

**FIT5059**  
**Advanced programming for database applications**

**Unit Guide**

**Summer semester, 2012**

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

*Last updated: 09 Nov 2012*

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# **FIT5059 Advanced programming for database applications - Summer semester, 2012**

This unit is designed for students who wish to extend their programming abilities in developing relatively large database applications. An integrated system of significant size will be developed using the current industry standard software. Topics covered include the principal aspects of database development and applications, advanced queries, customising forms and professional reporting, business graphics, importing and exporting data, internet applications, debugging and error-handling security and system documentation

## **Contact Hours**

2 hrs lectures/wk, 2 hrs laboratory/wk

## **Workload**

Students will be expected to spend a total of 36 hours per week during summer semester on this unit:

- Lectures: 6 hours per week
- Tutorials/Lab Sessions: 6 hours per week
- and up to an additional 24 hours in some weeks for completing lab and project work, private study and revision.

## **Unit Relationships**

### **Prohibitions**

BUS5410, BUS4410

### **Prerequisites**

([FIT9004](#) or [FIT9017](#)) and ([FIT9003](#) or [FIT9019](#))

Knowledge of relational database principles, including SQL.

### **Chief Examiner**

**Associate Professor David Taniar**

### **Campus Lecturer**

### **Caulfield**

**Kefeng Xuan**

## **Tutors**

### **Caulfield**

**Kefeng Xuan (Jason)**

# Academic Overview

## Outcomes

At the completion of this unit students will be able to:

- create a database system for practical application utilising forms, reports and graphics;
- understand the principal aspects of setting up a complete database application system;
- write complex queries using database query language;
- experience group work in building a complex database application system;
- produce a database system of professional quality.

## Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:
  - a. engage in an internationalised world
  - b. exhibit cross-cultural competence
  - c. demonstrate ethical values

critical and creative scholars who:

- a. produce innovative solutions to problems
- b. apply research skills to a range of challenges
- c. communicate perceptively and effectively

## Assessment Summary

Examination (3 hours): 60%; In-semester assessment: 40%

<b>Assessment Task</b>	<b>Value</b>	<b>Due Date</b>
Class Test	10%	Monday 3 December 2012
Assignment	30%	Friday 14 December 2012
Examination 1	60%	To be advised

## Teaching Approach

### Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

## Feedback

### Our feedback to You

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Solutions to tutes, labs and assignments

### Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through SETU, Student Evaluation of Teacher and Unit. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, and on student evaluations, see:  
<http://www.monash.edu.au/about/monash-directions/directions.html>  
<http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html>

### Previous Student Evaluations of this unit

Student feedback has shown this unit is well structured and no changes have been required for this semester.

If you wish to view how previous students rated this unit, please go to  
<https://emuapps.monash.edu.au/unitevaluations/index.jsp>

### Required Resources

Please check with your lecturer before purchasing any Required Resources. Limited copies of prescribed texts are available for you to borrow in the library, and prescribed software is available in student labs.

#### You will need access to:

- Oracle Developer Suite (Form Builder)
- Oracle SQLPlus\*

These are freely available to download from the following web addresses:

1. Oracle Database 10g Release 2 (10.2.0.4.0) Enterprise/Standard Edition  
<http://www.oracle.com/technetwork/database/10204-winx64-vista-win2k8-082253.html>

2. Oracle Developer Suite 10g (10.1.2.0.2)  
<http://www.oracle.com/technology/software/products/ids/index.html>

## Unit Schedule

Week	Activities	Assessment
0	Before You Start, install required software (Please visit Study Guide 0 for software installation)	No formal assessment or activities are undertaken in week 0
1	Topic 1 - SQL and Oracle Form Introduction	
2	Topic 2 - Data Block Forms (Basic)	
3	Topic 2 - Data Block Forms (Advanced)	
4	Topic 3 - PL/SQL Programming (Basic)	
5	Topic 3 - PL/SQL Programming (Advanced)	
6	Topic 4 - Custom Form (Basic)	
7	Topic 4 - Custom Form (Multiple Form)	Assessment Task 1: Class Test on Monday 3 December 2012
8	Topic 5 - Custom Forms (Tab Canvas)	
9	Topic 6 - Property Palette	
10	Topic 7 - Pictures and Java Beans	
11	Topic 8 - Stacked Canvas and Menus	
12	Application Integration	Assessment Task 2: Assignment due Friday 14 December 2012
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: <a href="http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html">http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html</a>

\*Unit Schedule details will be maintained and communicated to you via your learning system.

