C. U. SHAH UNIVERSITY

Faculty of Computer Science

Post Graduate Diploma in Computer Application (PGDCA)

(1 year – Two Semester Full Time Course)

Semester:II **Subject Code:PGD201** **Name: RDBMS Using Oracle**

Teaching & Evaluation Scheme

Sr. No.	Subject Code	Name of the Subject	Teaching Scheme (Hours)				Evaluation Scheme								
							Theory					Practical (Marks)			
			Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/ Viva	TW	Total	Total
							Marks	Hrs	Marks	Hrs					
1	PGD201	RDBMS Using Oracle	4	-	4	8	30	1.5	70	2.5	100	30	20	50	150

Objectives: Student will be able to:

- Create a simple relational databases
- Understand fundamental concepts of database, table, record, field and data type
- Insert, update and delete the records in the table.
- Retrieve the data using Select queries.
- Understanding database objects.

Prerequisites: Student should have reasonable general PC skills.

Course outline:-

Sr. No.	Course Contents	Number of Hours
1	**Introduction to RDBMS** -Overview of DBMS Terminology of DBMS: row, column, tuple, attributes, domain, keys, normalizations, E-R Diagrams. DBMS v/s RDBMS - Characteristics of RDBMS - Justify Oracle as a RDBMS	5
2	**SQL, SQL*Plus** - Introduction to SQL - SQL Commands and Data types - Introduction to SQL*Plus - Operator and Expression - SQL v/s SQL*Plus	2
3	**Managing Tables and Data** - Creating and Altering tables (Including constraints)- Data Manipulation Command like	3

	Insert, update, delete.	
4	**Viewing Database data** SELECT statement with WHERE,GROUP BY and HAVING, ORDERBY,DISTINCT	4
5	**Join and Sub-query** Join, Sub-query, Special operator likeIN, ANY,ALL,BETWEEN,EXISTS, LIKE,Built in functions	5
6	**Other DatabaseObjects** View Index Sequence Synonyms	3
7	**Data and Transaction Control Statements** Grant, Revoke, Role, Creating Users about transaction Starting and Ending of Transaction Commit, Rollback, Savepoint	4
8	**Introduction to PL/SQL** - SQL v/s PL/SQL - PL/SQL Block Structure - Language construct of PL/SQL (Variables, Basic and CompositeData type, Conditions, looping)	5
9	**Cursor** Using Cursor(Implicit, Explicit) Attributes of Cursor %TYPE and %ROWTYPE	5
10	**Advanced PL/SQL** - Creating and Using Procedure,Functions, Package, Triggers, Exception Handling.	5
11	**Object in PL/SQL** - Creating Objects, PL/SQL Tables,Nested Tables, Varrays	5
12	**Introduction to Oracle Database Structure** - Initialization Parameter - Control Files, Redo Log files, Data files, Tablespace, Oracle Blocks	2
		48

Learning Outcomes:

- Successful completion of this course, the student will enable to convert data and information into manageable and informative reports and analysis.
- By learning the basics of oracle, the student can get to grips with how to store that data effectively in ways that make it easy to update, query and generate required outputs.

Books Recommended:

1, *"SQL,PL/SQL The programming Lang.OfOracle"*,IvanBayross, BPB Publication.
2, *"Oracle 8i The Complete Reference"*,George Koch, TMH Publication.
3, "Mastering SQL", Martin Gruber, BPB Publication(1st Edition)
4, "Teach Yourself PL/SQL", Jonathan Genni
5, "An Introduction to Database Systems",C.J,Date,Pearson(8th Edition)

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Post Graduate Diploma in Computer Application (PGDCA)

(1 year – Two Semester Full Time Course)

Semester: II Subject Code:PGD202 Name:Web Based Application Development Using PHP

Teaching & Evaluation Scheme

Sr. No.	Subject Code	Name of the Subject	Teaching Scheme (Hours)				Evaluation Scheme								
							Theory					Practical (Marks)			
			Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/ Viva	TW	Total	Total
							Marks	Hrs	Marks	Hrs					
1	PGD202	Web Based Application Development Using PHP	4	-	4	8	30	1.5	70	2.5	100	30	20	50	150

Objectives:

- To familiarize each student with PHP elements with building blocks for developing websites.

Prerequisites: Basic knowledge of computerprogramming and HTML.

