	Working with PHP
Unit-1	PHP Basics-2
Unit-1	Form Management
Block-3	OOPS and Design Patterns
Unit-1	Object oriented programming
Unit-2	Design Patterns
Block-4	PHP Advanced
Unit-1	Getting started with PHP and database systems
Unit-2	Form management using HTML,CSS, JavaScript and Ajax

DWD-07 – PROJECT (6 Credit)