

Curriculum
For
PG Diploma in Web Designing
(Distance Mode)

2019 & onwards

Directorate of Distance Education
University of Kashmir

**Syllabus for PG Diploma in Web Designing
for
Academic Session 2019 & Onwards**

PG Diploma in Web Designing

STRUCTURE OF CURRICULUM

Semester-I				
Course Code	Title	Maximum Marks		Credits
		Theory	Internal Assessment	
Semester-I				
DWD19101	Computer Fundamentals and Applications	75	25	04
DWD19102	Relational Database Management Systems (RDBMS)	75	25	04
DWD19103	Web Development	75	25	04
DWD19104	Lab-I for DWD19101	50 (Practical)	25 (Practical)	03
DWD19105	Lab-II for DWD19102	50 (Practical)	25 (Practical)	03
DWD19106	Lab-III for DWD19103	50 (Practical)	25 (Practical)	03
Total		375	150	21
Semester-II				
DWD19201	Multimedia Systems	75	25	04
DWD19202	PHP	75	25	04
DWD19203	Lab-IV for DWD19201	50 (Practical)	25 (Practical)	03
DWD19204	Lab-V for DWD19202	50 (Practical)	25 (Practical)	03
DWD19205	Project Work	200	50	10
Total		475	150	24

Paper Title: Computer Fundamentals and Applications

Paper Code: DWD19101

Credits: 04

Internals: 25

External: 75

Unit-I

Introduction to Computers – Characteristics, Components, Advantages & Limitations. Classification of computers, Software- Classification & Application. Introduction to Operating Systems, fundamentals of DOS & Windows OS. Working with common DOS Internal and External Commands.

Unit-II

Introduction to Algorithm-Representation, advantages & Limitations. Introduction to Flow Chart-Symbols, Levels, Rules, Advantages & Limitations. Introduction to Programming Languages-Levels & Translators. Introduction to Internet-Working & Applications.

Unit-III

Introduction to MS Office Package. MS Word- fundamentals & Advantages. Text Formatting, Bullets, Inserting Graphics, Tables, Hyperlinks, Mail Merge, Macros & Templates. MS Excel-Fundamentals & Advantages. Formulas & Functions. Inserting Charts & Graphs.

Unit-IV

MS PowerPoint- fundamentals & Advantages. Design Template & Auto Content Wizard. Color & Animation Schemes. SlideMaster & Package for CD. MS Access-Fundamentals & Advantages. Tables, Queries, Forms, Reports, Macros & Modules. Understanding Field Properties, Indexing a Field.

Text Book: P.K. Sinha, Computer Fundamentals, 2005, BPB New Delhi

Reference Books:

1. P.K. Sinha, Computer Fundamentals, 2005, BPB, New Delhi
2. Peter Norton, Inside the PC, 2001, SAMS Tech Media
3. Taxali, PC Software, 2005 Tata McGraw Hills, New Delhi.

Suresh K. Basandra, Computers Today, 2005 , Galgotia Publications.

Paper Title: Relational Database Management Systems

Paper Code: DWD19102

Credits: 04

Internals: 25

External: 75

Unit-I

Introduction to Database- History, Characteristics, Users and Advantages, Classification of Database, Data Models, Schemas & Instances. Three Schema Architecture & Data Independence. DBMS Languages & Interfaces. Conceptual Data modelling using ER Model.

Unit-II

Relational Data Model Concepts- Domains, Attributes, Tuples, Relations & their characteristics. Relational Data Model Constraints-Entity Integrity, Referential Integrity, Foreign Keys and other Relational Database design using ER to Relational Mapping.

Unit-III

Design guidelines for Relation Schemas. Functional Dependencies. Normalization of Relation Schema. Normal Forms based on Primary Key (1NF, 2NF, 3NF, BCNF, 4NF) Lossless Join & Dependency Decomposition. Introduction to Transactions, Concurrency Control, Schedules & Serializability.

Unit-IV

SQL-History & Overview, Creating & Manipulating Tables. Introduction to Query Processing – DDL, DML & DCL, Transaction Processing. General Syntax, Clauses, Expressions, Conditions, Operators, Built-in & Group Functions. Sub-Queries and Joins, Views, Sequences, And Nested Queries.

Text Book: Elmasri R. and Navathe S.B. Fundamentals of Database Systems, Addison Wesley.

