GENERAL INFORMATION

Subject Coordinator
Dr Janusz Getta
Telephone Number: 02 4221 4339
Email: jrg@uow.edu.au
Location: 3.210

Dr Getta’s Consultation Times During Session
Day          Time
Monday 3.30 pm – 5.30 pm
Wednesday 10.30 am – 12.30 pm

Subject Organisation
Session: Spring Session, Wollongong
Credit Points: 6
Contact hours per week: 3 hours Lecture, 2 hours Comp Lab
Lecture Times & Location: Mon 13:30 -15:30 38.G01
Tue 11:30 -12:30 20.3

Tutorial Day, Time and Location can be found at: http://www.uow.edu.au/student/sols/timetables/index.html

Students should check the subject’s web site regularly as important information, including details of unavoidable changes in assessment requirements will be posted from time to time. Any information posted to the web site is deemed to have been notified to all students.

Content
This subject investigates three major areas of modern database systems:

1. design of relational databases
2. programming of relational databases
3. concurrency control and data recovery in database systems

Topics will include: Introduction to conceptual database modelling; Principles of relational database model; Structured Query Language (SQL) and its procedural extensions (PL/SQL, Embedded SQL, JDBC); Database server programming; Normalisation of relational databases; and Transaction management and recovery in database systems

Objectives
A student who successfully completes this subject should be able to:
(i) explain the principles of relational database model,
(ii) design and implement a simple relational database,
(iii) use a number of software tools to implement database applications,
(iv) program a relational database server,
(vi) normalise a relational database,
(vi) explain the principles of distributed databases and design a distributed database,
(vii) explain the principles of transaction management and database recovery mechanisms
**Attendance Requirements**

It is the responsibility of students to attend all lectures/tutorials/labs/seminars/practical work for subjects for which you are enrolled.

It should be noted that the amount of time spent on each 6 credit point subject should be at least 12 hours per week, which includes lectures/tutorials/labs etc.

Satisfactory attendance is deemed to be attendance at approximately 80%* of the allocated contact hours. Attendance rolls may be kept for lectures, **TUTORIALS** and laboratories. If you are present for less than 80%* you need to apply for special consideration, otherwise a fail grade may be recorded.

Students MUST attend their **allocated** tutorial unless they have the written permission of the subject coordinator.

**Method of Presentation**

This subject comprises of 3 hours lectures and 2 hours of computer labs.

**Lecture Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assessment Tasks Due</th>
<th>Comments</th>
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</thead>
</table>
| 1    | Course information: Database Management Systems (DBMS) what is it and why do we need it?  
Database design: conceptual modeling. | Assignment 1 release date: 30 July 2007 | |
| 2    | Database design: conceptual modeling (cont.) relational database model, logical modeling. | | Laboratory classes commence |
| 3    | SQL: Data definition statements, data entry statements, data manipulation statements. | Assignment 1 deadline date: 20 August 2007, 5.00 pm  
Assignment 2 release date: 21 August 2007 | |
| 4    | SQL: Queries | | |
| 5    | SQL: Queries [cont.], relational views, | Assignment 2 deadline date: 17 September 2007, 5.00 pm  
Assignment 3 release date: 18 September 2007 | |
| 6    | Indexing: Data definition statements  
System Catalog: Database repositories | | |
| 7    | PL/SQL: data structures, control structures | | |
| 8    | PL/SQL: programming with cursors  
Embedded SQL: SQL+ C/C++ | | |
| 9    | JDBC: SQL + Java  
Database applications: simple HTML interfaces | Assignment 3 deadline date: 15 October 2007, 5.00 pm | Class test date: 8 October 2007, 1.30-3.30pm, in 38.G01 |
| 10   | Database design: anomalies, functional dependencies, normal forms | | |
| 11   | Database design: database design based on data dependencies | | |
| 12   | Concurrency control in database systems: database transactions, serializability, 2 phase locking protocol, optimistic protocols, isolation levels | | |
| 13   | Summary | | |

**Subject Materials**

**Textbooks:**

This subject outline can be found at [http://www.itacs.uow.edu.au/current/subject_outlines](http://www.itacs.uow.edu.au/current/subject_outlines)

**Equivalent textbooks** (in the alphabetical order):


**SQL textbooks** (in the increasing order of complexity and sophistication):


Oracle DBMS textbooks available on Safari Bookshelf (O’Reilly Network), access through a link to Proquest Safari website

All other materials available on e-Learning.

These readings/references are recommended only and are not intended to be an exhaustive list. Students are encouraged to use the library catalogue and databases to locate additional readings.

