Unit Outline

Marketing Information Systems

INMT3315

Semester 1, 2009

Unit Coordinator: Peter Goldschmidt*

http://webct6.uwa.edu.au

The significant contributions of Christina Kum, Dr. Nick Letch, Mr Brett Smith, Prof. Arno Scharl and Ms Carmel McGinely in the preparation of these materials are greatly acknowledged.

Business School

www.business.uwa.edu.au
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UNIT DESCRIPTION

Introduction

Welcome to Marketing Information Systems 3315!

This unit focuses on how new information technologies are changing the nature of marketing management. It specifically addresses foundations of electronic customer relationship management, one-to-one marketing and personalised communication. From an applied perspective, the unit explores how state-of-the-art Web technologies, point of sale data gathering and electronic market research can improve decision-making and provide a competitive advantage in global markets.

Students should note that this unit entails a major project and involves substantial reading and preparation for tutorials. While the block teaching sessions and readings provide the background theory, the learning experience is also in your hands. Contribution and effort are critical to learning in this course.

Unit content

Specific outline outcomes

This unit is designed to provide students with learning outcome across three inter-related topics:

1. Marketing Decision Making and Analysis

Marketing managers are constantly faced with making decisions about products, customers, promotions, pricing, campaign management, sales, competitors and more. All these decisions require analysis of data and information that is available both within and external to the organisation. This topic examines typical marketing decision making activities and the underlying data that is required to support informed decisions. On the competition of this unit student should be able to identify sources of data required to support a range of marketing decisions and apply suitable analytical techniques.

Specific learning outcomes include:

• Apply techniques and decision models to customer data to support marketing decisions.

• Identify sources of customer data

• Select appropriate data mining techniques

• Integrate IS into the marketing function
2. Marketing Information Systems Applications

Applications of information technology are critical to support marketing decision making. A wide range of software applications and alternative IT infrastructure designs can be deployed by organisations to capture, process, analyse, report and drive marketing activities. This topic examines information systems that support a variety of marketing functions and the costs and benefits associated with them. On completion of this unit, students will be familiar with the nature and use of marketing IS applications.

Specific learning outcomes include:

- Use Ms-Access to report on customer data
- Develop SQL to retrieve data and generate sales and marketing reports
- Learn to use Business Intelligence software independently
- Evaluate CRM software packages

3. Marketing IS Design and Development

In order for marketing information systems to be effective, they need to be designed, deployed and used so that they integrate not only with the organisation’s marketing function, but also with the information systems of the wider organisation. This topic examines the techniques and tools underlying the design and development of information systems that support marketing. On completion of this unit, students will be able to contribute to the successful deployment of information systems that support marketing.

Specific learning outcomes include:

- Determine appropriate architecture for OLAP
- Model data for retrieval from a data warehouse
- Use a methodology to guide the application of data mining techniques and tools to customer data
- Develop strategies for CRM implementation
- Implement processes for preparing data for loading into a data warehouse
Generic learning outcomes

In completing this unit, you will be provided with the opportunity to further develop the following skills:

1. Problem solving and critical thinking skills will be fostered in tutorials;
2. Verbal and written communication skills will be developed via the assignments and participation in tutorials;
3. The ability to effectively use marketing oriented software
4. Research skills will be enhanced through gathering and analysing empirical data, and through sourcing research articles to support your arguments in written assignments.
Contact details

<table>
<thead>
<tr>
<th>Unit contact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit coordinator/ Lecturer / Tutor</strong></td>
</tr>
<tr>
<td><strong>name:</strong> Peter Goldschmidt</td>
</tr>
<tr>
<td><strong>email:</strong> <a href="mailto:Peter.Goldschmidt@uwa.edu.au">Peter.Goldschmidt@uwa.edu.au</a></td>
</tr>
<tr>
<td><strong>phone:</strong> +61 8 6488 2799</td>
</tr>
<tr>
<td><strong>fax:</strong> +61 8 6488 1004</td>
</tr>
<tr>
<td><strong>consultation hours:</strong> Thursday 11:30am – 12:30pm</td>
</tr>
<tr>
<td><strong>lecture times:</strong> Thursday 13:00pm – 14:45pm</td>
</tr>
</tbody>
</table>

| **lecture building & room: Arts LR5** |
| **Tutorial T1** Fri 12:00 – 12:45 SSCIG207 |
| **Laboratory Lab1** Fri 12:00_12:45 TBA |

Textbook and resources

**Recommended text**

The required text provides the primary readings for this unit.