Course outline:-

Sr. No.	Course Contents	Number of Hours
1	**PHP Basic** Introduction to PHP PHP configuration in IIS & Apache Web server, PHP Variable Static & global variable GET & POST method	4
2	**Operator, Looping and Array** PHP Operator, Conditional Structure &Looping,Structure Array, Types of Array	4
3	**User Define Function:** Introduction and categories, argument function, default argument, variable function ,return function	5
4	**Variable Length Argument Function** func_num_args(), func_get_arg(), func_get_args(), Variable Function, gettype(), settype(), isset(), unset(),strval(), floatval(), intval(), print_r()	4
5	**String Function , Math Function and Date Function** String:chr(), ord(), strtolower(), strtoupper(),strlen(), ltrim(), rtrim(), trim(),	4

	substr(),strcmp(), strcasecmp(), strpos(),strrpos(), strstr(), stristr(), str_replace(),strrev(), echo(), print() Math:abs(), ceil(), floor(), round(), fmod(),min(), max(), pow(), sqrt(), rand() Date:Date, getdate(), setdate(),checkdate(), time(), mktime()	
6	**Array Function and Miscellaneous Function** count(), list(), in_array(), current(), next(), previous(), end(), each(), sort(), rsort(), assort(), arsort(),array_merge(), array_reverse() Misc.:define(), constant(), include(),require(), header(), die()	4
7	**File handling Function** fopen(), fread(), fwrite(), fclose(),file_exists(), is_readable(),is_writable(), fgets(), fgetc(), file_get_contents(),file_putcontents(), ftell(), fseek(),rewind(), copy(), unlink(), rename(),move_upload_file()	5
8	**PHP Components** Cookies, Session, Server variable, Database Connectivity with MySQL MySQL Functions	5
9	**Advance PHP** PHP with OOPS, Class, constructor, inheritance, serialize objects, PHP with XML XML introduction, Simple XML functions	5
10	**Smarty** Smarty Introduction Variable:Variables assigned from PHP, Variables loaded from config files	2
11	**Variable Modifiers:** capitalize, lower, upper, truncate,count_characters, count_words, date format, nl2br, replace	2
12	**Built in Function:** config_load(), foreach(),foreachelse(), include(), if(),elseif(),else(),section(), sectionelse()	2
13	**Custom Functions:** assign(), counter(), cycle(), eval(),fetch(), html_checkboxes(), html_image(), html_options(),html_radios(), html_select_date(),html_select_time(), html_table()	2
		48

Learning Outcome:

- Successful completion of this course, the student will enable to create web sites using PHP language.

Books Recommended:

1,"*Beginning PHP"*,Mercer, Wiley Publication.
2, *"Professional PHP 5"*,Thompson, Wiley Publication.
3, "*Beginning MySQL*",RobertSherdon, Wiley Publication
4, "*The Complete Reference PHP*",StevenHolzener , Tata Mc-Graw Hill
5, "*Learning PHP 5*",DavidSklar, OReilly Publication

Faculty of Computer Science

Post Graduate Diploma in Computer Application (PGDCA)

(1 year – Two Semester Full Time Course)

Semester: II **Subject Code:PGD203** **Name: VB.NET Programming**

Teaching & Evaluation Scheme

Sr. No.	Subject Code	Name of the Subject	Teaching Scheme (Hours)				Evaluation Scheme								
							Theory					Practical (Marks)			
			Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/ Viva	TW	Total	Total
							Marks	Hrs	Marks	Hrs					
1	PGD203	VB.NET Programming	4	-	4	8	30	1.5	70	2.5	100	30	20	50	150

Objectives:

- To enhance knowledge of .Net Framework and architecture which will be used to develop an application in VB.NET

Prerequisites: Basicknowledge of Object oriented programming concepts and VB.

Course outline:

Sr. No.	Course Contents	Number of Hours
1	**.NET Framework** MS .Net Platform Microsoft .NET and Windows DNA Microsoft .NET Architecture Hierarchy	3
2	**Features of the .NET platform** Multilanguage Development, Platform andProcessor independence Automatic memory management, EasyDeployment, Distributed Architecture, Interoperability with Unmanaged code, Security,Performance and Scalability	3
3	**Components of the.NET Architecture:** MS .NET Runtime, Managed/Unmanaged Code, Intermediate Language, Common Type System, MS .NET Base class library(BCL), Assemblies, Metadata, Assemblies and Modules, Assembly Cache, Reflection, Just In Time Compilation, Garbage Collection	5
4	**Introduction to VB .NET** Introduction to visual studio, Project basics,types of project in .NET, IDE of VB.NET, The Environment, Editor tab, format tab, general tab, docking tab, visual development, event driven programming,properties,methods ,events	5
5	**Visual Basic Language Basics**	3

