THE UNIVERSITY OF AUCKLAND
BUSINESS SCHOOL

Course Outline 2017
INFOMGMT 393: DATA MINING AND DECISION SUPPORT (15 POINTS)
Semester 1 (1173)

Course Prescription
Business modelling to solve challenging problems faced by identified stakeholders. Decomposing unstructured complex problems, evaluating and prioritising alternatives, allocating scarce resources, and justifying and defending solutions provided.

Programme and Course Advice
Prerequisite: INFOMGMT 292 or INFOSYS 222 or equivalent

Goals of the Course
This course aims to provide students with a sound theoretical background of knowledge management in an organisation, with decision support and business intelligence tools (includes data mining, and data warehousing). The course offers the opportunity to build decision support solutions using state of the art business intelligence tools.

Learning Outcomes
By the end of the course, the student will be able to:

1. understand information needs of an organisation, department or functional division, and individual stakeholders involved in the business;
2. gain a sound theoretical knowledge of decision support, data mining and data warehousing principles;
3. gain practical experience in the design and implementation of a Decision Support System in a collaborative and networked environment using state of the art data warehousing, data mining and business intelligence tools;
4. critique and document the quality of information and DSS models used in implemented systems in a business; and
5. conduct research on one aspect of data mining and decision support and then suggest a design solution to a decision problem taking into consideration human, organizational, and technical issues and the utilization of discussed technologies.

Content Outline
This course will be conducted under the following themes:

- Week 1 Data warehousing Concepts
- Week 2 Business Intelligence and Data Mining: an introduction
- Week 3,4,5,6, Data mining Techniques and Applications
- Week 7 Business Analytics & Visualisation
- Week 8 Introduction to DSS
- Week 9 DSS Concepts; Methodologies; Variations
- Week 10 Knowledge Management & Intelligent Systems
- Week 11 DSS Implementations
- Week 12 Revision

Learning and Teaching

The course is delivered through Lectures three hours per week and lab session of 2 hours per week.

Teaching Staff

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Learning Resources

Recommended Reading

- *"Decision Support Systems in the 21st Century"* – 2nd Edition by George M. Marakas, published by Prentice Hall (Recommended), ISBN 0-13-245323-1
- Online tutorials and support for the software

Assessment

To pass this course a pass in both the coursework and the exam is required.

Course Work **(50%)**
Exam **(50%)**

Labs		10%
Assignment		20%
Discussion Questions (DQ)	or Paper presentations	20%
Exam		50%
Total		100%

The final exam will be based on all material covered in the course. Assignment hand-out and due dates are given in the course schedule.

Learning Outcome	Labs	Assignment	DQ: Paper Presentations	Final Examination
1		**X**	**X**	**X**
2	**X**	**X**	**X**	**X**
3	**X**	**X**	**X**	**X**
4	**X**	**X**	**X**	**X**
5	**X**	**X**	**X**	**X**