**Supplementary text**

Resources will also be drawn from two supplementary texts.

How to Begin

The package you are holding now is made up of three components: the Unit Outline you are reading, the Learning Guide, and the Readings required for the lectures and tutorials. Please also regularly check the unit’s Web site for updates and additional information, particularly with regards to your group project.

Unit Outline

This Unit Outline should be read very carefully before you begin reading the other guides or accessing the unit’s Web site. It contains a great deal of the information that you are likely to require and can answer many questions you may have. The Unit Outline also contains information on your assessment items and instructions for accessing the Web site. Each week you should look in the Unit Outline for the tutorial readings and preparation activities necessary for you to complete before the tutorial.

Learning Guide

Each week you should read the corresponding topic in the Learning Guide to get an introduction to the topic, and the readings necessary for you to complete. The Learning Guide gives you a brief overview of the topic, the reading assignments and the group activities associated with that topic.

Unit reader

There is a compiled list of readings that you may purchase from the Co-Op bookshop. The cost of the unit reader covers the printing costs. Copies of the unit reader are also available from the closed reserve.

Web site

This unit will use WebCT (version 6) to provide students with an online version of unit outline and other relevant unit materials and tools. Additional readings and reading suggestions will be posted to the unit web site from time to time. Please also regularly check the unit’s Web site for updates and additional information, particularly with regards to your group project.

Prerequisites

This unit assumes that students have already developed certain basic skills. It is expected that students have an adequate command of:

- English and related communication skills – students are expected to understand and follow the principles of accepted expression and style.
- Basic mathematical and statistical skills.
- Library and Web research skills
• IT skills: Web browser, Windows operating system, MS Office (Word, Excel).

If you are not well prepared in any of the above areas you should make every effort to remedy the situation through undertaking additional reading and/or practice. Do not hesitate to ask for advice from your tutor.

Technical and software requirements

Students must have access to the Internet and an e-mail account that can be used to send completed assignments, interact with the lecturer, tutor and other students, and receive unit updates. Students will make use of the unit Web site to receive notice and reading materials.

You will also require the following software:

• MS Office (Word, Excel, Access) is required to complete assignments
• Access to presentation software such as Microsoft PowerPoint is also recommended.

Unit structure

Lecture details

This unit will consist of a 90 minute lecture per week.

Tuesdays 13:00pm – 14:45pm Arts Lecture Room 5

Lecture schedule

The corresponding lecture topics and assignments are shown below. The timing and order of some topics may change depending on the rate of learning of a particular topic.

