



The University of Southern Queensland

## Course specification

The current and official versions of the course specifications are available on the web at <http://www.usq.edu.au/coursespecification/current>. Please consult the web for updates that may occur during the year.

### Description: Oracle Development

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIS	3010	78415	2, 2008	EXT	1.00	Toowoomba

<b>Academic group:</b>	FOBUS
<b>Academic org:</b>	FOB005
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	020303

### STAFFING

Examiner: Glen Van Der Vyver  
Moderator: Srecko Howard

### OTHER REQUISITES

Students are required to have access to a personal computer, e-mail capabilities and Internet access to USQConnect. Internet access is also required to use the USQ Oracle server. Students who have not previously completed CIS2002 at USQ will need to study module 1 of the Study Book in some detail in order to gain an understanding of the fundamentals of data modelling and normalisation. Current details of computer requirements can be found at <http://www.usq.edu.au/business/aboutfob.htm>.

### RATIONALE

Large-scale databases have become core tools in modern Information Technology and are a key resource in companies of all sizes. It is therefore imperative that business students master the fundamentals of a major DBMS product and develop skills that will facilitate a critical understanding of complex business problems pertaining to databases and database management systems. In particular, business students should develop an appreciation of the critical importance of the database in business and systems analysis and develop practical skills relating to the extraction of data from commercial databases. The Oracle DBMS is a leading edge product which is very well established in the marketplace, and is therefore highly suitable as the software vehicle for this course.

### SYNOPSIS

In this course, students build practical skills in the implementation of commercially oriented databases as well as the development of database queries and client and server-side database applications of limited scope. The course focuses on using data to solve business problems and the extraction of data that will facilitate corporate decision making. Students will gain a working knowledge of Oracle SQL and the procedural extension to SQL known as PL/SQL. The course will cover client-side as well as server-side PL/SQL, including stored procedures, functions and triggers. Finally, students extend their theoretical knowledge by studying a small number of selected

topics in database theory. The course covers a significant proportion of the syllabus of the examinations conducted by Oracle Corporation for the Oracle Certified Professional Associate (OCA) and Oracle Certified Professional (OCP) exams (in the Application Developer stream as at 1 July, 2007).

## OBJECTIVES

The course objectives define the student learning outcomes for a course. On successful completion of this course, students should be able to:

1. apply data modelling, normalisation and systems/business analysis skills to the creation and manipulation of database objects
2. work comfortably in the Oracle (SQL) environment
3. write SQL, DDL and DML statements at a variety of levels of complexity
4. write client-side and server-side code using Oracle PL/SQL with a focus on producing reports that will facilitate business decision making
5. demonstrate a factual and critical knowledge of a limited number of topics in database theory
6. explain the architecture of Oracle and evaluate the extent to which it meets the requirements of selected theoretical architecture/s
7. write PL/SQL programs, procedures, functions and triggers to solve business problems.

## TOPICS

Description	Weighting (%)
1. Selected topics in database theory	15.00
2. DBMS applications programming (Oracle)	85.00

## TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Casteel, J 2007, *Oracle 10g: SQL*, Thomson Course Technology, Boston, Massachusetts.

Lahey, H (ed) 2000, *Information systems developers handbook: a road map for students*, University of Southern Queensland, Toowoomba, Queensland.

(This handbook is available on the USQ website at <http://www.usq.edu.au/business/infosys/isdevelhandbook.htm>.)

Shah, N 2005, *Database systems using Oracle: a simplified guide to SQL and PL/SQL*, 2nd edn, Pearson-Prentice Hall, Upper Saddle River, New Jersey.

(international edn)

Summers, J & Smith, B 2006, *Communication skills handbook: how to succeed in written and oral communication*, 2nd edn, John Wiley & Sons, Milton, Queensland.

## REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Casteel, J 2003, *Oracle 9i developer: PL/SQL programming*, Thomson Course Technology, Australia.

Connolly, T & Begg, C 2005, *Database systems: a practical approach to design, implementation, and management*, 4th edn, Addison-Wesley, Boston, Massachusetts.

Morrison, J & Morrisson, M 2003, *A guide to Oracle 9i*, Thomson/Course Technology, Boston, Massachusetts.

