

Session: 2022/23

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Title of Module: Oracle Database Development			
Code: COMP11012	SCQF Level: 11 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Junkang Feng		
Summary of Module			
<p>The module focuses on the following topics:</p> <ul style="list-style-type: none"> • Oracle Database architecture and concepts including logical and physical storage structures of Oracle. • Oracle database development tools: SQL*Plus, Forms Builder and the PL/SQL programming language. • The Object-Relational features of Oracle. • Using SQL*Plus to create users (schemas), tablespaces, various schema objects, to realise PL/SQL programming and to make use of Oracle's Object-Relational features in database application development. • Using Oracle Forms to create forms as a front-end of an Oracle Database application. <p>Practical lab work involves the design and implementation of database applications by using the above tools and the Oracle database management system. Practical work reinforces the understanding of the theoretical concepts discussed in the lectures and helps the student gain practical skills of database application development with Oracle.</p> <p>During the course of this module students will develop their UWS Graduate Attributes (https://www.uws.ac.uk/current-students/your-graduate-attributes/). Universal: Academic attributes - critical thinking and analytical & inquiring mind; Work-Ready: Academic attributes - knowledge of Database Application Development with Oracle and Database Database Application Development Implementation skills with tools associated with Oracle DBMS; Successful: autonomous, driven and resilient.</p>			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
	✓	✓			
<p>Face-To-Face Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.</p> <p>Blended A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations</p> <p>Fully Online Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.</p> <p>HybridC Online with mandatory face-to-face learning on Campus</p> <p>HybridO Online with optional face-to-face learning on Campus</p> <p>Work-based Learning Learning activities where the main location for the learning experience is in the workplace.</p>					

Campus(es) for Module Delivery						
The module will normally be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
✓					✓	
Term(s) for Module Delivery						
(Provided viable student numbers permit).						
Term 1		Term 2	✓	Term 3		

Learning Outcomes: (maximum of 5 statements)	
<p>On successful completion of this module the student will be able to:</p> <p>L1. Demonstrate reasonable understanding of Oracle database architecture including the logical and physical structures, memory and processes structures, and data dictionary of Oracle.</p> <p>L2. Demonstrate understanding of SQL*Plus client environment and commands, the ability to develop sub-programs and database level triggers by using the PL/SQL language.</p> <p>L3. Understand the object-relational features in Oracle.</p> <p>L4. Design and develop fully functional database applications using the Oracle DBMS and the tools: SQL*Plus and Oracle Forms.</p> <p>L5. Manipulate data stored in an Oracle object-relational DBMS using Oracle SQL, PL/SQL, Oracle SQL*Plus client facilities and Oracle Forms Builder.</p>	
Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	<p>SCQF Level 11.</p> <p>Understanding of Oracle server logical and physical structures and Oracle client (SQL*Plus) environment and commands;</p> <p>Critical understanding of the weakness of the Relational model and the concepts of the Object-Relational data model.</p>
Practice: Applied Knowledge and Understanding	<p>SCQF Level 11.</p> <p>Designing and developing a database application using the Oracle Object Relational Database Management Systems;</p> <p>Manipulating the data in an oracle application using Oracle SQL features, PL/SQL and Oracle SQL*Plus client</p> <p>Using of Oracle Developer Suite applications (e.g. Form Builder) to an Oracle application.</p>
Generic Cognitive skills	<p>SCQF Level 11.</p> <p>Bringing together information from a variety of sources;</p>

	Dealing with complex design, implementation and data manipulation issues and make informed judgment.	
Autonomy, Accountability and Working with others	SCQF Level 11. Working with others in groups or teams and demonstrate leadership where appropriate; Systematically practice in ways that addresses their own learning needs and reflects on own and others' roles and responsibilities.	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: COMP11007	Module Title: <u>Database Design</u>
	Other:	or equivalent: A formal course on relational databases
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

Learning and Teaching	
<p>The student learning hours for the Distance Learning version of this module are detailed in brackets in the box below. Distance learning students access on-line materials instead of lectures. They participate in on-line tutorials on particular topics by submitting material and discussions through relevant forums on Moodle. Practical sessions (equivalent to Laboratory work) are also carried out on-line.</p> <p>Independent study hours consist of two parts: coursework (42 hours) and independent study hours (107)</p>	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	20
Laboratory/Practical Demonstration/Workshop	20
Independent Study	160
	200 Hours Total
**Indicative Resources: (eg. Core text, journals, internet access)	
<p>The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Lectures Notes and lab sheets;</p> <p>Oracle Technology Network Online Documentation http://www.oracle.com/pls/db102/homepage</p> <p>Guide to Oracle 10g, Morrison J. & Morrison M., 2006.</p> <p>Database Systems: A Practical Approach to Design, Implementation and Management. Connolly T. & Begg C., 6th Ed., 2015.</p>	

Extension Resources

1. Oracle PL/SQL programming, Feuerstein S, Pribyl B., Gennick J., 5th Ed., 2009.

Oracle 9i Development By Example, by Dan Hotka, 2002.

2. Various sources including current research literature, commercial technology review reports and trade, mass media articles and web sites.

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Engagement Requirements

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: [Academic engagement procedure](#)

Supplemental Information

Programme Board	Computing
Assessment Results (Pass/Fail)	No
Subject Panel	Business & Applied Computing
Moderator	Santiago Matalonga
External Examiner	C Luo
Accreditation Details	Contact School for current details.
Version Number	2.13

Assessment: (also refer to Assessment Outcomes Grids below)

Two class tests worth 40% of the overall mark

coursework assignment worth 60% of the overall mark

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.
(ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (% of Assessment Element)	Timetabled Contact Hours
Class test (written)	✓	✓	✓		✓	40	3
Component 2							
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (% of Assessment Element)	Timetabled Contact Hours
Laboratory/ Clinical/ Field notebook	✓	✓		✓	✓	60	0
Combined Total For All Components						100%	3 hours

Footnotes

A. Referred to within Assessment Section above

B. Identified in the Learning Outcome Section above

Note(s):

1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

This module is appropriate for any student. Any special needs will be catered for and coordinated by the School and School's Enabling Support Co-coordinators.

[UWS Equality and Diversity Policy](#)

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)