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture topic</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Role of IT in marketing activities</td>
<td>Reader 1: Types of DSS&lt;br&gt;Reader 2: How to implement marketing strategies using database approaches</td>
</tr>
<tr>
<td>2</td>
<td>Customer centric marketing</td>
<td>Reader 3: Data warehouse and database marketing&lt;br&gt;Reader 4: Realising business benefits through CRM</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Reading Material</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>3 12 Mar</td>
<td>Customer relationship management</td>
<td>Text Chapter 10 (pp.207-213), 11, 12</td>
</tr>
<tr>
<td>4 19 Mar</td>
<td>Database</td>
<td>Text Chapter 1, 3-8, 18 (pp.363-368, p384-385,)</td>
</tr>
<tr>
<td>5 26 Mar</td>
<td>Data warehouse</td>
<td>As for Database above</td>
</tr>
<tr>
<td>6 2 Apr</td>
<td>Data quality Segmentation</td>
<td>Reader 5: Making segmentation work</td>
</tr>
<tr>
<td></td>
<td>Project presentation</td>
<td>Reader 6: Customer data quality</td>
</tr>
<tr>
<td>7 9 Apr</td>
<td>Customer metrics</td>
<td>Reader 7: How to select your best customer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reader 8: Customer Value Metrics</td>
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<tr>
<td>16 Apr</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>8 23 Apr</td>
<td>SQL Data mining &amp; OLAP</td>
<td>Reader 9: Beginning SQL commands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reader 10: Data mining in marketing Part 1</td>
</tr>
<tr>
<td>9 30 Apr</td>
<td>More on OLAP</td>
<td>Reader 11: OLAP in data warehouse</td>
</tr>
<tr>
<td>10 7 May</td>
<td>Operational CRM</td>
<td>Chapter 15-17</td>
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<tr>
<td></td>
<td></td>
<td>Reader 12: Sales Force Automation</td>
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<tr>
<td></td>
<td></td>
<td>Reader 13: Ecommerce Recommendation Applications</td>
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<tr>
<td>11 14 May</td>
<td>CRM Systems</td>
<td>Chapter 18 (pp. 379 – 384)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 19</td>
</tr>
<tr>
<td>12 21 May</td>
<td>CRM Implementation</td>
<td>Reader 14: CRM implementation</td>
</tr>
<tr>
<td>13 28 May</td>
<td>Revision</td>
<td></td>
</tr>
<tr>
<td>4 Jun</td>
<td>Study Break (1 week)</td>
<td></td>
</tr>
<tr>
<td>11 Jun</td>
<td>Exams (2 weeks)</td>
<td></td>
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</tbody>
</table>
Tutorials/Laboratory

You are required to attend an 1-hour tutorial/laboratory per week. The tutorial and laboratory session will be on the same day and time. Depending on the exercise for the week, you will either attend a tutorial or a laboratory. Refer to the tutorial schedule below for details. You need to register for a tutorial session through the online class registration system.

The tutorial readings can be found in your reader while the tutorial questions can be found on the unit web site.

Tutorial schedule

Tutorials are 45 minutes in length and will be held in Week 2, 3, 7-12. The focus will be on case studies and exercise that highlight and illustrate the relevant topics from chapter readings and additional readings. Students are required to study each reading, case or book section before the tutorial, and prepare questions for discussions during the tutorial.

The tutorial readings and questions can be found in the Learning Guide.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Exercise/Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Business Intelligence (Lab)</td>
<td>VALs Exercise Reader 15: Blending Reporting and Analytics</td>
</tr>
<tr>
<td>T2 CRM Strategy</td>
<td>Reader 16: HDB CRM Implementation</td>
</tr>
<tr>
<td>T3 CRM System</td>
<td>Case Study Reader 17: Harrah’s High Payoff from Customer Information Chapter 12 questions (p254-255)</td>
</tr>
<tr>
<td>T4 Data warehouse implementation</td>
<td>Case Study Reader 18: Sherwin-Williams Data Mart Strategy Reader 19: Fallacy of data mart centric strategies</td>
</tr>
<tr>
<td>T5 Using 3rd party data (Lab)</td>
<td>Asteroid Exercise</td>
</tr>
<tr>
<td>T7 CRM Implementation</td>
<td>Reader 22: On-Demand and On-Premise CRM</td>
</tr>
<tr>
<td>T8 Presentation &amp; Revision</td>
<td>Presentation</td>
</tr>
</tbody>
</table>
Assessment

Your final mark will be determined by your performance on four items of assessment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Tutorial Assignments</td>
<td>10%</td>
</tr>
<tr>
<td>Major Project</td>
<td>35%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Major Project (35%)

In groups of 4-5, you will investigate the application of information system to a marketing function in a real life organisation. Given the diversity of organisations that you can investigate and the relative differences in information systems requirements, each group’s final project report may address quite different problems. For example, your project may be (but is not limited to):

- The preparation of a feasibility study for the implementation of a CRM system:
- The macro specification of a data warehouse for the analysis of customer data;
- The design of a system that supports a new loyalty program;
- An evaluation of the effectiveness of sales force automation and/or call centre systems;
- An examination of analytic and data mining tools in support of marketing decisions.

Your overall report will be assessed in two stages:
Stage 1. Project Proposal (5% presentation and 10% report)

Your group will choose an industry example (private or government) for your marketing IS project. During this stage of the assignment, your objective is to understand the IS environment of the organisation as it relates to marketing activities, as well as specifically identify the purpose and deliverables for the next stage of the project.