**Assessment**

This subject has the following assessment components.

<table>
<thead>
<tr>
<th>Assessment Items &amp; Format</th>
<th>Percentage of Final Mark</th>
<th>Due Date</th>
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</thead>
</table>
| Assignment 1             | 6%                       | Released: 30 July 2007  
                          |                          | Due: 20 August 2007, 5.00 pm |
| The tasks of this assignment include: conceptual modeling, logical database design, application of CASE system to logical database design, data definition and data manipulation statements of SQL.  
| Submission format:       |                          |                      |
|                          | hardcopy                 |                      |
| Assignment 2             | 8%                       | Released: 21 August 2007  
                          |                          | Due: 17 September 2007, 5.00 pm |
| The tasks of this assignment include: construction of queries in SQL, advanced data definition and data manipulation statements of SQL, creating relational views, indexing relational tables, accessing data dictionary, and elementary programming in PL/SQL.  
| Submission format:       |                          |                      |
|                          | hardcopy                 |                      |
| Assignment 3             | 6%                       | Released: 18 September 2007  
                          |                          | Due: 15 October 2007, 5.00 pm |
| The tasks of this assignment include: advance programming in PL/SQL (stored functions and stored procedures, using cursors), Embedded SQL programming, JDBC programming and implementation of simple HTML based database.
Submission format: hardcopy

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<tr>
<th>Class test</th>
<th>20%</th>
<th>Week 11, 8 October, 1.30pm – 3.30 pm in 38.G01</th>
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</thead>
<tbody>
<tr>
<td>Covers Assignment 1 and Assignment 2</td>
<td>20%</td>
<td>Week 11, 8 October, 1.30pm – 3.30 pm in 38.G01</td>
</tr>
<tr>
<td>Final Examination</td>
<td>60%</td>
<td>Examination Period</td>
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Notes on Assessment
All assignments are expected to be completed independently. Plagiarism may result in a FAIL grade being recorded for that assignment.

Submission of Assessment Items
Assignments are to be submitted personelly to your lecturer or tutor. The students are allowed to submit assignments during the lecturer's office hours (in bldg 3 Level 2 room 210), or during 10 minutes break between the lecture classes on Monday or Tuesday (in a lecture hall), during the laboratory classes (in a laboratory room), or during an assignment submission session 1.5 hour before the assignment deadline. All submissions must be accompanied by a standard Assignment Cover Sheet available from the School office. No assignments will be accepted without Assignment Cover Sheet. The students must collect a submission receipt signed by a lecturer. All assignments that do not satisfy the submission requirements listed above will not be evaluated and will be returned to the students during the next lab class with mark 0.0. All assignments must be submitted as hard copy only. No part of an assignment will be accepted as electronic mail or fax.

Return of Assessment Items
The annotated copies of evaluated assignments will be personelly returned to the students after one week from the respective submission date. The assignments may be collected by the students during the laboratory classes or during the lecturer’s office hours. The enquiries about the assignment marks can only be made to the tutors during laboratory class times or to the lecturer during the lecturer’s office hours. The enquiries about the assignment marks can only be made in a period of time of maximum 1 week after the evaluated copies of assignment are handed out. After 1 week of “enquiry period”, no more marks will be changed. The assignment marks will be available on SOLS on the assignment return day.

Penalties for late submission of Assessment Items
Penalties apply to all late work, except if special consideration has been granted. Late submissions will attract a penalty of 25% of the assessment mark per day including weekends. Work more than 4 days late will be awarded a mark of zero.

Electronic release of Assessment Items
Specifications of all assignments will be released in electronic format ONLY. There will be NO printed hardcopies distributed during lecture or lab classes. The students will collect the electronic copies of specifications on E-Learning. Only one submission is accepted for each assignment. Therefore, make sure that you are really happy with your assignment before submission.

Class test
The written class test will be held in Week 11, Monday, 8 October, from 1.30 pm to 3.30pm in 38.G01. The class test is worth 20% towards the final marks. The class test will cover a scope of Assignment 1 and Assignment 2.

