Unit Outline*

MGMT8504
Data Analysis and Decision Making

Semester 2, 2011
Crawley

Assistant Professor Catherine Leighton

Business School
www.business.uwa.edu.au

* This Unit Outline should be read in conjunction with the Business School Unit Outline Supplement available on the Current Students web site http://www.business.uwa.edu.au/students
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UNIT DESCRIPTION

Introduction

Welcome to the Data Analysis and Decision Making unit held in Semester 2, 2011! I hope you are as enthusiastic about taking this unit as I am about teaching it. I trust that you will find this unit enjoyable, challenging, rewarding and applicable to your work.

I expect that many of you are feeling a little nervous, especially if this is the first time you have studied statistics. I would like to reassure you that this is quite normal. I hope that as we work through the topics together you will feel more comfortable and may even start to enjoy learning about 'stats'. In my experience, learning about statistics is similar to learning a new language or skill; initially you will be confused, then frustrated, and finally (with hard work and perseverance) you will come to understand how to use and apply the statistical tools and techniques discussed.

I cannot stress enough how important it is to study continuously throughout the semester as many of the topics covered in this unit are cumulative. It is unlikely that you will pass this unit if you cram your study in the last few weeks of the semester. To help facilitate your ongoing study, I have included an in-class quiz. You will also need to complete a ‘Statistics in Practice’ project, which requires you to identify an issue in an organisation, collect and analyse relevant data, then provide appropriate recommendations and make a presentation to the class. A final exam concludes this unit. Lastly, I would like to wish you all the very best with your studies in this unit.

Unit content

This unit introduces data analysis and decision-making tools that students are able to use to manage their own day-to-day work. Students are able to identify situations in which quantitative analysis can support problem solving and decision making. They also gain practical experience in applying statistical and decision analysis techniques and statistical packages (generally Excel) in management contexts. Topics include introduction to modelling of organisations and business problems; measurement; variability; uncertainty; statistical tests and quantitative approaches to decision making.

The goal of the unit

Any manager operating in a business environment requires as much information as possible about the characteristics of that environment. Much of the available information is quantitative, for example, movements in interest rates, stock market price, money supply and the level of unemployment. Market research surveys are carried out to determine the strength of product demand. An auditor is concerned about the number and size of errors found in account receivables. A human resource manager may be able to use aptitude test scores, in addition to subjective evaluation of candidates, for the recruitment of personnel. Even in sport, statistics is increasingly used as an objective means to assess the signing of players and also to evaluate the strengths and weaknesses of opponents. If you think about it, we confront statistics in most of our everyday life. The common features of the above examples are that the information to be absorbed is numerical or categorical and, in its raw form, virtually impossible to comprehend fully. One of the important roles of today’s manager is to make sense of quantitative data by summarising it in such a way that a readily understood picture emerges.

This unit introduces data analysis and decision-making tools to help students manage their own day-to-day work whether it be analysing and reporting results or helping guide management in the interpretation of statistics. It must be emphasized that this unit is not designed to convert you into a statistician (which I am sure is a relief) but rather to give you an appreciation of the various uses of readily available or easily obtainable data. This unit does not focus on ‘number crunching’ but rather on the analysis and interpretation of computer-generated results for meaningful decision-making. It also provides a statistical foundation for quantitative techniques used in other units including Economics, Finance, Marketing, and Quality Management.
Please rest assured that the objective of this unit is not to turn you into a statistician. The focus is not 'number crunching' but the interpretation of results. If at any time you find the unit overwhelming contact me so that we can work through your concerns together.

**Learning outcomes**

On completion of this unit, you should be able to:

- Read, interpret and evaluate papers and reports which include statistics.
- Accurately summarise data and conduct statistical analyses.
- Understand the applications and limitations of decision-making techniques used in various uncertain situations in the business environment.

**Educational principles and graduate attributes**

In this unit, you will be provided with the opportunity to

- Critically evaluate management and business problems using statistical techniques.
- Develop more effective communication skills through a class presentation on the findings of your team project and by responding to any questions that arise following that presentation.
- Develop competencies to work more effectively in teams through the completion of a group project relating to your selected business context.
- Demonstrate self-management and independent learning skills through the completion of the weekly exercises.
- Develop ethical and cultural awareness in an international context through completion of various class exercises and case studies.