Your tasks:

PREPARATION: Develop a set of questions appropriate to the industry example you choose. These questions are designed to elicit information about the current marketing activities and how these are supported by information technology.

INTERVIEW: Conduct the audit with a person or persons from the organisation you have chosen. Please make sure you use only 15-25 minutes of their time. Be PREPARED. Ask for any documents that may help you with your project beforehand.

Remember – marketing and marketing intelligence is one of the most closely guarded secrets within organisations. Make sure your questions are general and avoid any interrogating tones. Accept null responses. Your may wish to discuss the parameters of the interview via the-mail or telephone before meeting in person. It is also a good idea to practice the interview with a personal acquaintance beforehand.

The initial report will be approximately 6-8 pages and include:

- An overview of the company – name and what their business is about. This is a perfect opportunity to add the environmental and marketing objective stages of the audit (1-2 pages).
- A systems audit (4-5 pages) of the marketing activities of the organisation, highlighting the current level of support provided by information technology.
- A project proposal (1-2 pages) that specifically identifies the purpose and deliverables of the second stage of your report

Your initial report is due in Week 7 (before the study break) during the lecture session. During this session, you will be required to present a PowerPoint presentation (no more than 7 minutes) to the class.

Stage 2 (20%)

Your report, 15 pages (12 point 1.5 spacing) including bibliography and appendices will vary in content depending on your initial proposal. However, it should take the form of a professional report to management and include a referenced discussion that supports the theoretical background to the proposal. More details of the format and content of this report will be provided during tutorials.

Submission – Your final report is due in Week 12, 22nd May (Friday) 12 noon.

Please note – For the group project, a mark will be allocated to the group as a whole. Individual marks will NOT be offered. If you have a problem with
the contributions of individual members, you should try to manage this amicable between yourselves. If this is not possible, then please contact your lecturer and we will attempt to guide the group accordingly. Do NOT leave this unit the last minute!

Log Book – You should keep a group log book of your meetings, allocated responsibilities, data and time allocated work completed by individuals etc. Each time you meet collectively as a group, you should identify a meeting facilitator. The facilitator’s role is to note meeting objectives and outcomes together with assigned responsibilities and dates and times etc. This facilitator’s role should be rotated among group members on an equal basis. There are no allocated marks for completing the log book. However, if you are having group problems, I will request to see the group log book. If you do not keep a log book, then you will not recourse to solve group problems.

Tutorial Assignment (10%) and Active Participation (5%)

This unit emphasises student participation especially during tutorials. Activities, case analyses/discussions, readings and topic debates, are planned to facilitate your learning of the concepts covered in the block teaching sessions to help apply them to an actual research project.

Final Exam (50%)

There will be a final exam on the material covered during semester and will be held during the formal examination period. It will be a 2 hour paper consisting of multiple choice questions and short answer questions.
Standard of Assessment

The Business School must ensure that the processes of assessment are fair and are designed to maintain the standards of the School and its students. The School follows the University of Western Australia’s grading system:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD</td>
<td>(Higher distinction)</td>
<td>80-100%</td>
</tr>
<tr>
<td>D</td>
<td>(Distinction)</td>
<td>70-79%</td>
</tr>
<tr>
<td>CR</td>
<td>(Credit pass)</td>
<td>60-69%</td>
</tr>
<tr>
<td>P</td>
<td>(Pass)</td>
<td>50-59%</td>
</tr>
<tr>
<td>N+</td>
<td>(Fail)</td>
<td>45-49%</td>
</tr>
<tr>
<td>N</td>
<td>(Fail)</td>
<td>0-44%</td>
</tr>
</tbody>
</table>

The School awards marks leading to these grades by using the following general criteria which are presented here as a clear indication of the School’s expectations. These general criteria may be supplemented by specific standards with regard to a particular assignment.

**HD**
The student has a clear understanding of theory, concepts and issues relating to the subject and is able to adopt a critical perspective. The student is able to clearly identify the most critical aspects of the task and is able to offer a logically consistent and well articulated analysis within the analytic framework presented in the unit. The student is able to draw widely from the academic literature and elsewhere but maintains relevance.

