

PANJAB UNIVERSITY CHANDIGARH- 160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)



FACULTY OF SCIENCE

SYLLABI

FOR

**WEB DESIGNING AND MULTIMEDIA
ADD-ON COURSE**

CERTIFICATE, DIPLOMA AND ADVANCED DIPLOMA

FOR

B.A./B.SC./B.COM.

FOR

EXAMINATIONS, 2021

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Web Designing and Multimedia – Add-on Course

Outlines of tests, syllabi and courses of reading for “**Web Designing and Multimedia**” an **Add-on Certificate Course** during the First year of B.A/B.Sc/B.com .

OUTLINES OF TESTS

Paper-Code	Paper Name	Lectures/Week	Practicals/Week	Ext.	Int.	Univ. Exam Marks	Hours
CWM-1001	Introduction to Web tools	4	0	65	10	75	3
CWM-1002	Introduction to Multimedia	4	0	65	10	75	3
CWM-1003	Practical based on CWM 1001 & 1002	0	4	50	-	50	4

Outlines of Tests, syllabi and courses of Reading for “**Web Designing and Multimedia**” an **add-on Diploma course** on during the Second year of B.A/B.Sc/B.Com.

Paper-Code	Paper Name	Lectures/Week	Practicals/Week	Ext.	Int.	Univ. Exam Marks	Hours
CWM-2001	Server Side Scripting (Using PHP)	4	0	65	10	75	3
CWM-2002	Multimedia Application Development (Using Director)	4	0	65	10	75	3
CWM-2003	Practical based on CWM 2001 & 2002	0	4	50	-	50	4

Outlines of Tests, syllabi and courses of Reading for “**Web Designing and Multimedia**”
 an **Add-on Advanced Diploma Course** on during the Third year of B.A./B.Sc./B.Com.

Paper-Code	Paper Name	Lectures/Week	Practicals/Week	Ext.	Int.	Univ. Exam Marks	Hours
CWM-1001	Java Programming	4	0	65	10	75	3
CWM-1002	Visualizing using 3ds max	4	0	65	10	75	3
CWM-1003	Practical based on CWM 1001 & 1002	0	4	50	-	50	4

Guidelines Regarding Introduction of Career Orientation Programme in the X plan as Add-on course for B.A/B.Sc./B.Com 2016 examination.

1. **Web Designing and Multimedia** is an add-on course under the UGC career orientation program in the X plan and will be introduced for the regular students in the existing three-year degree program by way of Add-on, skill oriented subjects during the first, second & third year of B.A/B.Sc/B.com along with the conventional degree program of B.A/B.Sc/B.com
2. The eligibility requirements and Regulations/Rules for this course are the same as for admission to B.A/B.Sc/B.com
3. The examination for this Certificate, Diploma & Advanced Diploma Course will be held separately, i.e. after termination of B.A/B.Sc/B.Com annual examinations.
4. The norms for continuous assessment of students as applicable to other subjects for 2010-2011 will be applicable to this add-on course also.
5. The candidates seeking admission to this course must have prior operational knowledge of computers.

SYLLABUS AND COURSES OF READINGS

Paper Title : Introduction to Web Tools

Paper code : CWM 1001

Course Duration : 90 Lectures

Max. Marks: 65

Time:3 hours

Objective: The Course enables the students to develop web based applications using various tools.

Note :

- i. The Question Paper will consist of Four units.
- ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt **ONE** question from each unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

UNIT - I

Internet : introduction, Internet connection, searching the Internet, Introduction to Internet services like FTP, http, E-mail, Telnet- enabling, disabling, Brief introduction to TCP / IP, Gateways, Routers, Servers, Browsers and its types, enabling and disabling extentions in a browser.

(No. of Lectures :22)

UNIT - II

Introduction to HTML: Concept of Web server, static and dynamic web servers, web client, Basic HTML tags, structure of an HTML program, text formatting, text styles, lists: OL, UL, DL, images, tables, links, image maps: client side and server side, frames, forms, forms controls, methods: Get and Post, validations.

(No. of Lectures :23)

UNIT - III

Dynamic HTML: Defining and applying cascading style sheets, concepts of layers, Use of <layers> in Netscape Navigator and <div>, in Internet explorer. DHTML examples-moving elements & Images, changing color, hiding an element, moving between layers.

(No. of Lectures :22)

UNIT - IV

Introduction to Java script: embedding Java script in web pages, Basic programming techniques, data types and literals, type casting, variables, arrays, operators and expressions programming constructs, functions, dialog boxes, Javascript document Object model, handling of various objects like window, location, Navigator, history, document etc, handling web page events using Javascript, cookies, user defined objects.

(No. of Lectures : 23)

References :

1.	Bayross, Ivan	:	HTML, DHTML, Javascript-, BPP.
2.	Ramalho	:	Advanced HTML with DHTML, BPB.
3.	Wagner Recherd and R. Allen	:	Javascript unleashed, Techmedia..