	Basic Variables – Declaring variables, Datatypes of variables, Forcing variable declarations,Scope and lifetime of a variable	
6	**Array Function and Looping**, Array, Typesof Array, Control Array, Collections, Subroutines, Functions, Passing variable, Number of argument, Optional argument, Return value from function, Looping statement, Decision statement Msgbox and Inputbox	5
7	**Working with GUI** Working with Forms GUI Programming with Windows Form	2
8	**Controls** TextBox, Label, Linked Label, Button, ListBox,ComboBox, CheckBox, PictureBox, RadioButton, Panel, ScrollBar, Timer, ListView,TreeView, ToolBar, StatusBar OpenFileDialog,SaveFileDialog, FontDialog,ColorDialog, PrintDialog Designing Menu	5
9	**OOP** Object oriented programming. Class, Object, Properties, Methods, Events, Constructors, Inheritance, overloading, My base,My class keywords Access specifiers, Public, private, protected	5
10	**COM** Overview of OLE, Accessing win32 API from VB .NET, Interfacing with Office 97COM technology, Advantages of COM+, COM and .NET, Create User Control, Access COM components in .NETApplication	4
11	**Database Programming** What is ADO.NET, ADO .NET architecture, Data Providers and Connection string	3
12	**Objects in VB.NET** Connection ,Command,DataReaders, DataSets, DataAdapters, DataTables DataColumn, DataRow, Differences between DataReader Model andDataSet Model, DataViewBinding TextBoxes,CheckBoxes,ListBoxes,CheckListBoxes, DatatGrids	5
		48

Learning Outcomes:

- At the end of the course the students can develop web application using VB.NET Programming

Books Recommended:

1,*"VB.NET Programming black book"*, Steven Holtzner, Dreamtech Publication.
2, *"Visual Basic.Net Bible"*,Bill Evjen,JasonBeres,HungrymindsPublication.
3, "*Professional VB.NET*", BillEvjen, Wiley Publication
4, "*Learning Visual Basic .NET*",Jesse Liberty,O'Reilly Publication
5, "Sams Teach Yourself ADO.NET in 21 Days", Dan Fox,Tech Media Publication

Faculty of Computer Science

Post Graduate Diploma in Computer Application (PGDCA)

(1 year – Two Semester Full Time Course)

Semester: II **Subject Code:** PGD204 **Name:** **SoftwareDevelopment Project**

Objectives:

- To solve problems of industrial/society/research.
- To plan, schedule, and monitor the software project
- Design and Documentation of project/Software

Pre-requisites: Greater knowledge of programming language, RDBMS and Software Engineering to develop a Project.

Course outline:

Sr. No.	Subject Code	Name of the Subject	Teaching Scheme (Hours)				Evaluation Scheme								
							Theory					Practical (Marks)			
			Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/ Viva	TW	Total	Total
							Marks	Hrs	Marks	Hrs					
1	PGD204	SOFTWARE DEVELOPMENT PROJECT	-	-	6	6	-	-	-	-	-	150	-	-	150
		REPORTING							-	-	-	-	25	25	25
		SEMINAR					-	-	-	-	-		25	25	25
		TOTAL				6					-	150	-	50	200

Project should be made using the tools like vb.net, oracle, MS-access, VB or PHP or any tools studied in PGDCA.

Learning Outcomes:

- Doing the project will enable the student to go through wide experience in developing projects. Such an experience will include solving technical issues, working with teammates, growing logical ability.
- Ability to write well documentation and codding.
- Well scheduling the time effectively.

- It will prepare the students for analyzing and programming for industrial problem andprojects work in future.

- The students can self-develop an application for industry.

Project Guidelines:

1. The project definition should be finalized during the 1st semester break and starting of 2nd semester

2. It is recommended that the team should be of 1 or 2 students.

3. The faculty members (Internal guides of project) must devote the time allocated as per the time table to guide the students for the project development.

4. Project plan along with the division of work amongst teammates would have been prepared and got approved within a maximum of one week of the start of the project development.

5. Coding standards should be followed precisely. The code should bemodularand give meaningful name of the module.

6. It is advisable that use the concept of OOPs

7. The documentation should be chapter wise.

8. The documentation should include database design, data dictionary, portions of code etc.