**TEACHING AND LEARNING RESPONSIBILITIES**

**Teaching and learning strategies**

My teaching philosophy is encapsulated by the following quote-

“When teaching, light a fire, don’t fill a bucket” - Dan Snow

With teaching, my main goal is to inspire, to ‘light a fire’. I hope that you see real value in the learning material presented, understand the application of this material to your workplace and, as a result, seek more information on the topic. However, with a unit such as DADM this presents many difficulties. It may be that you attend the first class with misconceptions of the use of statistics, believing that there is little application for this knowledge in management. Additionally, many of you may have little or no background in statistics and, therefore, are very nervous and concerned about studying “stats”. I firmly believe that engaging and encouraging you to participate in each topic provides a more conducive learning environment than simply bombarding you with information or ‘filling your buckets’.

To inspire you, and help overcome your apprehension, I encourage both critical thinking and the linking of theory to real-world examples. In doing this, I present newspaper articles, business reports, reports from the Australian Bureau of Statistics, and case studies to demonstrate the application of certain statistical tools and techniques. I also have you critically appraise such material. However, to ensure this approach is successful, I present theories, models, and research in such a way that allows you to draw on your own working experiences and relate these experiences to each topic. I reinforce this with an assignment involving the collection and analysis of data from your workplace. You are required to write a business report for senior management describing your findings and recommendations. This ‘hands-on’ approach helps to reinforce learning and understanding of each topic. It also provides a useful framework for those who initially may not see the application of business statistics to the workplace.
Teaching and learning evaluation

You may be asked to complete two evaluations during this unit. The Student Perception of Teaching (SPOT) and the Students’ Unit Reflective Feedback (SURF). The SPOT is an evaluation of the lecturer and the unit. The SURF is a university-wide survey, completed online, and deals only with the unit. You will receive an email from the SURF office inviting you to complete the SURF when it is activated. We encourage you to complete the forms as your feedback is extremely important and can be used to make changes to the unit or lecturing style when appropriate.

At the UWA Business School each unit is periodically evaluated and the feedback from students taken into account when the unit is updated. In relation to the DADM unit, student feedback has resulted in the following changes (and more):

- Changes have been made to the delivery of the unit where the focus is now on the interpretation of results, rather than computation. This is seen as a more suitable and useful approach to you as Masters-level students.

- Changes were made to the assessment so that data is no longer provided but now may be sourced from your workplace or other publicly available database. This was done to demonstrate the relevance of studying business statistics by applying this knowledge to your workplace.

- The classes now include more group work, case studies, class activities, DVDs and ‘real-world’ examples and less stand-and-deliver from me. This is to further encourage active learning so that you learn ‘by doing’ rather than passively sitting back and listening to me talk your ears off.

Attendance

Participation in class, whether it is listening to a lecture or getting involved in other activities, is an essential part of the learning process. It is therefore important that you attend all classes (and be on time). More formally, the University regulations state that ‘to complete a course or unit students shall attend prescribed classes, lectures, seminars and tutorials’. Where a student, due to exceptional circumstances, is unable to attend a scheduled class, they are required to obtain prior approval of the unit coordinator to be absent from that class. Any student absent from class without having had such absence approved by the unit coordinator may be referred to the faculty for advice and may be required to withdraw from the unit.
CONTACT DETAILS

We strongly advise students to regularly access their student email accounts. Important information regarding the unit is often communicated by email and will not be automatically forwarded to private email addresses.

<table>
<thead>
<tr>
<th>Unit coordinator/lecturer:</th>
<th>Assistant Professor Catherine Leighton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
<td><a href="mailto:catherine.leighton@uwa.edu.au">catherine.leighton@uwa.edu.au</a></td>
</tr>
<tr>
<td>Phone:</td>
<td>6488 7987</td>
</tr>
<tr>
<td>Consultation hours:</td>
<td>By appointment</td>
</tr>
<tr>
<td>Lecture times and venues:</td>
<td>Tuesdays 9.00am – 12.00pm, BUSN:101</td>
</tr>
</tbody>
</table>

Catherine Leighton  
BPsych (UWA), MPsych (w distinction) (Curtin), PhD Candidate (UWA)