Reference Books:

1. Dates. C, "An Introduction to Database Systems." Pearson Education, Asia.
2. A. Silbershatz, H.F. Korth and S. Sudarshan, " Database System Concepts", 3rd edition, 1997, McGraw-Hill , International Edition.
3. Ivan Bayross, "SQL & PL/SQL using Oracle 8i & 9i SQLJ", BPB.
4. William Page, "Using Oracle 8i-Special Edition", Que /PHI.

Paper Title: Web Development

Paper Code: DWD19103

Credits: 04

Internals: 25

External: 75

Unit-I

- I.Introduction to the Internet
 - a) Introduction to HTML Terminology,
 - b) HTML4 versus HTML5,
 - c) Options for Writing HTML,
 - d) Design Considerations and Planning,
- II.Basic Tags and Document Structure,
 - a. Headings,
 - b. Lists,
 - c. Links,
 - d. Images,
 - e. Audio & Video
 - f. Tables
- III.Forms
 - a. Methods
 - b. Elements

Unit-II

- 1. Concept of CSS,
 - a. Creating Style Sheet,
 - b. CSS Properties,
 - c. CSS Styling (Background, Text Format, Controlling Fonts),
- 2. Working with block elements and objects,
- 3. Working with Lists and Tables,
- 4. CSS Id and Class,
- 5. Box Model
 - a. Introduction,
 - b. Border properties,
 - c. Padding Properties,
 - d. Margin properties),
- 6. CSS Advanced
 - a. Grouping,
 - b. Dimension,
 - c. Display,
 - d. Positioning,
 - e. Floating,
 - f. Align,
 - g. Pseudo class,
 - h. Navigation Bar,
 - i. Image Sprites,
 - j. Attribute selector
 - k. CSS Color
 - l. Creating page Layout and Site Designs.
 - m. Transformations & Animations

UNIT III JAVA SCRIPT

- 1. Introduction to Java Script
 - 1.1 Advantages of JavaScript
 - 1.2 Limitations of JavaScript
 - 1.3 Differentiate between JavaScript and Java
 - 1.4 Writing JavaScript into HTML
- 2. Building up JavaScript into HTML
 - 2.1 Basic Programming Techniques
 - 2.2 Data Types and Literal.
 - 2.3 Type casting
 - 2.4 Creating and incorporating variables in a Script.
 - 2.5 The Java Script Array, the Elements of an Array.
 - 2.6 The Java Script array and its length property.

UNIT IV JAVA SCRIPT

- 1. Operators and Expressions in JavaScript
 - 3.1 Arithmetic, Logical, Comparison, string, Assignment operator.
- 2. JavaScript Programming Constructs
 - 4.1 Conditional checking If then --else
 - 4.2 Super Controlled—Endless Loops (For loop)
- 3. Functions in Java Script

- 3.1 Built —in — Functions.
- 3.2 User Defined Functions.
- 4. Classes & Objectsworking with Objects
 - 4.2 Invoking methods
 - 4.3 Events & Event Loop
 - 4.4 Errors, Error Handling & Debugging
- 5 Introduction to jQuery
 - 5.1 Installation & Use
 - 5.2 Un-Obstructive JavaScript
 - 5.3 jQuery Basics
 - 5.4 Selectors
 - 5.5 DOM attributes
 - 5.6 DOM Traversing
 - 5.7 CSS methods
 - 5.8 Effects

Reference Books:

1. Young," Internet Complete Reference", Tata Mc Graw Hill.
2. Paul Wilton," Beginning Java Script ", Willey Publications
3. Nicholas C. Zakas, "Professional JavaScript for Web Developers" second Edition , Wrox Publications
4. Ramesh Bangia , "Internet and Web designing ", Firewall Media .
5. Ivan Bayross, "HTML/DHTML/JavaScript, PERL CGI", BPB Publications.