Paper Title : Introduction to Multimedia

Paper code : CWM 1002

Course Duration : 90 Lectures

Max. Marks: 65

Time: 3 hours

Objectives: The objective of this course is to create familiarity with fundamentals of multimedia and creating multimedia applications using FLASH..

Note :

- i. The Question Paper will consist of Four units.
- ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt **ONE** question from each unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

UNIT - I

Architecture and subsystems of multimedia, computer systems, multimedia applications(Training, science & Technology, Kiosks, Office, home, image processing etc.). Multimedia building blocks i.e. text, hypertext, image, audio, video, animation. Multimedia authoring methodologies,

(No. of Lectures :22)

UNIT - II

Detailed working of Multimedia devices.

Input Devices: Keyboards, mouse, touch screen, graphic tablet, scanner, OCR, Microphone, Digital camera.

Output Device: Monitor, Projector, audio and video devices.

Memory and Storage devices: RAM, Magnetic media, CDs, DVDs. Discussion of recent trends in Multimedia devices.

(No. of Lectures :23)

UNIT - III

Use of any presentation package such as MS-PowerPoint.

FLASH : Introduction to FLASH, Exploring interface, File types, drawing and painting in Flash, Using various tools, using various selection tools, scaling and rotating, importing graphics into Flash, using gradient tools, creating and using symbols, using library symbols,

(No. of Lectures :22)

UNIT - IV

ANIMATION

Components of Animation, creating frame by frame animation, tweening (shape, motion), adding sound, concept of layers, using guide layer, making buttons, brief introduction to actions, event handlers and actionscript.

(No. of Lectures : 23)

References :

1.	Hillman, David	:Multimedia Technology & Application
2.	Kermar, Phillip	:Sams Teach Yourself Macromedia Flash.
3.	Waghan, Tay	:Multimedia Making it Work, 3 rd edition, TMH.
4.	Reinhardt & Centz	:Flash Bible, IDG Books.

CWM 1003: Practical based on CWM 1001 & CWM 1002

Max Marks: 50

Diploma Course

Paper Title : Server Side Scripting (Using PHP)

Paper Code : CWM 2001

Course Duration : 90 Lectures

Max. Marks: 65

Time: 3 hours

Objectives: The objective of this course is to create familiarity with Server Side Scripting using **PHP**.

Note :

- i. The Question Paper will consist of Four units.
- ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt **ONE** question from each unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

UNIT - I

Web Fundamentals : Review of Web related concepts e.g. Web Server, Web Browser, Web Site, Web Page, Home Page, URL, http, IP address (various classes), Configuring TCP/IP, Network Trouble Shooting Command like netstat, ping, tracert, ipconfig, nslookup.

Introduction to PHP : Evaluation of Php, Basic Syntax, Defining variable and constant, Php Data type, Operator and Expression, Decisions and loop, Making Decisions, Doing Repetitive task with looping ,Mixing Decisions and looping with Html.

(No. of Lectures – 22)

UNIT - II

PHP – 1 : Handling Html Form With Php, Capturing Form Data, Dealing with Multi-value filed, Generating File uploaded form, Redirecting a form after submission. Function : What is a function, Call by value and Call by reference, Recursive function, String: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function, Array: Anatomy of an Array.

(No. of Lectures – 23)

UNIT - III

PHP – 2: Working with file and Directories: Understanding file& directory, Opening and closing a file, Coping ,renaming and deleting a file, Working with directories, Building a text editor, File Uploading & Downloading. Generating Images with PHP

(No. of Lectures – 22)

UNIT - IV

PHP - 3: Introduction to OOPs : Objects, Declaring a class, New keyword, constructor, destructor, Access method and properties using this variable, Public,private,protected properties and methods, static properties and methods, class constant, inheritance, polymorphism, Parent::, self::, Instanceof operator, Abstract method and class, Interface, Final. Exception Handling: Understanding Exceptions and errors, try, catch and throw.

(No. of Lectures – 23)

References :

1.	Powell, Thomas A.	:	Web Design : The complete Reference, Tata McGraw Hill
		:	Refer various internet sites for

Paper Title : Multimedia Application Development (Using Director)

Paper Code : CWM 2002

Max. Marks: 65

Course Duration : 90 Lectures

Time: 3 hours

Note for the Paper settler: Total of 9 questions may be set covering the whole syllabus. Candidate will be required to attempt five questions in all taking at least one from each section.

Objectives: The objective of this course is to create familiarity with Multimedia Application Development using **Director**.