Catherine holds a Bachelor of Psychology degree from UWA and a Master degree in Psychology (with distinction) from Curtin University. She has been a lecturer at the UWA Business School since August 1999. During this time, she has taught the ‘Data Analysis and Decision Making’ unit on the Graduate Diploma in Business Administration and MBA programs, both in Perth and Singapore. Catherine has also been involved with team teaching the ‘Quantitative Methods in Management Research’ unit in Perth and Singapore on the Master of Business Research/Doctor of Business Administration program. In 2008, Catherine taught the ‘Quantitative Methods for Management’ unit at Bocconi University in Milan, Italy. Prior to lecturing at UWA, Catherine was employed by the Graduate School of Business at Curtin University as a lecturer teaching the ‘Information for Business Decisions’ unit. Catherine also engages in consulting work for several organisations including the Main Roads, Silver Chain, Tourism WA, and St John of God Health Care. Much of this work involves the collection and analysis of data in order to develop strategies for improved organisational effectiveness. Catherine’s research interests include the following areas: organisational citizenship behaviour, job performance and satisfaction, organisational commitment and emotional labour. Catherine is currently completing her PhD thesis which is entitled “Exploring the Nomological Network of Workplace Emotion Regulation: Its relationship with employee attitudes, performance and well-being”.

TEXTBOOK(S) AND RESOURCES

Unit website

Resources for this unit (unit outline, powerpoint slides, practice exam papers, examples assignments, and more) will be available on WebCT and accessed through the following website http://www.webct.uwa.edu.au. At the WebCT Welcome screen, click on Log into My WebCT and you will be prompted for a WebCT ID and password. Your WebCT ID will be your student number. Any letters must be in upper case (capitals). Your password will be your student PIN. Your login details must be kept confidential. After you have logged in, the page called My WebCT will appear personalised with your name. Under Courses, WebCT courses for which you have access will be listed. When you have finished using WebCT, do not forget to log-out. There is a log-out button on the top of your homepage as well as on the My WebCT page.

Required text

Please make use of the companion website for this textbook (which includes learning outcomes, Excel data files, PHStat2 software for download, self-study quizzes and more): http://wps.prenhall.com/bp_groebner_busstats_8/

Software requirements

This unit will use MS Excel, hence prior knowledge of this software is desirable, but not essential. The textbook provides instructions on how to use specific features. Students are most welcome to use a different statistical package for analysis if preferred (e.g., Minitab, SPSS, SAS, etc).

As the emphasis of this unit is on the interpretation of output there is no need to purchase a sophisticated scientific calculator. A standard, UWA-approved, Casio or Sharp scientific calculator is more than adequate. **PLEASE NOTE:** The University only permits the use of calculators in examinations when the calculator has an approved sticker. If you do not have an approved sticker on your calculator you will not be permitted to use this calculator during the exam. Since this is a University-wide policy it is not possible for unit coordinators to grant on the spot exemptions. Calculators can be approved at the Business School Student Centre between 9.00am – 4.30pm Monday to Friday. Further information is available on the Business School web site, see http://www.business.uwa.edu.au/studentnet/assessments.

Additional resources and reading material

Data
We will use databases included in the textbook, provided by the lecturer, or obtained via the library. For your project, it is recommendable that you use data from your workplace. However, if it is not possible or suitable, several other sources may be investigated:

- Australian Bureau of Statistics (census data, etc.) www.abs.gov.au;
- DatAnalysis (Australian Stock Exchange ASX companies);
- Global Market Information Database (GMID);
- Mergent Online (US companies data);

Please feel free to contact the Business Library 64881588 to organise for Michelle Mahoney or another staff member to help you use these databases.

Additional reading materials
Any statistics/data analysis textbook available in the library may assist you with the concepts. Additional reading material will be available, for a cost-recovery price, through the Co-Op Bookshop. The reference list for these resources is provided below. Please note the readings marked with an asterisk (*) are essential readings and may be examined.
Reference List (for the additional readings)


Unknown. 2008, ‘Study proves it: Most really do like it hot’, The West Australian, October 25, p. 36.

