



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Database Languages and Tools
2	Course number	1904415
3	Credit hours (theory, practical)	3 theory
	Contact hours (theory, practical)	3 theory
4	Prerequisites/co requisites	1902321
5	Program title	Business Information Technology
6	Program code	4
7	Awarding institution	The University of Jordan
8	Faculty	King Abdullah II School for Information Technology
9	Department	Department of Business Information Technology
10	Level of course	4 th year
11	Year of study and semester (s)	Any
12	Final Qualification	Bachelor (B.Sc.)
13	Other department (s) involved in teaching the course	none
14	Language of Instruction	English
15	Date of production/revision	production : 1-2-2015/ revision :17-5-2015
16	Required/ Elective	Required

17. Course Coordinator: Dr. Rizik Al-Sayyed

Office numbers:
Office Hours: 10-11 Everyday
Office extension: 22639
r.alsayyed@ju.edu.jo

18. Other instructors:

None

19. Course Description:

Develop database applications in a production environment using Oracle Developer 10g utilities which provides a comprehensive guide for developing database applications using Oracle 10g relational database and Developer 10g application development utilities. Database developments activities include using SQL commands to create tables and insert, update, delete and view data values. This course provides an overview of PL/SQL, explores the Developer 10g application development tools, and describes how to create an integrated database application, also it covers how to display application component in a Web browser and gives an overview to the database administration activities.

20. Course Objectives:

At the end of this course, students should ...

1. Understand the fundamentals of using database tools and its application
2. Create a database schema from scratch (Use ER, Normalizations ...etc)
3. Understand how to design and implement client/server database applications
4. Understand theoretical part about tools and applications and how administrator work
5. Discuss the advantages of using Oracle in developing applications
6. Implement practical cases using client/server database
7. Design and implement complete real world cases

Successful completion of this course should lead to the following learning outcomes:

Intended Learning Outcomes (Mapped directly to KPI → ILO≡KPI):

On successfully completing the module, the students are expected to have gained good knowledge of:

A- Knowledge and understanding: Students should ...

A1: Understand the fundamentals concepts (the theoretical part) of database, its tools and its applications.

A2: Understand how to analyze and design a client/server database application

B- Intellectual skills and specific skills with ability to ...

B1: Implement a real world practical client/server database application.

B2: Configure and tune the basic database services

C- Transferable skills – with ability to

C1: Work in a group in order to implement a database web-based project.

C2: Present the final work (project) and make a demo.

Teaching and Learning Methodology:

Method	Lecture	Demo	Laboratory	Case study
Learning outcomes	A1+A2	B1+ B2	A2+B2	C1+C2
Assessment	Exams + Assignments	Exams + Assignments	Project + Presentation	Exams + presentation

21. Topic Outline and Schedule:

Week	Topics (estimated hours)	PPT
1-2	Chapter 1: Client/server Database and Oracle 10g Relational Database (3 hrs) <ul style="list-style-type: none"> • Overview of Relational Database. • Overview of Relationships between entities including primary key, foreign key. • Overview of normalization 	Tools_Ch01
3	Chapter 2: Creating and modifying Database Tables (3 hrs) <ul style="list-style-type: none"> • Introduction to SQL. • Defining Oracle 10g Database Tables. • Oracle 10g Data Types. • Constraints. • Viewing information about tables. 	Tools_Ch02

	<ul style="list-style-type: none"> Modifying and Deleting Database Tables. 	
4	<p>Chapter 3: Using SQL queries to Insert, Update, Delete and View data (5 hrs)</p> <ul style="list-style-type: none"> Inserting Data into tables. Creating transactions and committing new data. Create search conditions in SQL Queries. Updating and deleting existing table record. Sequences. Database objects privilege. Retrieving data form a single database table. Using calculations in SQL queries. Group functions. Joining multiple tables. Creating nested queries. Creating and using a database view. 	Tools_Ch03
5-7	<p>Chapter 4: Introduction to PL/SQL (7 hrs)</p> <ul style="list-style-type: none"> Fundamentals of PL/SQL. Executing a PL/SQL program is SQL. PL/SQL Decision Control structures. Using SQL queries in PL/SQL programs. Loops. Cursors. Handling Runtime Errors in PL/SQL programs. 	Tools_Ch04
8-9	<p>Chapter 5: Introduction to Forms builder (8 hrs)</p> <ul style="list-style-type: none"> Displaying Forms in a Web Browser. Using Data Block form. Creating Data Block form. Modifying Forms using the Data Block wizard and layout wizard. Creating a Form to display multiple records. Creating a Form based on database view. Creating a Data Block Form that displays data from multiple tables. Using format masks to format character strings. Using sequence to generate Primary key values. Creating LOV. 	Tools_Ch05
10-11	<p>Chapter 6: Creating Custom Forms (8 hrs)</p> <ul style="list-style-type: none"> Introduction to custom Forms. Creating Custom Form. Form triggers properties. Directing from External Navigation. Providing system Feedback. Avoiding user errors. Converting a Data Block to Control Block. Linking a Data Block to Control Block. Creating Forms with multiple canvas. Creating Tab Canvas. Creating Stack Canvas. 	Tools_Ch06
12-13	<p>Chapter 7: Creating Database Reports (4 hrs)</p> <ul style="list-style-type: none"> Introduction to Reports Builder Database Reports. 	Tools_Ch07

