AC –24/11/2023
Item No. – 6.2 (N)

As Per NEP 2020

University of Mumbai

Title of the program

A- U.G. Certificate in Information Technology
B- U.G. Diploma in Information Technology
C- B.Sc. (Information Technology)
D- B.Sc. (Honours) in Information Technology
E- B.Sc. (Honours with Research) in Information Technology

Syllabus for Semester –

Sem I & II

Ref: GR dated 20th April, 2023 for Credit Structure of UG

(With effect from the academic year 2024-25 Progressively)

Skill Enhancement Courses (SEC)

Name of the course : Web Programming

Sr.No.	Heading	Particulars
1	**Description the course : Including but Not limited to:**	This course covers a range of topics aimed at equipping students with the skills and knowledge needed to create visually appealing, functional, and user-friendly websites. The course provides an insight into emerging technologies to design and develop state of the art web applications using client-side scripting, server-side scripting, and database connectivity. website development includes all related development tasks, such as client-side scripting, server-side scripting, server and network security configuration, eCommerce development, and content management system (CMS) development. Website design is a combination of different elements that work together to create an effective and user-friendly experience. These include the use of typography, layout, color theory, grid systems, motion graphics, and responsive designs.
2	**Vertical :**	Skill Enhancement Course(SEC)
3	**Type :**	Practical
4	**Credits:**	2 credits (1 credit = 30 Hours of Practical work in a semester)
5	**Hours Allotted :**	60 Hours
6	**Marks Allotted:**	50 Marks
7	**Course Objectives (CO)** **CO1:** To understand how to use Java script objects and XML. **CO2:** To create well organized, styled web pages **CO3:** To add versatility to a web page using jQuery **CO4:** To deploy a local web server and run a simple web application. **CO5:** To read and process data in MySQL using PHP. **CO6:** To understand usage of Bootstrap	
8	**Course Outcomes (OC)** OC1: Knowledge in different java script objects. OC2: How to use XML with CSS and XSL OC3: validate a form using jQuery OC4: handle asynchronous requests OC4: Write and deploy PHP with database and to simplify web development. OC5: Create a responsive layout using the Bootstrap	

	9	**Modules:** **Module 1:** **1. Write JavaScript code for** a. Demonstrating different JavaScript Objects such as String, RegExp, Math, Date b. Demonstrating different JavaScript Objects such as Window, Navigator, History, Location, Document c. Storing and Retrieving Cookies **2. Create a XML file with Internal / External DTD and display it using** a. CSS b. XSL **3. Write PHP scripts for- Performing certain mathematical operations such as calculating factorial / finding Fibonacci Series / Displaying Prime Numbers in a given range / Evaluating Expressions** **4. Write PHP scripts for** a. Retrieving data from HTML forms b. Working with Arrays c. Working with Files (Reading / Writing) **5. Advanced PHP** a. Write a PHP program to demonstrate use of sessions and cookies. b. Write a PHP program to demonstrate use of filters.	**30 Hrs**
		Module 2 **6. PHP and MySQL** a. Write a PHP program to create: Create a database College b. Create a table Department (Dname, Dno, Number_of_faculty) c. Write a PHP program to create a database named “College”. Create a table named “Student” with following fields (sno, sname, percentage). Insert 3 records of your choice. Display the names of the students whose percentage is between 35 to 75 in a tabular format. **7. Write a PHP program** a. Update rows in a table b. Delete rows from a table **8. Design a PHP page for authenticating a user** **9. Write PHP scripts for** a. Storing and Retrieving Cookies b. Storing and Retrieving Sessions **10. Perform the following using Bootstrap:** a. Create a responsive layout using the Bootstrap grid system b. Create a simple Bootstrap navbar with dropdown menus c. Create a basic Bootstrap form with validation	**30 Hrs**
	10	**Text Books** • HTML 5 Black Book, Covers CSS 3, JavaScript, XML, XHTML, AJAX, PHP and jQuery, 2ed, Dreamtech Press, 2016 • Web Programming and Interactive Technologies, scriptDemics, StarEdu Solutions India, 2018	