Paper Title: Multimedia Systems

Paper Code: DWD19201

Credits: 04

Internals: 25

External: 75

UNIT I: Adobe Photoshop

Introduction to Multimedia and Photoshop

1. Multimedia-Text, graphics, Animation, Audio, Images, Video
2. Applications of Multimedia in Education, Entertainment, marketing.
3. Introduction to Photoshop and Image Ready
4. Uses of different types of objects
5. Optimizing Photoshop Projects
6. Building a contact sheet
7. Use of file Browser, Multiple Views.
8. Selection Techniques
 - 8.1 Selection of Geometric Areas, colour Range
 - 8.2 Select Areas using quick mask, paths
 - 8.3 Modification, Save and Load of Selections.
9. Converting Files
 - 9.1 Save files in other formats.
 - 9.2 Move files from Mac to windows.
 - 9.3 Building of GIF files for the web.
 - 9.4 Build JPEG files for the web.
10. Working with Tone
 - 10.1 Measuring and Comparing Pixel Values.
 - 10.2 Optimizing the tonal range
 - 10.3 Use of Dodge, Burn and Sponge Tools.
 - 10.4 Sharpening of Images

UNIT II: Adobe Photoshop:

Drawing, Image Editing Building Web Files and Special Effects of Photoshop

1. Working with Colour
 - 1.1 Work with Colour Variations.
 - 1.2 Global Colour corrections.
 - 1.3 Subtle Colour changes.
 - 1.4 Build Duotones, Tritones, and Quadtones for the web.
2. Image Editing Basics
 - 2.1 Resize, Crop, Rotate of an Image
 - 2.2 Adding of Canvas, Silhouette an image.
3. Drawing Painting and filling with Colour.
4. Using Types
 - 4.1 Add Type to an image, Create 3D Text.
 - 4.2 Create typographical Style Sheets, filtered text effects.
 - 4.3 Build Filtered Text, wrapping of text.

UNIT-III

Photoshop-Layers, Paths, Effects

1. Using Paths like (Straight — Edge Path, curved Path, Stroke Paths, and Clipping Paths).
2. Working with Layers
 - 2.1 Creation, Moving and Linking of layers.
 - 2.2 Group layers, creation of Layer sets.
 - 2.3 Transformation and adjustment of layers.
 - 2.4 Add a layer Mask, merging and Flatten of Layers.
3. Building Web Files
 - 3.1 Preview files in Browsers and Platforms.
 - 3.2 Slice Images for the Web, Build Image maps.
 - 3.3 Filter Based GIF Animations.
 - 3.4 Building of JavaScript Rollovers and Web Gallery.
4. Special Effects Like (Blending, Glow effect, Lighting effects, Radial Blur, Adding Texture).

UNIT IV MS-Flash

1. Working with Flash, Working with Graphics, Working with symbols
2. Embedding In HTML.
3. Building Graphic Elements for a Flash Project
4. Basic animation, Animation in Flash, Types of Animation
5. Shape Tweening, staggering animation effect, working in the timeline
6. Animation Review Break apart and distribute, Introduction to Motion Guide.
7. Sound in Flash
8. Video in Flash, Visual Elements in Flash
9. Adding Multimedia to Flash Projects

10. Types of Interactivity
11. Active Learning
12. Action Script in Flash, Components in Flash
13. Adding Interactivity to Flash Projects, Publishing.

Reference Books

1. Lourekas, "Photoshop7- Visual Quick Start Guide", BPB Publications.
2. Kelby, "Photoshop 7- Killer Tips ", BPB Publications
3. Ulrich, "Macro Media Flash 5 for Windows and Macintosh", Pearson
4. Daniel, "How to use Adobe Photoshop ", BPB Publications.
5. Bauer, "Using Adobe Photoshop 7 - Special Edition.
6. Prof Sham Tickoo, Adobe Flash Professional CC 2015: A Tutorial Approach, Cadcim Technologies, 2016

Paper Title: PHP**Paper Code:** DWD19202**Credits:** 04**Internals:** 25**External:** 75**UNIT I:**

- 1.1 Installing and Configuring PHP on Windows
- 1.2 The Building Blocks of PHP
- 1.3 php.ini Basics
- 1.4 Variables
- 1.5 Data Types
- 1.6 Operators and Expressions
- 1.7 Constants
- 1.8 Flow Control Functions in PHP
- 1.9 Switching Flow
- 1.10 Loops
- 1.11 Code Blocks and Browser Output
- 1.12 Functions: Calling, Defining
- 1.13 Returning Values from User-Defined Functions.
- 1.14 Variable Scope

UNIT II:

- 2.1 Working with Strings
- 2.2 Formatting Strings with PHP
- 2.3 Working with Dates and Times
- 2.4 Using Date and Time Functions in PHP
- 2.5 Session Function Overview
- 2.6 Starting a Session
- 2.7 Working with Session Variables
- 2.8 Destroying Sessions and Unsetting Variables.

