

FIT5093
Business intelligence applications

Unit guide

Semester 2, 2008

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FIT5093 Business intelligence applications - Semester 2 , 2008

Unit leader :

Lecturer(s) :

Caulfield

- Peter O'Donnell

Tutors(s) :

Caulfield

- Jacob Zhivov
- Rattanan Nantiyakul
- Pamela Spink
- Manoj Kathpalia

Introduction

Welcome to FIT5093 Business Intelligence Applications for semester 2, 2008. This 6 point unit forms a part of the Business Intelligence stream within the Master of Information Management and Systems degree but can be taken as an elective unit in any Faculty of Information Technology Master's level degree. The unit occasionally attracts students from other Faculties as well - most notably Business. The unit fits nicely with the other units - esp. data warehousing - from the Business Intelligence stream but is also intended to stand on its own.

Unit synopsis

ASCED code: 020307 Decision Support Systems

This subject provides students with an understanding of the nature of OLAP-based systems and the issues that need to be considered in their development. Topics include the definitions of on-line analytical processing (OLAP), business intelligence (BI); initiating a BI project; eliciting information requirements (Critical Success Factor (CSF) approach, Strategic Business Functions (SBF) approach, the Balanced Scorecard approach); OLAP architecture; Data Management (including the relationship of the BI system to the data warehouse), BI development methodologies, BI design issues (including interface design); Change management and organisational issues. Case studies and OLAP tools will also be used for practical work.

Learning outcomes

Knowledge and Understanding

At the conclusion of FIT5093 students will:

1. Understand the scope and application of OLAP technology and business intelligence systems;
2. Have knowledge of the major approaches to the development of business intelligence and reporting systems;
3. Be able to design simple multi-dimensional databases;
4. Be able to develop a simple business intelligence system using an OLAP tool;
5. Be able to develop a simple reporting system;
6. Be able to communicate and foster realistic expectations of the role of OLAP technology and business intelligence systems in management and decision support.

Workload

For on campus students, workload commitments are:

- two-hour lecture and
- one-hour tutorial (held in a computer laboratory) (requiring advance preparation)
- a minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.
- You will need to allocate up to 5 hours per week in some weeks, for use of a computer, including time for discussion groups, tutorial and assignment work..

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed FIT9003, or equivalent.

Relationships

FIT5093 is a unit in the business intelligence track of the Master of Information Management and System and the Master of Business Systems degrees. The unit is available as an elective unit in all FIT masters and also as an elective unit in the Master of Business (IT Management)

You may not study this unit and IMS5004 in your degree.

Continuous improvement

Monash is committed to 'Excellence in education' and strives for the highest possible quality in teaching and learning. To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. Two of the formal ways that you are invited to provide feedback are through Unit Evaluations and through Monquest Teaching Evaluations.

One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. It is Monash policy for every unit offered to be evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Student Evaluations

The Faculty of IT administers the Unit Evaluation surveys online through the my.monash portal, although for some smaller classes there may be alternative evaluations conducted in class.

If you wish to view how previous students rated this unit, please go to <http://www.monash.edu.au/unit-evaluation-reports/>

Over the past few years the Faculty of Information Technology has made a number of improvements to its courses as a result of unit evaluation feedback. Some of these include systematic analysis and planning of unit improvements, and consistent assignment return guidelines.

Monquest Teaching Evaluation surveys may be used by some of your academic staff this semester. They are administered by the Centre for Higher Education Quality (CHEQ) and may be completed in class with a facilitator or on-line through the my.monash portal. The data provided to lecturers is completely anonymous. Monquest surveys provide academic staff with evidence of the effectiveness of their teaching and identify areas for improvement. Individual Monquest reports are confidential, however, you can see the summary results of Monquest evaluations for 2006 at <http://www.adm.monash.edu.au/cheq/evaluations/monquest/profiles/index.html>

Improvements to this unit

The unit is well established. There are no major changes - other than updates of the content where appropriate - planned this year. Student (and staff) evaluations of the unit have in the past been very positive.