	• PHP: A Beginners Guide, Vikram Vaswani, TMH	
11	**Reference Books** • HTML, XHTML, and CSS Bible Fifth Edition, Steven M. Schafer, WILEY, 2011 • Learning PHP, MySQL, JavaScript, CSS & HTML5, Robin Nixon, O'Reilly, 2018 • PHP, MySQL, JavaScript & HTML5 All-in-one for Dummies, Steve Suehring, Janet Valade Wiley, 2018	
12	**Internal Continuous Assessment: 40%**	**Semester End Examination: 60%**
13	**Continuous Evaluation through:** Students are expected to attend each practical and submit the written practical of the previous session. Performing Practical and writeup submission will be continuous internal evaluation. 2.5 marks can be awarded for each practical performance and writeup submission totalling to 50 marks and can be converted to 20 marks.	30 marks practical exam of 2 hours duration
14	**Format of Question Paper: Duration 2 hours. Certified copy of Journal is compulsory to appear for the practical examination** Practical Slip: Q1. From Module 1 13 marks Q2. From Module 2 12marks Q3. Journal and Viva 05 marks	

Name of the Course: PLSQL Practical

Sr.No.	Heading	Particulars	
1	**Description the course : Including but Not limited to:**	PL/SQL ,Oracle's procedural extension language for SQL, allows developers to include procedural language components such as loops, conditional statements and functions. The course enables students with practical experience in using PL/SQL for effective database programming and development.	
2	**Vertical :**	Skill Enhancement Course(SEC)	
3	**Type :**	Practical	
4	**Credits :**	2 credits	
5	**Hours Allotted :**	60 Hours	
6	**Marks Allotted:**	50 Marks	
7	**Course Objectives(CO):** CO 1. Comprehend the basics of PL/SQL and gain knowledge about control and conditional statement in PL/SQL. CO 2. Understand working with cursors,collections and composite data types in PL/SQL. CO 3. Develop expertise in creating stored procedures and functions. CO 4. Explore the use of triggers to automate responses to events within the database. CO 5. Understand the concept of Exception handling. CO 6. Design modular applications using packages.		
8	**Course Outcomes (OC):** OC 1. Use PL/SQL variables ,data types, control and conditional statement. OC 2. Apply sequences and cursor in PL/SQL. OC 3. Work with Collection and Composite Data Types. OC 4. Develop PL/SQL structures like functions, procedures and triggers for database applications. OC 5. Handle errors and exceptions in PL/SQL programs. OC 6. Develop PL/SQL packages.		
9	**Modules:-** **Module 1:**		
	1. **PL/SQL Basics**- Use of variables, Write executable statement, Interacting with Oracle Server, Create anonymous PL/SQL block,Sequences 2. **Control Structure in PL/SQL**- Using while loop, Do loop, For loop, Use of GOTO statement 3. **Create conditional statement using PL/SQL**- Using if statement, Using if else statement, Using elsif ladder, Using case expression. 4. **Create cursor in PL/SQL**- Implicit cursor, Explicit cursor, Parameterized cursor **5. Collection and Composite Data Types** - Working with Collections,Working with Composite Data Types		**30 Hrs**

	Module 2:	
	1. Creation of Procedures in PL/SQL **2. Functions in PL/SQL** 3. **Creation of Trigger –** Create Row level trigger, Create Statement level trigger, Create instead of trigger 4. **Handling exceptions**- Creation of user defined exception, Creation of system defined exception 5. **Creation of Package in PL/SQL**	**30 Hrs**
10	**Text Books** 1. Programming with PL/SQL for Beginners , H. Dand, R. Patil and T. Sambare, X –Team 2. Oracle pl/sql Programming ,Feuerstein, S., & Pribyl, B. ," O'Reilly Media, Inc.".	
11	**Reference Books** 1. Oracle Database PL/SQL Language Reference, 12c Release 1 (12.1) E50727-04 , Alpern, D., Belden, E., Agrawal, S., Baer, H., Castledine, S., Chang, T., & Yang, M. 2. Oracle PL/SQL for dummies , Rosenblum, M., & Dorsey, P. (2006), John Wiley & Sons. 3. PL/SQL Programming ,Ivan Bayross, BPB	
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