VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wānanga o te Ūpoko o te Ika a Māui

School of Information Management

MMIM552 RESEARCH METHODS

Trimester 1 2005

COURSE OUTLINE

Contact Details

Paper Coordinator: **Name: David Mason**
Room: **EA328 Easterfield Building**
Tel. **463 7435 027 404 8003**
Email: *david.mason@vuw.ac.nz*

Programme Administrator: *Mary Braun*
Location to be advised
Tel. 463-5457
Email: *mary.braun@vuw.ac.nz*

Class Times and Room Numbers

Lectures: *Thursdays, commencing 24 February 2005*
One two-hour class each week
Times: **5:40 p.m. to 7:30 p.m.**
Venue: **Railway 315**

Course Objectives

The paper will prepare students to undertake independent research in Information Systems. Students will learn how to plan a research project, design data collection, collect data, enter data, analyse data and report the results. Students will learn qualitative and quantitative approaches to information systems research. Topics covered will include: research design, the research cycle, qualitative methods, quantitative methods which may include descriptive statistics, properties of the normal distribution, hypothesis testing, elements of sampling, t-tests, regression and correlation, factor analysis, analysis of variance, use of SPSS. In order to master the skills of research students will undertake a practical research project and will analyse their results under supervision using both qualitative and quantitative techniques. The topics will be taught with specific reference to the requirements and context of Information Systems research.

Course Content

On completion of this course the student will be able to

- Demonstrate an understanding of the comparative strengths and weaknesses of quantitative and qualitative research.
- Demonstrate their understanding of the principles underlying the scientific collection, collation and analysis of data.
- Formulate testable statistical hypotheses.
- Design a questionnaire and use it to collect data to support or refute a hypothesis.
- Use SPSS to create data sets and produce descriptive, parametric and non-parametric statistical analyses.
- Use z-scores, comparison of means, regression analysis, factor analysis in the appropriate situations.
- Use qualitative analysis to summarise survey data.

Learning Schedule

Week	*Content Lecture*	*Reading*
Week1 24-Feb-05	Introduction to research methods, philosophy of scientific research, The cycle of knowledge.	
Week 2 3-Mar-05	Outline of the research project. Designing a questionnaire. Repertory grid analysis.	Field ch1
Week 3 10-Mar-05	Frequencies and summary statistics. Introduction to SPSS	Hinton ch1,2 Field ch1
Week 4 17-Mar-05	Correlation Analysis. Using graphs and charts	Hinton ch20 Field ch2
Week 5 24-Mar-05	Descriptive statistics, central tendency, spread. Types of numbers.	Hinton ch3 Field ch2
31-Mar-05	*No Lectures*	
7-Apr-05	*Mid Trimester Break*	
Week 6 14-Apr-0	Standard deviation, normal distribution. Z-scores.	Hinton ch Field ch2
Week 7 21-Apr-05	Hypothesis testing. Sampling. one sample t-tests. Two sample t-tests. Significance, error and power.	Hinton ch5,6,7 Field ch6
Week 8 28-Apr-05	Correlation and Regression	Hinton ch20,21 Field ch3,4
Week 9 5-May-05	Chi squared and non parametric tests	Hinton ch19 Field ch2
Week 10 12-May-05	Qualitative techniques.	Field ch1
Week 11 19-May-05	Analysis of variance. ANOVA	Hinton ch10,11,12 Field ch7
Week 12 26-May-05	Factor analysis. Advanced research tools and techniques.	Field ch11

This schedule is subject to change.

Readings

There are two required textbooks for this course:

Hinton, Perry. 2003 *Statistics explained*. London: Routledge. 0-415-10286-3

Field, Andy. 2000. *Discovering statistics using SPSS for Windows*. London: Sage 0-7619-5755-3

The lectures and workshops will require constant reference to both these books.

Other useful texts in this area include:

Taylor, Steven J. and Robert Bogdan. (1998) Introduction to qualitative research methods. London: Wiley. 0-471-16868-8

Alreck, Pamela L. and Robert B. Settle. (2004) The survey research handbook. New York: McGraw-Hill. 0-07-294548-6

Presser, Stanley (Ed). (2004) Methods for testing and evaluating survey questionnaires. New York: Wiley. 0-471-45841-4

Workloads and Terms

Lectures 2 hours per week
Private study 6 – 8 hours weekly throughout the trimester

Lectures

The lectures will be a combination of theory and practice, informal and interactive, more of a continuous workshop aimed at helping students develop active research skills.

Assessment Requirements

Assessment	Due date	Weighting
Statistical analysis and report of findings of example data set supplied.	21 Apr 05	40%
Research project	26 May 05	60%

4.1 Assignment one - Quantitative and qualitative data analysis

Date due: 21 Apr 2005
Assessment value: 40%
Submission details: Hand in at the beginning of the class.

Assessment details:

You will be given a data set from a large survey done previously. It will be in XL format. You are required to convert the data into SPSS and choose suitable labels, codes etc., to prepare the data ready for analysis. You may have to clean up the data before using it. You will then inspect the data and decide what summary statistics are suitable for analysing the responses, and how to analyse any qualitative data. You will carry out as many analyses as the data suggest, using the techniques learned in the course. After analysis you will then decide how best to present any significant results to the data owner. The data owner is located in Perth, Australia. The data owner has no knowledge of statistical analysis.