# UNIT SCHEDULE

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topics</th>
<th>Assessment</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module 1: Describing and Presenting Data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1 2 Aug</td>
<td>Introduction to Data Analysis and Decision Making</td>
<td></td>
<td>Ch 1 • Evidence-Based Management • Competing on Analytics* • Research in Business Studies*</td>
</tr>
<tr>
<td>#2 9 Aug</td>
<td>Presenting Categorical and Numerical Data using Charts and Tables Describing Data Using Numerical Measures</td>
<td></td>
<td>Chs 2 &amp; 3 • The Well-Chosen Average • Case One: A Personal Story • Working Overload • Jump in WA Pay Packets • What We Don’t Want</td>
</tr>
<tr>
<td><strong>Module 2: Probability Distributions and Inference</strong></td>
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<tr>
<td>#3 16 Aug</td>
<td>Report Writing - Structuring a statistical report Introduction to Probability Probability Distributions</td>
<td></td>
<td>Chs 4 &amp; 6 • Part-time Job Link to Uni Failure</td>
</tr>
<tr>
<td>#4 23 Aug</td>
<td>Statistical Inference - Introduction to Sampling Distributions - Confidence Intervals</td>
<td>Assessment 2: Part A due</td>
<td>Chs 7 &amp; 8</td>
</tr>
<tr>
<td><strong>Module 3: Hypothesis Testing</strong></td>
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<tr>
<td>#5 30 Aug</td>
<td>Introduction to Hypothesis Testing - Types of errors, p values - One sample tests - Two sample tests</td>
<td></td>
<td>Ch 9 &amp; 10 • Study Proves It: Most Really Do Like It Hot • Car Insurers Reward Safer Women Drivers</td>
</tr>
<tr>
<td>#6 6 Sept</td>
<td>Hypothesis Testing cont.. - Two-sample tests cont..</td>
<td></td>
<td>Ch 10 &amp; 11 • Managers’ Perceptions of Proper Ethical Conduct#</td>
</tr>
<tr>
<td>#7 13 Sept</td>
<td>Hypothesis Testing cont.. -  $\chi^2$ test for independence - ANOVA</td>
<td></td>
<td>Chs 12 &amp; 13 • Impact of Computer Disasters on Information Management#</td>
</tr>
<tr>
<td><strong>Module 4: Prediction</strong></td>
<td></td>
<td>Assessment 1: Mid-term quiz</td>
<td>Ch 14 • Relationships: Causal and Casual*</td>
</tr>
<tr>
<td>#8 20 Sept</td>
<td>Simple Linear Regression (SLR) - Correlations - Output (assumptions, solution, interpretation)</td>
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<tr>
<td>26-30 Sept</td>
<td>Mid-Semester Study Break</td>
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<tr>
<td>#</td>
<td>Date</td>
<td>Event Description</td>
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</tbody>
</table>
| #9 | 4 Oct | Multiple Linear Regression (MLR)  
- Output (solution, diagnostics, interpretation, violation of assumptions)  
- Prediction with MLR |
|    |      | Ch 15  
- Wine and Chocolate Help You Live Longer  
- Celebrate a Beer with a Wage Rise  
- A Beer or Wine a Day Increases Cancer Risk  
- Alcohol is a Big Cause of Cancer: Experts  
- Gargling Link to Cancer  
- Cancer Link to Mobile Phone Use ‘Inconclusive’  
- Long Way Home is the Best |
| #10 | 11 Oct | Stats in Practice Report (please bring your laptop and project data)  
- Analyse data sets using MLR  
- Output (assumptions, solution, interpretation, compare models) |
| #11 | 18 Oct | Stats in Practice: Presentations |
|     | Assessment 2: Part C due- Class Presentations |
|     | #12 | 25 Oct | Applying Statistics to Business Case Studies  
Guess Speaker |
|     | Assessment 2: Part B due  
- Kiss High Blood Pressure Goodbye  
- Effects of Low Habitual Cocoa Intake on Blood Pressure….. |
|     | 1 Nov | Unit Revision  
Exam Preparation- Quiz Night Format! |
|     | Assessment 2: Part B due  
- A Refresher on Some Statistical Terms and Tests |
|     | 12-26 Nov | Exam Period |

Note: *essential readings which may be examined.  
#good examples of not-so-good data analysis.
ASSESSMENT MECHANISM

The purpose of assessment

There are a number of reasons for having assessable tasks as part of an academic program:

- providing opportunities for you to check your understanding of the course content and to explore data analysis and decision making relevance through real life examples, including your own experiences;
- encouraging you to explore and understand the subject fully and make connections with other disciplines or situations already known;
- foster collaboration with peers and enhance data analysis computing skills;
- acknowledge your efforts and progress in mastering the subject.