Unit staff - contact details

Unit leader

None provided

Lecturer(s) :

Mr Peter O'Donnell

Lecturer

Phone +61 3 990 32502

Tutor(s) :

Mr Jacob Zhivov

Mr Manoj Kathpalia

Mrs Pamela Spink

Rattanan Nantiyakul

Additional communication information

Outside the scheduled class contact hours you can contact teaching staff by email, by phone, or during their consultation hours or by making an appointment. The "staff" page on the Moodle-based unit web site contains staff contact details including their consultation hours.

If you need a staff member urgently and are unable to contact them, please contact Caulfield School of IT service desk, Level 6 – Building H, Ph: 9903 2535.

Many of the staff involved in teaching this unit (including the unit leader, Peter O'Donnell) are active bloggers, and maintain an active presence on Facebook and Twitter. Again, see the "staff" page on the Moodle-based unit for details.

Teaching and learning method

Teaching strategies will include lectures, laboratory-based tutorials, assignment work, reading exercises and guest lectures (given by practitioners).

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Unit Schedule

Week	Topic	References/Readings	Key dates
1	Introduction to the unit; introduction to business intelligence applications	See the unit web site for weekly readings	
2	The nature of business intelligence applications		
3	Business intelligence case studies (I)		
4	Methods of business intelligence application development		
5	Business intelligence technology		
6	Multi-dimensional modelling (I)		
7	Multi-dimensional modelling (II)		
8	Business performance measurement (I)		
9	Business performance measurement (II)		
10	Designing business intelligence application user interfaces		Submission of draft assignment 1 will be encouraged by this date.
11	Business intelligence case studies (II)		
Mid semester break			
12	Unit review; The future of business intelligence applications		Assignment 1 and 2 due
13	Business performance measurement (III) - guest lecturer		

Unit Resources

Prescribed text(s) and readings

There is no prescribed text.

Recommended text(s) and readings

Extensive reading will be made available to students using the library's digital scanning service and has been posted on the unit website. Useful texts include:

Eckerson, W (2006) *Performance Dashboards: Measuring, Monitoring, and Managing Your Business* Wiley.

Thomsen, E. (2002). *OLAP Solutions: Building Multidimensional Information Systems* (2nd Ed.). Wiley.

Parmenter, D. (2007) *Key Performance Indicators (KPI): Developing, Implementing, and Using Winning KPIs* Wiley.

Vitt ,E., Luckevich, M. & Misner, S. (2002). *Business Intelligence*. Microsoft Press.

Required software and/or hardware

The unit will make extensive use of a wide variety of OLAP and business intelligence software packages including Microsoft Excel, Crystal Reports, Crystal Xcelsius and Radius90. The main tool that will be used is Microsoft SQL Server Analysis Services 2005. This product is installed in the computer laboratories we will be using, and is available for loan under a licence agreement from Microsoft - so that students can install a copy on their personal computer for use on assignment and tutorial work.

Equipment and consumables required or provided

Students studying off-campus are required to have the minimum system configuration specified by the Faculty as a condition of accepting admission, and regular Internet access. On-campus students, and those studying at supported study locations may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to 6 hours per week for use of a computer, including time for newsgroups/discussion groups.

Study resources

Study resources we will provide for your study are:

Study resources we will provide for your study are:

- Copies of the weekly lecture slides;
- Additional readings for each week's lecture;
- Weekly laboratory exercises which will help build the practical skills and knowledge required to complete the assignment work;
- Assignment specifications and sample solutions;
- Access to past examination papers;
- Discussion groups on the Moodle-based unit web site;
- A unit podcast featuring lecture and tutorial recordings and interviews with industry practitioners;
- This Unit Guide outlining the administrative information for the unit;

- The unit web site on Moodle, where resources outlined above will be made available.

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to <http://www.lib.monash.edu.au>. Be sure to obtain a copy of the Library Guide, and if necessary, the instructions for remote access from the library website.

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (<http://moodle.monash.edu.au>) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: <http://my.monash.edu.au>

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

For more information, please visit: <http://www.monash.edu.au/muso/support/students/downloadables-student.html>

You can contact the MUSO Support by: Phone: (+61 3) 9903 1268

For further contact information including operational hours, please visit:

<http://www.monash.edu.au/muso/support/students/contact.html>

Further information can be obtained from the MUSO support site:

<http://www.monash.edu.au/muso/support/index.html>

Assessment

Unit assessment policy

To pass this unit, a student must obtain :

- 40% or more in the unit's examination and
- 40% or more in the unit's non-examination assessment
and
- an overall unit mark of 50% or more

If a student does not achieve 40% or more in the unit examination or the unit non-examination assessment then a mark of no greater than 44-N will be recorded for the unit.