4.2 Assignment two - Data Collection and Analysis Methods

Date due: 26 May 2005
Assessment value: 60%
Submission details: Hand in at the beginning of the class.

Assignment procedure:

a) Questionnaire Design Exercise
The first part of the assessment will be to design a questionnaire. The requirement is to design a questionnaire which will be used to collect responses about an Information Systems issue. The issue will be negotiated at the first lecture of the course.

b) Questionnaire Refinement
After handing in, all the questionnaires will be critiqued anonymously by the class and from that exercise one consolidated questionnaire will be created incorporating the best questions from all those suggested. Each person will then design an SPSS data set to hold the responses.

c) Data Collection Exercise
Each student will then collect responses using the questionnaire. This will be done outside of class time.

d) Data entry and exchange exercise
Each student will enter the data from the questionnaires, check it and make the data available to others so that each student has a complete set of every response, theirs plus that of the other members of the class.

Assessed individual work (60%)

e) Data analysis exercise
Each student will analyse all the data collected and use it to produce an individual qualitative and quantitative summary of the findings.

Grading standards

Letter Grade	***Number/Percentage Grade Equivalent***	***Simple Description***	***Extended Description***
A+	Over 84	Outstanding	Far exceeds requirements, flawless, creative
A	80-84	Excellent	Polished, original, demonstrating mastery
A-	75-79	Very Good	Some originality, exceeds all requirements
B+	70-74	Good	Exceeds requirements in some respects
B	65-69	Satisfactory	Fulfils requirements in general
B-	60-64	Acceptable	Only minor flaws. Unoriginal
C+	55-59	Pass	Mistakes, recapitulation of course material
C	50-54	Minimum pass	Serious mistakes or deficiencies
D	40-49	Marginal Fail	Little understanding, insufficient performance
E	00-39	Fail	Below the minimum required

General University Policies and Statutes

Students should familiarise themselves with the University's policies and statutes, particularly those regarding assessment and course of study requirements, and formal academic grievance procedures.

Student Conduct and Staff Conduct

The Statute on Student Conduct together with the Policy on Staff Conduct ensure that members of the University community are able to work, learn, study and participate in the academic and social aspects of the University's life in an atmosphere of safety and respect. The Statute on Student Conduct contains information on what conduct is prohibited and what steps can be taken if there is a complaint. For queries about complaint procedures under the Statute on Student Conduct, contact the Facilitator and Disputes Advisor. This Statute is available in the Faculty Student Administration Office or on the website at: www.vuw.ac.nz/policy/StudentConduct.
The policy on Staff Conduct can be found on the VUW website at:
www.vuw.ac.nz/policy/StaffConduct.

Academic Grievances

If you have any academic problems with your course you should talk to the tutor or lecturer concerned or, if you are not satisfied with the result of that meeting, see the Head of School or the Associate Dean (Students) of your Faculty. Class representatives are available to assist you with this process. If, after trying the above channels, you are still unsatisfied, formal grievance procedures can be invoked. These are set out in the Academic Grievances Policy which is published on the VUW website:
www.vuw.ac.nz/policy/AcademicGrievances.

Plagiarism

Victoria University defines plagiarism as the copying of ideas, organisation, wording or anything else from another source without appropriate reference or acknowledgement so that it appears to be one's own work. This includes published and unpublished work, the Internet and the work of other students and staff. Plagiarism is an example of misconduct in the Statute of Student Conduct. Students who have plagiarised are subject to a range of penalties under the Statute. See the website: www.vuw.ac.nz/policy/StudentConduct.

Students with Disabilities

The University has a policy of reasonable accommodation of the needs of students with disabilities. The policy aims to give students with disabilities an equal opportunity with all other students to demonstrate their abilities. If you have a disability, impairment or chronic medical condition (temporary, permanent or recurring) that may impact on your ability to participate, learn and/or achieve in lectures and tutorials or in meeting the course requirements, then please contact the Course Coordinator as early in the course as possible. Alternatively you may wish to approach a Student Adviser from Disability Support Services to confidentially discuss your individual needs and the options and support that are available. Disability Support Services are located on Level 1, Robert Stout Building, or phoning 463-6070, email: disability@vuw.ac.nz. The name of your School's Disability Liaison Person can be obtained from the Administrative Assistant or the School Prospectus.

Student Support

Staff at Victoria want students' learning experiences at the University to be positive. If your

academic progress is causing you concern, please contact the relevant Course Co-ordinator, or Associate Dean who will either help you directly or put you in contact with someone who can.

The Student Services Group is also available to provide a variety of support and services. Find out more at www.vuw.ac.nz/st_services/ or email student-services@vuw.ac.nz.

VUWSA employs two Education Coordinators who deal with academic problems and provide support, advice and advocacy services, as well as organising class representatives and faculty delegates. The Education Office is located on the ground floor, Student Union Building, phone 463 6983 or 463 6984, email education@vuwsa.org.nz.