The fact that we grade your work then gives you an indication of how much you have achieved – “doing is demonstrating that you know it”. Providing feedback on your work also serves as part of the learning process. In this unit we use a combination of individual and group assessments meant to continuously review your progress and facilitate communication with your peers.

Assessment mechanism summary

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight</th>
<th>Due date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1: Mid-Term Quiz Individual assessment</td>
<td>Mid-term quiz (material covered from lectures 1-7)</td>
<td>20%</td>
<td>20 Sept</td>
</tr>
<tr>
<td></td>
<td>Part B: Final Report (including revised preliminary report)</td>
<td>15%</td>
<td>1 Nov, 6.00pm</td>
</tr>
<tr>
<td></td>
<td>Part C: Group Presentation</td>
<td>10%</td>
<td>18 Oct</td>
</tr>
<tr>
<td>Total: 30%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment 3: Final Exam</td>
<td>Final Exam (material from all lectures)</td>
<td>50%</td>
<td>12-26 Nov</td>
</tr>
</tbody>
</table>

Note 1: Results may be subject to scaling and standardisation under faculty policy and are not necessarily the sum of the component parts.

Note 2: Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning outcomes as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the unit.
Assessment components

There are three main aspects to your assessment: A mid-term quiz, a ‘Statistics in Practice’ group assignment and a final end-of-semester exam. The details for each are described below.

Assessment #1: Mid-Term Quiz - Individual Assessment (20%)

Description and guidelines
The purpose of the quiz is to evaluate your understanding of the material covered in lectures one through seven (inclusive) to provide you with helpful feedback on your progress. The quiz is an open-book assessment and will take one hour (plus 10 minutes reading time). Textbooks, calculators (approved by UWA), writing materials and statistical tables are permitted for use during the quiz.

Marking criteria
This quiz will consist of multiple choice and short answer/calculation questions. It is worth 20% towards your final grade and will be held at the beginning of lecture 8 (20th September).

Assessment #2: ‘Statistics in Practice’ Report and Presentation - Team Assessment (30%)

Description and guidelines
The 'Statistics in Practice' assessment is designed to develop your skills in the use of statistical tools and techniques, the interpretation of statistical output, and the reporting of this output at a level appropriate to your audience, that is for an audience with little to no statistical background (i.e. a non-technical report). This is a team project and must be completed in groups of 4-5 students.
I will allocate students to teams and provide these groupings in lecture 2.

This project is made up of several stages, as shown below. Project ideas will be discussed during class. Data for your project may be sourced either from your workplace or a publicly available database. In either case, please check the suitability of the data with me before proceeding with your project.

<table>
<thead>
<tr>
<th>Source Data</th>
<th>Summarise Data</th>
<th>Analyse Data</th>
<th>Interpret Output</th>
<th>Present Project</th>
<th>Write Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>-one dependent variable (numerical)</td>
<td>-tables</td>
<td>-perform correlations and multiple regression</td>
<td>-select final model (i.e. best combination of variables)</td>
<td>-class presentation of project</td>
<td>-incorporate feedback from presentation and preliminary report into this final report</td>
</tr>
<tr>
<td>-five independent variables (no more than two categorical)</td>
<td>-charts</td>
<td>-interpret model output</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-numerical measures (means, etc)</td>
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</tr>
<tr>
<td>-at least 30 data</td>
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</tbody>
</table>

Marking criteria
In total, the project contributes 30% towards your final grade. This Statistics in Practice project has three parts, each marked separately and discussed next.

Statistics in Practice Assessment Part A: Preliminary Report—Descriptive Statistics (5%)

Description and guidelines
The purpose of the ‘Statistics in Practice’ preliminary report is to determine whether you are on task with this project. The report should be no longer than 700 words and include the following:

1) The objective(s) of the project and research question.
2) The data you plan to use to address this research question.
3) A clear definition and measure of key variables (one dependent variable, five independent variables). For example: “Length of Service” refers to the length of time the individual has been employed with their current organisation and is measured in years and months.
4) Hypotheses for the relationships between each independent variable with the dependent variable (i.e. there should be five hypotheses). For example: it is proposed that the longer the employee’s length of service the greater their job satisfaction.