Assignment tasks

• Assignment Task

Title : Specification of a Business Intelligence application

Description :

Assignment 1 involves the development of a specification of a businessintelligence prototype system. A prototype system, based on this specification, will be constructed in assignment 2.

The Moodle-based unit web site contains details of the required submission and the case study the assignment work will be based on.

Weighting : 25%

Criteria for assessment :

See the Moodle-based unit web site for details.

Due date : End of week 12.

• Assignment Task

Title : Business Intelligence application (prototype system).

Description :

Assignment 2 involves the construction of a working business intelligence prototype system. The system will be specified in assignment 1.

The Moodle-based unit web site contains details of the required submission and the case study the assignment work will be based on.

Weighting : 25%

Criteria for assessment :

See the Moodle-based unit web site for details.

Due date : End of week 12.

• **Assignment Task**

Title : Reflective blog posts

Description :

Each student is invited to keep a reflective journal on the either the Moodle-based unit web site or using the www.blogger.com system. This blog will provide the opportunity to reflect on the learning that takes place throughout the unit. Each week you will be able to make a new posting to your blog. The blog entries should include a reflection on what has happened in terms of your progress on assignment and tutorial work, your management of the assignment project and its tasks, what lessons have been learned to date and what you (and the staff) could do differently.

To obtain the 3% bonus mark for this task you must complete a minimum of 10 weekly blog entries during the semester. Each blog post will be read and assessed by the chief examiner. To get the 3% bonus 6 of these posts should be assessed as "satisfactory".

The 3% bonus will be added to the assignment component of the mark available for the unit. Note that that component cannot exceed 50%. So, for example, a student who obtained 46/40 for their assignment work who earns the bonus will get 49%. While a student who got 49/50 would get 50/50 - the maximum available - if they earned the bonus.

For more details, please refer to the Moodle-based unit web site.

Weighting : Bonus of 3% added to overall assignment mark.

Criteria for assessment :

For more details, please refer to the Moodle-based unit web site.

Due date : Your last blog entry can be made anytime before the exam.

Examinations

• **Examination**

Weighting : 50%

Length : 3 hours

Type (open/closed book) : Closed book

Remarks (optional - leave blank for none) :

The exam will be scheduled by the central Monash exams branch during the normal examination period at the end of the semester.

Assignment submission

Assignments will be submitted by electronic submission via the Moodle-based unit web site. The due date is the date by which the submission must be received/the date by which the the submission is to be posted.

Assignment coversheets

Assignment coversheets must be attached to the on-line assignment submissions. Please see the Moodle-based uni wbe site for details.

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Requests for extensions must be made to the unit lecturer at your campus at least two days before the due date. You will be asked to forward original medical certificates in cases of illness, and may be asked to provide other forms of documentation where necessary. A copy of the email or other written communication of an extension must be attached to the assignment submission.

Late assignment

Assignments received after the due date will be subject to a penalty of 5% per day, including weekends. Assignments received later than one week (seven days) after the due date will not normally be accepted. In some cases, this period may be shorter if there is a need to release sample solutions.

Return dates

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

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at <http://www.policy.monash.edu/policy-bank/academic/education/assessment/>

We will aim to have assignment results made available to you within two weeks after assignment receipt.

Students will be encouraged to seek feedback on their progress on assignment work during the semester - this feedback will be given (where possible) at the time the feedback is sought.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with Student Rights and Responsibilities (<http://www.infotech.monash.edu.au/about/committees-groups/facboard/policies/studrights.html>) and the Faculty regulations that apply to students detected cheating as these will be applied in all detected cases.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to

jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- [Disabilities Liaison Unit](#)

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at <http://www.monash.edu.au/exams/special-consideration.html>. Contact the Faculty's Student Services staff at your

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campus for further information and advice.