Rob, P & Coronel, C 2007, *Database systems: design implementation and management*, 7th edn, Thomson/Course Technology, Boston, Massachusetts.

Sunderraman, R 2004, *Oracle8 programming: a primer*, 2nd edn, Addison-Wesley, Reading, Massachusetts.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Directed Study	56.00
Private Study	119.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	100.00	2.00	10 Aug 2008 (see note 1)
ASSIGNMENT 2	100.00	8.00	14 Sep 2008 (see note 2)
ASSIGNMENT 3	100.00	20.00	02 Nov 2008 (see note 3)
EXAM PART A (MULTI-CHOICE)	20.00	21.00	END S2 (see note 4)
EXAM PART B (WRITTEN)	80.00	49.00	END S2

### NOTES

1. Assignment 1 assesses Objectives 3, 5 and 6. It comprises an online multiple choice test.
2. Assignment 2 assesses Objectives 3, 5 and 6. It comprises an online multiple choice test.
3. Assignment 3 assesses 1 - 4, and 7. Assignments must be submitted electronically.
4. The examination assesses Objectives 1 and 3 - 7. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date for Exam (Parts A and B) after the timetable has been finalised. The total working time for Exam (Parts A and B) is 2 hours.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:

- If you are an international student in Australia, you are advised to attend all classes at your campus. For all other students, there are no attendance requirements for this course. However, it is the students' responsibility to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:  
To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)
  - 3 Penalties for late submission of required work:  
If students submit assignments after the due date without prior approval of the examiner, then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late up to ten working days at which time a mark of zero may be recorded. No assignments will be accepted after model answers have been posted. Model answers will be posted on the discussion group approximately ten days after the due date.
  - 4 Requirements for student to be awarded a passing grade in the course:  
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.
  - 5 Method used to combine assessment results to attain final grade:  
The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.
  - 6 Examination information:  
This is a closed examination. Candidates are allowed to bring only writing and drawing instruments into the examination. The examination consists of two parts. Part A is worth 30 marks and Part B is worth 70 marks.
  - 7 Examination period when Deferred/Supplementary examinations will be held:  
Any Deferred or Supplementary examinations for this course will be held during the next examination period.
  - 8 University Regulations:  
Students should read USQ Regulations 5.1 Definitions, 5.6 Assessment, and 5.10 Student Academic Misconduct for further information and to avoid actions which might contravene university regulations. These regulations can be found at <http://www.usq.edu.au/corporateservices/calendar/part5.htm>. Students should also read the Faculty of Business Policies and Procedures which can be found at <http://www.usq.edu.au/business/aboutfob.htm>.

## ASSESSMENT NOTES

- 1 Assignments: (i) The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the examiner. (ii) Students must retain a copy of each assignment submitted for assessment. This must be produced within 24 hours if required by the examiner. (iii) In accordance with university policy, the examiner may grant an extension of the due date of an assignment in extenuating circumstances. (iv) The examiner will normally only accept assessments that have been written, typed or printed on paper-based media. (v) Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the examiner to negotiate such special arrangements. (vi) In the event that a due date for an assignment falls on a local public holiday in their area, such as a

- show holiday, the due date for the assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the examiner's convenience.
- 2 Course weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper.
  - 3 Referencing in assignments: Unless otherwise directed by the examiner, all written and oral assignments submitted by students must conform to the guidelines laid out in the 'Communication skills handbook: how to succeed in written and oral communication'. Any work not prepared in accordance with these guidelines may be subject to penalty or requirement for resubmission.
  - 4 Make-up work: Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the examiner, a student will be able to achieve the remaining objectives of the course after a period of non-directed personal study.
  - 5 Deferred work: Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded: IDS (Incomplete - Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).

## **OTHER REQUIREMENTS**

- 1 E-mail and Internet access: Students require access to e-mail and Internet access to USQConnect for this course. Students also require a PC and Internet access for a connection to the USQ Oracle server. The PC should have the following specifications: Pentium 4 or above; 8 GB free disk space; 512 MB of memory, although 256 MB may be sufficient.
  - 2 Some study materials and important information about the course will be made available via the online discussion group. Students are therefore expected to access the discussion group regularly and read all postings.
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