Level 5 Diploma in Database Developer (991) 191 Credits

Subject Title: Oracle Designer	**Guided Learning Hours:** 280
Exam Paper No.: 4	**Number of Credits:** 28
Prerequisites: Detailed knowledge of Oracle SQL	**Corequisites:** A pass or higher in Diploma in Database Administration or equivalence

Aim: Learners will be equipped with the skills necessary to develop, maintain and certify process models, function models and data models along with their supporting structures; building enterprise-wide system from sophisticated models is now possible with Oracle Designer technology. A complete, functional system will be developed over the duration of the unit, allowing learners to see first hand the productivity gains achieved with the tool. All the supporting tools and utilities are also considered, including the navigators, setting preferences and fine-tuning models. Once the models have been developed, learners will learn how rapid prototypes can be generated using the Design Wizards. The unit take learners along a streamlined path through the Oracle Designer development environment; covering recording business requirements into the Repository including process modeling entity relationship modeling and function modeling. Well-constructed systems are easy to maintain and enhance. On completion of the unit, learners will be able to: build robust and scalable Oracle database applications; establish a data model and a storage framework; develop powerful and efficient SQL statements; write reusable structured PL/SQL code with cursors, procedures and triggers

Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.

Special Requirements: The unit requires a combination of lectures, demonstrations, discussions, and hands-on labs.

Intended Learning Outcomes:	**Assessment Criteria:**
1. Oracle Designer tools, utilities and the components of Oracle Designer.	1.1 Define Oracle Designer 1.2 Explain the components of Oracle Designer 1.3 Demonstrate how to start Oracle Designer tools and utilities a process diagram 1.4 Describe how to start Oracle Designer Tools
2. The advantages of separating the logical and physical storage structures.	2.1 Describe how to create a process step 2.2 Describe how to add a flow, a trigger and an outcome 2.3 Describe Data Flow Diagram (DFD) 2.4 Describe Process Logic Specifications (structured specifications) 2.5 Explain the Role of Functional Decomposition in Physical database design 2.6 Describe types of diagrams for modelling system requirements
3. The main components of an Entity-Relationship Diagram (ERD) and the steps involved in creating an ERD.	3.1 Define an entity 3.2 Demonstrate how to add an entity to the entity relationship diagram model 3.3 Define a relationship 3.4 Demonstrate adding relationships on an entity relationship diagram 3.5 Define an attribute 3.6 Demonstrate adding attributes to an entity
4. The relationship between modeling data and tasks, enumerating the basic constructs of business process diagrams and function hierarchy diagrams..	4.1 Describe how to use the Function Hierarchy Diagrammer to decompose functions 4.2 Define elementary functions 4.3 Describe how functions use data

		4.4	Explain how to specify whether a function can create, retrieve, update or delete an instance of an entity
		4.5	Describe how to use the Function/Attribute Matrix utility to create usages
		4.6	Describe creating a table definition from entities
		4.7	Demonstrate how to create database tables
		4.8	Describe how Read/write diagrams be able to decide which Designer Tool is best suited for a certain task
5.	The Form Module, Menu Module, PL/SQL Libraries, Object Libraries and Object Group (Form Builder).	5.1	Demonstrate how to create default module definitions
		5.2	Demonstrate how to modify the default module definitions
		5.3	Demonstrate how to generate a working form
		5.4	Explain how to change form characteristics
		5.5	Describe how to create a lookup table
6.	Running generated forms and refining Oracle Developer Forms.	6.1	Describe how to set a generator preference
		6.2	Demonstrate changing a display aspect of the module definition
7.	Web application development tool for creating pages.	7.1	Demonstrate how to query using world wide web
		7.2	Demonstrate updates using world wide web
		7.3	Demonstrate how to delete using world wide web
		7.4	Demonstrate how to enter information in an Oracle database over the world wide web
		7.5	Describe how to create simple form, report pages and how to enhance the look of applications by using stylesheets.
8.	Exiting from Oracle Designer and deleting tables.	8.1	Demonstrate how to close the Oracle Designer Window
		8.2	Demonstrate how to drop tables

Methods of Evaluation: A 2½-hour written examination paper with five essay questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake project/coursework in Oracle Designer with a weighting of 100%.

Recommended Learning Resources: Oracle Designer

Text Books	• Oracle Designer Handbook by Dr Paul Dorsey and Paul, Dr. Dorsey. ISBN-10: 0078824176 • Oracle Design: The Definitive Guide by Dave Ensor and Ian Stevenson. ISBN-10: 1565922689 • Oracle Designer: A Template for Developing An Enterprise Standards Document by Mark A. Kramm and Kent Graziano. ISBN-10: 0130153435
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Oracle Database