# Assessment Requirements

## Assessment Policy

Faculty Policy - Unit Assessment Hurdles

(<http://www.infotech.monash.edu.au/resources/staff/edgov/policies/assessment-examinations/unit-assessment-hu>)

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at

<http://lib.monash.edu/tutorials/citing/>

## Assessment Tasks

### Participation

- **Assessment task 1**

**Title:**

Class Test

**Description:**

Class Test

**Weighting:**

10%

**Criteria for assessment:**

1. Understanding of SQL and PL/SQL
2. Use of data block forms and custom forms

**Due date:**

Monday 3 December 2012

- **Assessment task 2**

**Title:**

Assignment

**Description:**

Oracle Form Builder

**Weighting:**

30%

**Criteria for assessment:**

1. Completeness of each sub-system.
2. Correctness of each the sub-system.
3. Testing results.
4. Technical requirements of the system specified in the assignment specification.

**Due date:**

Friday 14 December 2012

## Examinations



## Assessment Requirements

### • Examination 1

**Weighting:**

60%

**Length:**

3 hours

**Type (open/closed book):**

Closed book

**Electronic devices allowed in the exam:**

None

## Assignment submission

It is a University requirement

(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html>) for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at <http://www.infotech.monash.edu.au/resources/student/forms/>. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an online quiz).

## Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.

## Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process:

<http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html>.

## Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

## Other Information

### Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:

<http://policy.monash.edu.au/policy-bank/academic/education/index.html>

Key educational policies include:

- Plagiarism  
(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html>)
- Assessment  
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-p>)
- Special Consideration  
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.h>)
- Grading Scale  
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html>)
- Discipline: Student Policy  
(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html>)
- Academic Calendar and Semesters (<http://www.monash.edu.au/students/key-dates/>);
- Orientation and Transition (<http://www.infotech.monash.edu.au/resources/student/orientation/>);  
and
- Academic and Administrative Complaints and Grievances Policy  
(<http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy>)
- Codes of Practice for Teaching and Learning  
(<http://www.policy.monash.edu.au/policy-bank/academic/education/conduct/suppdocs/code-of-practice-tea>)

### Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at [www.monash.edu.au/students](http://www.monash.edu.au/students). For Sunway see <http://www.monash.edu.my/Student-services>, and for South Africa see <http://www.monash.ac.za/current/>

The Monash University Library provides a range of services and resources that enable you to save time and be more effective in your learning and research. Go to <http://www.lib.monash.edu.au> or the library tab in my.monash portal for more information. At Sunway, visit the Library and Learning Commons at <http://www.lib.monash.edu.my/>. At South Africa visit <http://www.lib.monash.ac.za/>.

Academic support services may be available for students who have a disability or medical condition. Registration with the Disability Liaison Unit is required. Further information is available as follows:

- Website: <http://monash.edu/equity-diversity/disability/index.html>;
- Email: [dlu@monash.edu](mailto:dlu@monash.edu)
- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus
- Telephone: 03 9905 5704, or contact the Student Advisor, Student Community Services at 03 55146018 at Sunway

Other Information

## **Reading list**

Morrison, J. and Morrison, M. (2005). Guide to Oracle 10g, Fifth Edition, Cengage Learning, ISBN: 0619216298

Oracle Form Development for Database Applications, by Taniar & Lim, Publisher: Rinton Press, USA, ISBN 1-58949-055-X