Remarks on Assessment
(a) As assignments are to assess a student's understanding of course material, each assignment must be solved using only material covered up to that point in the course (unless otherwise stated in the question).
(b) Students who copy an assignment will receive zero for that assignment. This also covers assignments which may be the product of community effort by several students. Working together is acceptable, but the final assignment must be the work of the individual student, as assessment is a measure of your ability.
(c) Programs that do not compile due to the syntax errors will receive no marks, and may still be commented upon. Proper documentation and program style are needed in the assignments to receive the full marks.
(d) The specifications of assignments and sample solutions will be available on E-Learning.
Special consideration
The School recognises that it has a responsibility to ensure equity and consistency across its subjects for all students. Sometimes, in exceptional circumstances, students need to apply for special consideration in order to complete all assessable work. The University applies strict criteria to the granting of special consideration. Before applying for special consideration students should carefully read the University’s policy. The policy can be found at: http://www.uow.edu.au/handbook/courserules/specialconsideration.html

As an example: If a student requires an extension of time for the completion of an assignment this may be granted in certain circumstances. A request for an extension must be made to the Subject Coordinator via SOLs before the due date.

Scaling
Final results in this subject may be scaled. The scaling method that will be used in this subject is as follows.

If $E$ is the student exam mark, and $A$ is the student assignment mark, the student final mark will be determined as follows:

- if $E \geq 40\%$ of the maximum exam mark: then student final mark is $E + A$;
- if $35\% \leq E < 40\%$ of the maximum exam mark: then student final mark is $\text{minimum}\{E+A, 47\}$
- if $E < 35\%$ of the maximum exam mark: then student final mark is $\text{minimum}\{E+A, 43\}$

Additional Information
Students must refer to the Faculty Handbook or online references which contains a range of policies on educational issues and student matters.

Supplementary Exams
Supplementary Exams will be dealt with in accordance with Special Consideration Policy (http://www.uow.edu.au/handbook/courserules/specialconsideration.html ) 6.2 Timing of Supplementary Exams.

While the School normally grants supplementary exams when the student does not sit the standard exam for an acceptable reason, each case will be assessed on its own merit and there is no guarantee a supplementary exam will be granted. If a supplementary exam is granted you will normally be notified via SOLs Mail the time and date of this supplementary exam. You must follow the instructions given in the email message.

Please note that if this is your last session and you are granted a supplementary exam, be aware that your results will not be processed in time to meet the graduation deadline.

Plagiarism
When you submit an assessment task, you are declaring the following

1. It is your own work and you did not collaborate with or copy from others.
2. You have read and understand your responsibilities under the University of Wollongong's policy on plagiarism.
3. You have not plagiarised from published work (including the internet). Where you have used the work from others, you have referenced it in the text and provided a reference list at the end of the assignment.
4. Plagiarism will not be tolerated.
5. Students are responsible for submitting original work for assessment, without plagiarising or cheating, abiding by the University’s policies on Plagiarism as set out in the Calendar under University Policies, and in Faculty handbooks and subject guides. Plagiarism has led to the expulsion from the University.

Student Academic Grievance Policy
The School aims to provide a fair, equitable and productive learning environment for all its students. The Student Academic Grievance Policy seeks to support the achievement of this goal by providing a transparent and consistent process for resolving student academic grievances.

Any student who has a grievance over a result should obtain a Faculty of Informatics Appeal Against Decision or Action Affecting Academic Experience form from the Informatics Student Enquiry Centre or http://www.uow.edu.au/content/groups/public/@web/@inf/@faculty/documents/doc/uow017433.pdf. The student should firstly take the form to the marker/lecturer to discuss the matter and, if the student is still not satisfied, s/he
should take the next step as outlined on the form.

Once the grievance has been considered by the Faculty, if the student still feels the situation has not been fully resolved s/he may consult the Dean of Students. However, the Dean of Students can have no input into the academic judgement of the lecturer and can only review the grievance to ensure proper procedure has been followed.

For more information, please consult the UOW policy in full at http://www.uow.edu.au/handbook/courserules/studacgrievpol.html

This outline should be read in conjunction with the following documents:

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<th>Code of Practice - Teaching and Assessment</th>
<th>Key Dates</th>
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<tr>
<th>Code of Practice - Students</th>
<th>Information Literacies Introduction Program</th>
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<tr>
<th>Acknowledgement Practice Plagiarism will not be tolerated</th>
<th>Student Support Services:</th>
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<tr>
<th>Code of Practice-Honours</th>
<th>Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, <a href="mailto:ameldrum@uow.edu.au">ameldrum@uow.edu.au</a></th>
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<th>Non-Discriminatory Language Practice and Presentation</th>
<th>Intellectual Property Policy</th>
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<th>Occupational Health and Safety</th>
<th>SCSSE SISAT Internet Access &amp; Student Resource Centre</th>
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<tr>
<th>SCSSE SISAT Student Guide</th>
<th>SCSSE SISAT Subject Outlines</th>
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