Study plan No.	**2021/2022**		**University Specialization**		Computer Science		
Course No.	**112325**		**Course name**		**Database Management System Programming**		
Credit Hours	**3**		**Prerequisite Co-requisite**		114341		
Course type	☐ MANDATORY UNIVERSITY REQUIREMENT	☐ UNIVERSITY ELECTIVE REQUIREMENTS	☐ FACULTY MANDATORY REQUIREMENT	☐ Support course family requirements	☐ Mandatory requirements	Elective requirements	
Teaching style	☐ Full online learning		☐ Blended learning		Traditional learning		
Teaching model	☐ **2Synchronous: 1asynchronous**		☐ **2 face to face : 1synchronous**		**3 Traditional**		

Faculty member and study divisions information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail	
Division number	**Time**	**Place**	**Number of students**	**Teaching style**	**Approved model**
1					

Brief description

SQL, data definition language DDL, data manipulation languages DML, and data control language DCL, PL/SQL, Control Structure statements, Functions, Procedures, Packages and Triggers. Records and tables, Oracle developer Forms include Triggers and LOVs, property palette, Writing PL/SQL in trigger, Item types, canvas types. Different Style of Reports. Practical applications and Projects.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc)	1. 1- 1.Oracle Database 12c The Complete Reference (Oracle Press) 1st Edition by Bob Bryla , Kevin Loney ,2014, McGraw-Hill. 2.Oracle Forms and Reports 12c Documentation
Supportive learning resources (Books, databases, periodicals, software, applications, others)	1. Oracle SQL Developer , 2016,by Ajith Narayanan , Packet Publishing. 2. Advanced Oracle PL/SQL Developer's Guide - Second Edition, 2016 by Saurabh K. Gupta . Packet Publishing. 3. Murach's Oracle SQL and PL/SQL for Developers, 2nd

	Edition, by Joel Murach, 2014. Mike Murach and Associates, Inc. 4. Oracle PL/SQL Language Pocket Reference: A Guide to Oracle's PL/SQL Language Fundamentals 5th Edition, by Steven Feuerstein , Bill Pribyl , Chip Dawes ,2015, O'Reilly Media, Inc			
Supporting websites				
The physical environment for teaching	Class room	☐ labs	☐ Virtual educational platform	☐ Others
Necessary equipment and software				
Supporting people with special needs				
For technical support				

Course learning outcomes (S *= Skills, C= Competences K= Knowledge,)*

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	To show excellent knowledge in SQL	**MK2**
K2	To be acquainted with the basics of PL/SQL and Forms Builder	MK2
K3		
	Skills	
S1	To be able to apply SQL to perform basic database operations	**MS2**
S2	To be able to use Forms Builder and PL/SQL to implement a real-life project	**MS2**
S3		
	Competences	
C1	To apply the various concepts of Forms Builder in solving real life problems	**MC2**

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
First exam	0	**0**	%20	0
Second / midterm exam	%30	**%30**	%20	30%
Participation / practical applications	0	**0**	10	30%
Asynchronous interactive activities	%30	**%20**	0	0
final exam	%40	**%50**	%50	40%

Note: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	learning style*	Reference **
1	**SQL. Review** DDL Commands, Database objects. – DML: insert, delete, update – Data Control Language Oracle data dictionary	Lecture	**77-102** **275-292**
2	**SQL. & SQL plus** – All Select Statements. – Sub queries **Single-Value Functions**. Character &Numeric &Date Functions	Lecture	**105-239**
3	**PL/SQL.** – Introduction to PL/SQL – Declaring variables and assigning values. – Conditional logic Case Statements	Lecture	**545-567** **295-308**
4	**PL/SQL:** – Loops – Cursors Exception handling	Lecture	**567-580**
5	**PL/SQL:** – Triggers. – Types of Triggers Trigger Syntax	Lecture	**581-603**
6	**PL/SQL** – Function**.** – Procedures. Packages	learning through problem solving	**603-624**
7	Mid Exam	learning through problem solving	
8	**Forms Builder:** – Forms Compiler and Forms runtime – Query builder Data Block Form	Lecture	**Oracle Forms 12c Documentation**
9	– Object navigator. – Layout editors tools Property palette	Lecture	**Oracle Forms 12c Documentation**

10	– Writing code with Developer. – Procedure Builder and PL/SQL. Triggers	Lecture	**Oracle Forms 12c Documentation**
11	– Using Graphical elements in Forms. – The form runtime environments Creating a form manually.	Lecture	**Oracle Forms 12c Documentation**
12	– Item types – List items, check box, radio buttons LOVs, Canvases.	Lecture	**Oracle Forms 12c Documentation**
13	– Developer Application design. Application interface. – Database object creating. Creating the Database schema.	Lecture	**Oracle Forms 12c Documentation**
14	– Menu Editors – Library editor Using Property palette	learning through problem solving	**Oracle Forms 12c Documentation**
15	– Form search types – Multiple Tables form (master-detail) More Triggers.	learning through problem solving	**Oracle Forms 12c Documentation**
16	**Final Exam**		

*** Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.**
**** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.**