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FIT9019 Database technology - Semester 2, 2012


Mode of Delivery

Caulfield (Day)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload

Students will be expected to spend a total of 12 hours per week during semester on this unit as follows:

Lectures: 2 hours per week
Tutorials/Lab Sessions: 2 hours per week per tutorial

and up to an additional 8 hours in some weeks for completing lab and project work, private study and revision.

Unit Relationships

Prohibitions

CSE9002

Chief Examiner

Dr Maria Indrawan-Santiago

Campus Lecturer

Caulfield

Dr. Maria Indrawan-Santiago
Tutors

Caulfield

Manoj Kathpalia
Academic Overview

Outcomes

At the completion of this unit students will:

• understand the motivations behind the development of database management systems;
• appreciate the underlying theoretical basis of the relational database model and how this model may be implemented in practice;
• understand the differences between non-relational database models and the relational database mode;
• be able to apply logical and physical database design principles to a database implementation;
• be conversant with Structured Query Language (SQL);
• understand the processes involved in database administration, transaction management, concurrency control, restart and recovery.

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 (2 hours): 65%; In-semester assessment: 35%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 - Data Modelling</td>
<td>20%</td>
<td>7 September 2012, 3pm</td>
</tr>
<tr>
<td>Assignment 2 - SQL</td>
<td>15%</td>
<td>12 October 2012, 3pm</td>
</tr>
<tr>
<td>Examination 1</td>
<td>65%</td>
<td>To be advised</td>
</tr>
</tbody>
</table>

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
- Interviews

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.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this unit

Previous student feedback has highlighted the following strengths in this unit:

- meeting its specified objectives
- providing useful feedback to students
- intellectually stimulating

If you wish to view how previous students rated this unit, please go to

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.

Acrobat Reader is required to view study materials. It is freely available from:
http://get.adobe.com/uk/reader/

Recommended text(s)


# Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Please register in Allocate+ for your tutorials</td>
<td>No formal assessment or activities are undertaken in week 0</td>
</tr>
<tr>
<td>1</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Relational Data Model</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Database Design 1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Database Design 2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Database Design 3/SQL 1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>SQL 2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>SQL 3</td>
<td>Assignment 1 due 7 September 2012, 3pm</td>
</tr>
<tr>
<td>8</td>
<td>Physical Database Design 1</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Physical Database Design 2</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Database Security, Concurrency &amp; Recovery</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Advanced Database Topics</td>
<td>Assignment 2 due 12 October 2012, 3pm</td>
</tr>
<tr>
<td>12</td>
<td>Latest development in database industry and research</td>
<td>No formal assessment is undertaken in SWOT VAC</td>
</tr>
<tr>
<td></td>
<td>Examination period</td>
<td></td>
</tr>
</tbody>
</table>

*Unit Schedule details will be maintained and communicated to you via your MUSO (Blackboard or Moodle) 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-hurdles.html)

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at http://lib.monash.edu/tutorials/citing/

Assessment Tasks

Participation

• Assessment task 1

  Title: Assignment 1 - Data Modelling
  Description: Students will be provided with a case study and will have to perform the Entity Relationship modelling and the normalisation process.
  Weighting: 20%
  Criteria for assessment:
  1. Quality of the benefits of database approach to the management of data.
  2. Correctness and quality of database design. This should support the business requirements outlined in the case study.
  3. Correctness of the normalisation process.
  4. Correctness of the Database Design Language (DBDL) for the normalised relations.
  Due date: 7 September 2012, 3pm

• Assessment task 2

  Title: Assignment 2 - SQL
  Description: Students will be provided with a set of relations and will have to create the database using Oracle software and develop a set of SQL queries.
  Weighting: 15%
  Criteria for assessment:
  1. Correctness of any changes made to the relations provided to accommodate the business requirements.
  2. Correctness of the data used to populate the tables.
  3. Correctness and quality of SQL commands to implement the queries identified. These will be assessed as to whether the output of the commands answers the business queries asked.
  4. Use of any Oracle features with justification in the implementation.
  Due date: 12 October 2012, 3pm
Examinations

- Examination 1

  Weighting: 65%
  Length: 2 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 VLE site 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.


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)
- Special Consideration (http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html)
- 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/)
- Codes of Practice for Teaching and Learning (http://www.policy.monash.edu/policy-bank/academic/education/conduct/suppdocs/code-of-practice-teaching-and-learning.html)

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. 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
- 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