Note :

- i. The Question Paper will consist of Four units.
- ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt **ONE** question from each unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

UNIT - I

Review of multimedia concepts and its applications: Information system, remote representation, entertainment etc, multimedia formats, uses, multimedia authoring, types of authoring tools (card, icon, time based, object oriented),

(No. of Lectures – 22)

UNIT - II

Multimedia project design concepts, growth and evolution of computer based multimedia, multimedia software life cycle, project planning and costing, multimedia team, multimedia distribution, MPEG, JPEG compression.

(No. of Lectures – 23)

UNIT - III

Director : Interface and working environment, using cast, score, stage, creating cast members, setting movie properties, using text window, using the tool palette, using color, using ink, sequencing sprites in the score, technique of animating using key-frame and tweening, reverse animation.

(No. of Lectures – 22)

UNIT - IV

Importing Media elements, adding sound, video and transitions to movie, inserting markers, adding behaviour introduction to lingo, writing simple handlers (mouse-up, mouse-down etc.) in lingo, developing commercial application using Director for games, presentation, tutorial etc..

(No. of Lectures – 23)

References :

1.	Gokul, S.	:	Multimedia Magic, BPB, Publications.
2.	Vaghan, Tay	:	Multimedia making it work, TMH.
3.	Gross, Phil & Roberts, Jason	:	Director-8 demystified, Pearson education

CWM 2003 : Practical Based on CWM 2001 & CWM 2002.

Max Marks : 50

Advanced Diploma Course

Paper Title: Java Programming

Paper Code: CWM 3001

Course Duration: 90 Lectures

Max. Marks: 65

Time: 3 Hours

Objectives: The objective of this course is to create familiarity with Java programming.

Note :

- i. The Question Paper will consist of Four units.
- ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt **ONE** question from each unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

UNIT - I

Fundamentals of object-oriented programming, features of Java, Java and Internet, why java is important for internet, java applets, Java environment, JRE, Java program structure, Java tokens, implementing a java program: stages in compilation and interpretation of a java program, Java virtual machine, command line arguments, constants, variables, data types, operators and expressions, decision-making and looping.

(No. of Lectures :22)

UNIT - II

Defining a class, accessing class members, constructors, method overloading, inheritance, method overriding, using static: static variables, methods and blocks, final and abstract; visibility control: public, private, default, protected.

(No. of Lectures:23)

UNIT - III

Arrays, strings, vectors, interfaces, using system packages: API, creating a package, adding a class to a package, multithreaded programming,

(No. of Lectures:22)

UNIT - IV

Managing errors and exceptions: java exception handling model, exception classes, try, catch, finally, throw, throws, applet programming: life cycle of an applet, embedding applet in a web page, graphics programming, network programming: java.net package and RMI. (No. of Lectures:23)

References :

1.	Balaguruswamy, E.	: Programming with Java, TMH.
2.	Naughton, Patric & Schildt, Herbert	: Java 2: The Complete Reference, TMH.
3.	Lemay, L.	: Teach yourself Java in 21 Days, Techmedia.

Paper Title: Visualizing using 3ds max
Paper Code: CWM 3002
Course Duration: 90 Lectures

Max. Marks: 65
Time: 3 Hours

Objectives: The objective of this course is to create familiarity with 3ds max.

Note :

- i. The Question Paper will consist of Four units.
- ii. Examiner will set total of **NINE** questions comprising **TWO** questions from each unit and **ONE** compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt **ONE** question from each unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

UNIT - I

Graphics Concepts: Storyboarding, Scene Development: Scene composition, Camera angles, Color and Lighting: Lighting, color; Motion and Movement: object movement, camera movement, editing; Real world applications and uses of 3D Imagery;
(Total No. of Lectures:22)

UNIT - II

3ds max Concepts: The fundamentals, object naming standards, understanding compound shapes, cloning objects, applying modifiers, the modifier stack, sub-object level editing, materials and maps, lighting concepts, keyframe animation concepts, mathematical accuracy; workflow and graphical user interface:pull down menus, the right-click menus, the toolbars and Tab panels,
(Total No. of Lectures:23)

UNIT - III

3ds max Concepts

The Command Panel, Quad menus, keyboard shortcuts, view port navigation, the status bar, frame slider and track bar, transformations, using grids, customizing the 3ds max user interface. 2D Modeling: Setting up the scene, shapes and splines;
(Total No. of Lectures:22)

UNIT - IV

3D Fundamentals: The extrude modifier, the Bevel modifier, the Bevel profile modifier, the Lathe modifier, modeling with primitives, cloning objects in a scene; Animation: Keyframe animation, path animation
(Total No. of Lectures:23) Note: Various concepts learnt should be applied using Practical exercises.

References :

1.	Boardman, Ted	:3ds Max fundamentals, Techmedia.
2.	Woods, Cat, Bichalho, Alexander & Murray, Chris	:Mastering 3ds max, BPB.

CWM 3003 : Practical BasedonCWM3001&CWM3002
Max Marks : 50

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