**D**
The student has a clear understanding of theory, concepts and issues relating to the subject. The student is able to develop an analysis of an issue using the analytic framework presented in the unit and is able to identify and evaluate the critical issues. The student is able to draw upon relevant academic and other material.

**CR**
The student demonstrates an understanding of the analytic framework developed in the unit and a partial understanding of concepts and issues. The student is able to identify some key issues and is able to present a logical discussion, but with some conceptual errors or gaps between analysis and conclusions. The student is able to draw upon an adequate range of references and other materials.

**P**
The student generally takes a descriptive rather than analytic approach to the subject. The student is able to demonstrate some understanding of the issues involved but does not demonstrate the ability to apply the analytic framework which had been developed in the unit. Draws primarily upon unit materials for referencing.

**N+**
The student is unable to demonstrate that he or she understands the core elements of the subject matter. The student is able to provide some insight into issues but misapplies analytic framework
developed in the unit, omitting key factors and, for example, drawing conclusions which are not related to the preceding discussion.

N The student is unable to demonstrate any understanding of the subject matter. Material presented for assessment is unrelated to unit framework and shows not effort to identify or address critical aspects of the topic.

The scaling of marks to ensure comparability between classes is an acceptable academic practice. The School and Board of Examiners have the right to scale marks where it is considered necessary to maintain consistency and fairness.

Supplementary Assessment

Supplementary Assessment is not normally offered by the Business School, however, students who achieve a grade between 45-49 in the last unit for their undergraduate degree taken in the last semester of study, will be eligible for a supplementary assessment

Ethical Scholarship, Academic Literacy and Academic Misconduct

Ethical scholarship is the pursuit of scholarly enquiry marked by honesty and integrity.

Academic Literacy is the capacity to undertake study and research, and to communicate findings and knowledge, in a manner appropriate to the particular disciplinary conventions and scholarly standards expected at university level.

Academic misconduct is any activity or practice engaged in by a student that breaches explicit guidelines relating to the production of work for assessment, in a manner that compromises or defeats the purpose of that assessment.

Students must not engage in academic misconduct. Any such activity undermines an ethos of ethical scholarship. Academic misconduct includes, but is not limited to cheating, or attempting to cheat, through:

- Collusion
- Inappropriate collaboration
- Plagiarism
- Misrepresenting or fabricating data or results or other assessable work
- Inappropriate electronic data sourcing/collection
- Breaching rules specified for the conduct of examinations in a way that may compromise or defeat the purposes of assessment.

Penalties for academic misconduct vary according to seriousness of the case, and may include the requirement to do further work or repeat work; deduction of marks; the award of zero marks for the assessment; failure of
one or more units; suspension from a course of study; exclusion from the University, non-conferral of a degree, diploma or other award to which the student would otherwise have been entitled.

Refer to the Ethical Scholarship, Academic Literacy and Academic Misconduct and individual Faculty policies.

Appeals against academic assessment

If students feel they have been unfairly assessed, they have the right to appeal their mark by submitting an Appeal Against Academic Assessment form to the Head of School and Faculty Office. The form must be submitted within twenty working days of the formal despatch of your unit assessment. It is recommended that students contact the Guild Education Officers to aid them in the appeals process. They can be contacted on +61 8 6488 2295 or education@guild.uwa.edu.au. Full regulations governing appeals procedures are available in the University Handbook, available online at http://www.publishing.uwa.edu.au/handbooks/interfaculty/PFAAAA.html.

Charter of student rights and responsibilities

This Charter of Student Rights and Responsibilities upholds the fundamental rights of students who undertake their education at the University of Western Australia.

It recognises that excellence in teaching and learning requires students to be active participants in their educational experience. It upholds the ethos that in addition to the University’s role of awarding formal academic qualifications to students, the University must strive to instil in all students independent scholarly learning, critical judgement, academic integrity and ethical sensitivity.

Please refer to the guild website the full charter of student rights, located at http://www.secretariat.uwa.edu.au/home/policies/charter

Student Guild contact details

The University of Western Australia Student Guild
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Website: http://www.guild.uwa.edu.au