UNIT III:

- 3.1 Working with Forms
- 3.2 Predefined Variables
- 3.3 Creating a Simple Input Form
- 3.4 Accessing Form Input with User-Defined Arrays
- 3.5 Combining HTML and PHP Code on a Single Page
- 3.6 Using Hidden Fields to Save State
- 3.7 Redirecting the User
- 3.8 Including Files with include () and include once ()

UNIT IV:

- 4.1 Connecting to MySQL with PHP
- 4.2 Working with MySQL Data
- 4.3 Working with Files
- 4.4 Creating and Deleting Files
- 4.5 Opening a File for Writing, Reading, or Appending
- 4.6 Reading from Files
- 4.7 Writing or Appending to a File.

Reference Books:-

1. Vaswani, Vikram, "PHP: A Beginners Guide". Tata MacGraw Hill
2. Vaswani, Vikram, "PHP: Programming Solutions:", Tata MacGraw Hill.
3. Ed Lecky Thomsons & others "Professional PHPS" Wlox publications
4. W Jason Guilmord "PHP and MySQL" Willey Pub.
5. Vaswani, "XHL and PHP" Peaseen

Paper Title: Lab-I for DWD19101**Paper Code:** DWD19104**Credits:** 03**Internals:** 25**External:** 50**Unit-I****DOS**

- a) Demonstration of basic internal and external commands
- b) Creating a batch file
- c) Passing an argument to a batch file

MS Word

- a) Formatting a word document, changing margins, size, orientation and inserting breaks, new sections, watermarks, page borders
- b) Creating an automated table of contents, table of figures, inserting an index, citing references and inserting bibliography
- c) Using Mail merge & Macro

Unit-II**MS Excel**

- a) Referencing Cells range of cells- absolute and relative referencing
- b) Using basic date time, statistical, logical and text functions
- c) Conditional statements

Unit –III**MS Power Point**

- a) Using templates for designing presentations
- b) Inserting transitional effects, timings
- c) Adding animations
- d) Using different monitors for different viewings
- e) Using presentation views and master views

MS Access

- a) Creating/designing a table using wizard
- b) Query Designing using wizard
- c) Designing crosstab , update and delete queries using wizard and SQL
- d) Developing reports
- e) Importing/ Exporting data from/to other data sources

Paper Title: Lab-II for DWD19102

Paper Code: DWD19105

Credits: 03 **Internals:** 25

External: 50

Unit-I

Q1. Create table Student using SQL with following attributes and perform the following operations?

Attribute Names: ST_ROLLNO, ST_NAME, ST_ADDRESS, ST_TELNO

- i. Add new attributes City, Street, Country with Datatype Varchar and length 30?
- ii. Modify field ST_ROLLNO and change the size to 5?
- iii. Remove column ST_ADDRESS?
- iv. Describe the Table Student?
- v. Drop Table Student?
- vi. Copy Structure of one table to another

Q2. Create table Student with following attributes and perform the following operations?

Attribute Names: ST_ROLLNO, ST_NAME, ST_STREET, ST_CITY, ST_State, ST_Country, DTE_REG, MARKS

- i. Insert 10 records
- ii. Perform various Project Operations using Select Query.
- iii. Perform various restrict operations using Select Query.
- iv. Update & Delete records
- v. Copy records from one Table STUDENT to other Table TEST? Assume both have same table structure
- vi. Perform various restrict operations using Select Query using various arithmetic and Logical Operators like
 - a. Less Than
 - b. Greater Than
 - c. Less Than or Equal to
 - d. Greater Than or Equal To
 - e. Equal to
 - f. Not Equal To
- vii. Perform Update /Delete/Insert /Select operations using various Arithmetic and Logical Operators on Table STUDENT

Unit-II

Q1. Perform various DML operations to verify

1. Domain Constraints
2. Validity Integrity
3. Entity Integrity using Primary and Unique Keys
4. Entity Integrity
5. Referential Integrity
6. Perform ON DELETE CASCADE and ON UPDATE CASCADE
7. Create and Drop Constraints using alter command

Q2. Perform the following join operations:

- i) Equi-Join
- ii) Non Equi-Join
- iii) Self-Join
- iv) Outer Join

Q3. Perform below Mentioned Operations on tables

- i) Create System named Constraints and User Defined Constraints
- ii) Create Column and Table Level Constraints.
- iii) View User Constraints Table for checking Constraint Parameters.