5) Numerical and graphical summaries of the data.

Marking criteria
This part of the project is worth 5% and is due on or before 23rd August (no later than 6pm). Submissions are to be made via the Uniprint website (see page 14 of this outline for more information).

Statistics in Practice Assessment Part B: Final Statistical Report (15%)

Description and guidelines
The final, and complete, report will include the following:

<table>
<thead>
<tr>
<th>Title page</th>
<th>Includes your name, title of the report, group members (with student numbers), and word length.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>A single paragraph that describes the research question and the most important findings. Please note this is not an introduction to your report but a snapshot stand-alone summary. It is often easier written last.</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>Gives an outline of the report together with the page numbers.</td>
</tr>
<tr>
<td>Introduction</td>
<td>Several paragraphs in which you describe the objectives, research question and the relevant dataset. The key variables and relevant assumptions should be discussed. Data collection methods, data reliability and trustworthiness of the source should also be discussed.</td>
</tr>
<tr>
<td>Data Description</td>
<td>Summarize the data included in your regression analysis using appropriate statistics, tables and charts. This, and the previous section, will be largely completed in the ‘Statistics in Practice Assessment Part A’ but now need to be incorporated into the body of this final report.</td>
</tr>
<tr>
<td>Findings</td>
<td>This section should present the findings of your study (from the correlation and regression output). Report the output thoroughly (using non-technical terms). Avoid discussing the procedures of the analysis but simply discuss the output from the final (selected) regression model rather than how the final model was chosen. As the report is to be prepared for senior management with little or no exposure to statistical tools and techniques, the interpretations should be explained in clear, concise terms. It is not necessary to show computations and technical terms should be avoided (i.e. correlation, regression, standard deviation, etc).</td>
</tr>
<tr>
<td>Conclusions</td>
<td>Summarise the key findings and make at least two recommendations.</td>
</tr>
<tr>
<td>References</td>
<td>Harvard Style.</td>
</tr>
<tr>
<td>Appendix</td>
<td>A statistical report should not contain details of statistical results that may clutter the report and dampen its main conclusions. Often statistical inference is based on statistical assumptions about the data that should be verified. The appendix can be used to provide evidence that these assumptions are met. The appendix is not included in the word count but should be thoughtfully presented and provide easy access to an interested reader.</td>
</tr>
</tbody>
</table>

Marking criteria
A maximum of 1200 words (excluding tables, charts, appendices) is allocated for this report. Any information above the word limit will not be taken into consideration. This part of the project is worth 15% and due on or before 1st November (no later than 6pm). Submissions are to be made via the Uniprint website (see page 14 of this outline for more information).
Statistics in Practice Assessment Part C: Presentation of Statistical Report (10%)

Description and guidelines
This team-based assessment requires team member(s) to present and discuss your Statistics in Practice report. Building on from Assessment Part B, you need to prepare a presentation for management (who have little or no statistical exposure) in order to demonstrate your ability to present results and conclusions in a non-technical manner. This presentation provides a demonstration of your oral communication skills and application of statistical knowledge to a business context. This presentation should also provide helpful feedback for completing your written report (which is due in the following week).

Marking criteria
The presentation should last a maximum of 10 minutes. The presentations are scheduled for lecture 11 (18th October). No more than six Powerpoint slides should be used and these must be provided to me the day before the presentations (i.e. by 6pm on 17th October) or earlier. This part of the project is worth 10%. A marking rubric for the team presentations is shown on page 15 of this outline for guidance. Presentations that are not provided to me by the due date will be allocated a mark of zero for ‘use of visual aids’ as specified on the marking guide for this assessment.

Assessment #3: Final Exam (50%)

Description and guidelines
The final exam will cover ALL lecture material, and will be held in the exam period (12-26 November 2011). The exam will be 130 minutes (2 hours 10 minutes) duration, including reading time, and will contain a combination of multiple choice and short answer questions. Practice exam papers (with solutions) will be provided via WebCT.