	<ul style="list-style-type: none"> • Modifying the reports appearance. • Viewing a report as a web page. • Creating a master detail report. • Report parameter. • Displaying image data in report. 	
14-15	<p>Chapter 8: Creating an Integrated Database Applications (3 hrs)</p> <ul style="list-style-type: none"> • Creating a splash screen. • Ensuring Consistent Across Form Modules • Opening and Closing Forms in an Integrated Environment • Displaying Report • Creating Pull Down Menus • Creating Pop Up menus • Displaying Menu Module in a form 	Tools_Ch08
16	Chapter 9: Advanced PL/SQL and Advanced Forms Builder topics (3 hrs)	External

22. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

Lecture, lab and presentation

23. Evaluation Methods and Course Requirements:

Teaching (T) Strategies

Class Contact is 3 Hours per week. The Course will be delivered using different means like lecture, presentations, seminars, discussion and case studies.

Learning (L) Methods

Students attend classes, ask questions and participate in discussions, do the home works, present the assignments and demo their works. A student will use the lab and select a programming language to implement the assignments. Students will access the e-learning platform for more instruction and supported learning materials

Assessment (A) Methods

There will be several assessment methods of evaluation the performance of the students such as attending and class participation, grading the homework, quizzes and assignments; conducting the Midterm and the Final Exams. Every student is expected to completely adhere to the assignments and project strict deadlines, absolutely no exceptions will be given.

24. Course Policies:

A- Attendance policies:

Maximum allowable absence 15% of number of Lectures/Semester

B- Absences from exams and handing in assignments on time:

It is the student's responsibility to ensure that he/she is aware of all assignments, announcements and contents of missed sessions

C- Health and safety procedures:

Practical sessions need labs which are suitable adjustable chairs, safe computers and wires should be well organized.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

It is the student's responsibility to ensure that he/she is adhere with cheating, plagiarism, misbehaviour

E- Grading policy:**Intended (Tentative) Grading Scale:**

Range	LG	الحرف	Range	LG	الحرف	Range	LG	الحرف
91 - 100	A	أ	74 - 77	B-	-ب	56 - 60	D+	+د
86 - 89	A-	-أ	70 - 73	C+	+ج	50 - 55	D	د
82 - 85	B+	+ب	66 - 69	C	ج	45 - 49	D-	-د
78 - 81	B	ب	61 - 65	C-	-ج	0 - 44	F	هـ

Grading and Evaluation Criteria: 100 points distributed as follows:

Weight	Criteria	Comments
30%	Midterm Exam (Automated)	TBA (in due course)
10%	Short Exam (Automated)	TBA (in due course)
10%	Seminar & Presentation	Class participation
50%	Final Exam	17 May, 2015

F- Available university services that support achievement in the course:

Computer Labs.

25. Required equipment:

- 1- Personal computers in a lab.
- 2- Data show
- 3- Access 2007

26. References:

1. Database Systems Concepts , 5TH Edition, Silberschatz Korth Sudarshan Mc Graw Hill, 2002.
2. <http://otn.oracle.com>

27. Additional information:

1. Tardiness and/or absenteeism will have a negative impact on the course grade.
2. الامتناع المدير عن حضور المحاضرات أو الدروس أو عن الأعمال الأخرى التي تقضي الأنظمة بالمواطبة عليها ، وكل تحريض على هذا الامتناع سوف يؤدي الى حرمان الطالب من المادة المعنية.
3. في حالة التغيب عن الامتحانين الأول و الثاني لن يكون هناك امتحان تعويضي الا في حالة وجود عذر وحالة طارئة من المستشفى. على الطالب براز العذر لمدرس المادة في فتره لا تتجاوز الثلاثة ايام من تاريخ الامتحان. وللمدرس الحق في قبول او رفض العذر , وحسب التعليمات.
4. Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President. For the final complaints, there will be a committee to review grading the final exam.
5. For more details on University regulations please visit <http://www.ju.edu.jo/rules/index.htm>

Name of Course Coordinator: -----Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: -----Signature: -----

Copy to:

Head of Department
Assistant Dean for Quality Assurance
Course File