Unit-III

Q1. Create Users user1, user2, user3 and perform the following operations

- i. Grant Session Privilege to the newly created users?
- ii. Grant privileges for creating and manipulation tables?

- iii. Grant data manipulation privileges to various users on tables?
- iv. Grant/Revoke privileges with grant option.

Q2. Perform the following operations

- i. Create Five Save Points from S1 to S5.
- ii. Rollback to Various Save Points and observe the changes in the table.
- iii. Perform various DDL operations the table and observe its effect on Save Point and Rollback on the table
- iv. Try to abnormally terminate the application to observe whether data is saved or not.
- v. Use Commit and Commit Work commands to save the data permanently.

Paper Title: Lab-III for DWD19103**Paper Code: DWD19106****Credits: 03 Internals: 25****External: 50****Unit-I**

HTML5/CSS

- (i) Developing basic web page using different HTML5 formatting and layout tags
- (ii) Use forms and Tables
- (iii) Embedding Styles in a tag, with in a page (intra page), linking external CSS to a page
- (iv) Use Selectors, Pseudo-Selectors and a class in a CSS
- (v) Working with positions, floating, grouping and dimensions in CSS
- (vi) Working with basic transformations and animations in CSS

Unit-II

JAVA SCRIPT

- (i) Accessing different properties of a web page
- (ii) Validating form elements of a page
- (iii) Defining new functions
- (iv) Creating classes in JavaScript
- (v) Handling different events in JavaScript

Unit-III

JQUERY

- (i) Using Selectors
- (ii) Accessing form attributes/elements
- (iii) Traversing DOM using JQuery

Paper Title: Lab-IV for DWD19201**Paper Code: DWD19203****Credits: 03 Internals: 25****External: 50****Unit-I****Photoshop**

- (i) Build a Contact Sheet
- (ii) Selection of Geometric Areas
- (iii) Select Areas using quick mask, paths
- (iv) Modify, Save and Load Selections
- (v) Covert files from one format to another format,
- (vi) Transfer files from one source platform to another platform
- (vii) Build PNG, JPEG and GIF files
- (viii) Measure & Compare Pixel Values of an Image
- (ix) Use dodge, burn and sponge tools
- (x) Build duotones, tritons & quadtones for the web

Unit-II**Photoshop**

- (i) Resize, Rotate & Crop an Image
- (ii) Adding of canvas, silhouette to an image
- (iii) Create 3D Text
- (iv) Building Full Text
- (v) Wrapping of Text
- (vi) Using paths like -----Straight Path, Edge Path, Curved Path, Stroke Path
- (vii) Layers: Creation, Grouping & Transformation and Adjustment & Masking
- (viii) Use Special Effects like Blending, Glow Effect, Lighting Effect, Radial Blur, Adding Texture

Unit-III**Q5 MS Flash**

- (i) Embedding Flash in HTML
- (ii) Building Basic Animation
- (iii) Shape Tweening, Staggering animation Effect
- (iv) Adding Multimedia to Flash
- (v) Adding Interactivity to Flash

Paper Title: Lab-V for DWD19202**Paper Code: DWD19204****Credits: 03 Internals: 25****External: 50****Unit-I**

- (i) Installing and configuring PHP (WAMP)
- (ii) Configure PHP.ini
- (iii) Use different PHP operators
- (iv) Program to demonstrate the concept of associative and homogenous arrays
- (v) Accessing different form elements using PHP
- (vi) Program to demonstrate various control constructs
- (vii) Program to demonstrate different date and time functions
- (viii) Program to demonstrate different string functions

Unit-II

- (i) Defining new functions
- (ii) Program to demonstrate scope of a variable
- (iii) Creating/ destroying a session
- (iv) Authenticating a user through session
- (v) Use hidden form elements to maintain session
- (vi) Include existing files in a PHP code

Unit-III

- (i) Program to demonstrate below operations on a file
 - a. Creation
 - b. Deletion
 - c. Read
 - d. Write
 - e. Appending
- (ii) Connecting to MySQL
- (iii) Perform various operations on MySQL
 - a. Selection
 - b. Creation
 - c. Deletion
 - d. Alter
 - e. Drop
 - f. Insertion
 - g. Grant
 - h. Revoke