Marking criteria
The final examination is a closed-book assessment with only writing materials, calculators (approved by UWA), and statistical tables are permitted during the exam. It is worth 40% of your final mark. Supplementary exams are not available in this unit. To pass this unit, students are required to achieve a score of at least 50% in the final exam. Students who fail to achieve the minimum standard in the final exam but achieve an accumulated score based on all assessment components for the unit of 50 and above will be awarded a final mark of 48%.

Submission of assignments
Please submit your written assignment in an electronic format by going to the Uniprint web site www.uniprint.uwa.edu.au then click on “Student Assignments” and follow the instructions. You will be provided with a receipt as proof of your submission. Please retain this receipt for your records. Assignments should be submitted by 6.00pm on the due date.

Late assignments will attract a penalty of 5% per day. The lecturer, only in exceptional circumstances, will waive this penalty. No marks will be awarded to assignments submitted after other students in the class have had their assignments returned. Assignments will be returned via the postgraduate reception office (ground floor). It is the intention that the marked assignments will be returned within two weeks of submission.
Charter of Student Rights and Responsibilities


Appeals against academic assessment

The University provides the opportunity for students to lodge an appeal against assessment results and/or progress status (refer http://www.secretariat.uwa.edu.au/home/policies/appeals).
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Not Sufficient</th>
<th>Pass</th>
<th>Credit</th>
<th>Distinction</th>
<th>High Distinction</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Matter Knowledge</strong></td>
<td>Does not have a grasp of the information, cannot answer audience questions.</td>
<td>Weak understanding of the information, finds it difficult to answer audience questions.</td>
<td>Uncomfortable with information and can only answer basic questions.</td>
<td>Comfortable with information, answers questions briefly.</td>
<td>Full knowledge of information, able to elaborate easily and provide thorough answers.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>Difficult to follow, no obvious sequence of information.</td>
<td>Difficult to follow as skips around topic, and loses thread.</td>
<td>Information presented logically, easy to follow.</td>
<td>Information presented logically, in an interesting way, easy to follow.</td>
<td>Captivating presentation with a clear and logical flow.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Non Verbal Communication</strong></td>
<td>No eye contact, reading from notes, audience totally switched off.</td>
<td>Minimal eye contact, reading from notes, audience mostly switched off.</td>
<td>Eye contact some of the time/some of the audience, turns back, reads notes.</td>
<td>Audience engaged but not fully relaxed or absorbed.</td>
<td>Good rapport, including all audience, eye contact, welcoming questions.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Verbal Communication</strong></td>
<td>Mumbles, uses jargon, difficult to hear, hesitates.</td>
<td>Difficult to hear some of the time, only some jargon explained.</td>
<td>Most of audience can hear and understand.</td>
<td>Can be clearly heard and understood by all audience.</td>
<td>Good projection of voice and use of intonation. Audience fully engaged and absorbed.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Use of Visual Aids</strong></td>
<td>No supporting visual aids to increase audience understanding.</td>
<td>Little to no supporting visual aids to increase audience understanding.</td>
<td>Visual aids do not increase audience understanding.</td>
<td>Relevant and timely use of visual aids increasing audience understanding.</td>
<td>Confident use of quality visual aids furthering audience understanding.</td>
<td>1</td>
</tr>
<tr>
<td><strong>Accuracy of Information</strong></td>
<td>Multiple mistakes (more than three), such as incorrect explanation, misuse of terminology.</td>
<td>Three mistakes, such as incorrect explanation, misuse of terminology.</td>
<td>Some mistakes (less than three) such as incorrect explanation, misuse of terminology.</td>
<td>No obvious mistakes.</td>
<td>Potential audience misunderstandings clarified or explained up front.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Consideration for the Audience Level of Statistical Knowledge</strong></td>
<td>No consideration for the audience and their understanding of statistics (e.g. use of statistical terms).</td>
<td>Some use of words and concepts inappropriate for the knowledge and experience of the audience.</td>
<td>Content of the presentation is adapted to the audience and situation in a general way.</td>
<td>Content of the presentation is adapted to the audience and situation in a specific way.</td>
<td>The presentation is perfectly pitched to the audience and their level of statistical knowledge.</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>