INTRODUCTION

Commencing January 2007 the Victoria University (VU) commenced a suite of modified and new logistics programs at both undergraduate and postgraduate levels. The two streams include programs in both the Business & Law and the Health Science & Engineering faculties. The purpose of the two streams is to capture the full breadth of learning in logistics.

From this position the University is well placed for the Master of Science in Logistics Systems and Support to offer advanced standing for the Australian Defence Force (ADF) Graduate Diploma of Resource Management.

The School of Computer Science and Mathematics is responsible for delivering the Masters program. The School is strongly supported by the Institute of Logistics and Supply Chain Management that is an Institute within Victoria University that provides guidance and technical input to both education and research projects within the University.

BRIEF DESCRIPTION OF COURSE

The designated ADF course of Graduate Diploma of Resource Management conducted for Royal Australian Engineers – Officers – ISC, COAC, IOC would receive advanced standing in the Victoria University Master of Science in Logistics Systems and Support.

The VU Master of Science in Logistics Systems and Support course comprises the following units of study:

- Supply Networks & Logistics Strategy
- Logistics Solutions and Systems
- Sequencing and Scheduling
- Optimisation Techniques
- Business Risk and Planning
- Quality Management and Statistics
- Reliability and Maintenance
- Organisation Analysis and Behaviour
- Financial Decision Support Systems
- Statistical Computing
- Thesis

The program offers exit points for a Graduate Certificate after the successful completion of four subjects and for a Graduate Diploma after eight subjects with the Master Degree being awarded after successful completion of all units.

The Thesis Unit is equivalent to two study units. It is recommended that the research units form part of the Master of Science being offered to ADF candidates.
MODE OF DELIVERY

The course is delivered in lecture format with research conducted by the student in an appropriate manner within the student’s time. The course will be delivered on a part-time basis over three semesters with lectures being offered in the evenings. Each subject carries a value of 12 credit points.

It is not anticipated that the course will include units from other universities

CREDIT PROPOSED FOR ADF GRADUATE DIPLOMA

Based on the details provided in the ADF course materials the successful graduates from the ADF Graduate Diploma of Resource Management would be offered eight units in the Master of Science in Logistics Systems and Support.

The prospective ADF applicants would be offered the following units to be awarded the VU Master of Science in Logistics Systems and Support:

- Research Thesis

And two units from the following:

- Sequencing and Scheduling
- Reliability and Maintenance
- Supply Networks and Logistics Strategy
- Logistics Solutions and Strategy

CONTENT DETAILS OF PROPOSED UNITS

Research Thesis
The aim of this unit is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study elaborated and an extended discussion presented. All students entering the unit will discuss the research topic with the Course Director.

Sequencing and Scheduling
The unit provides students with a comprehensive understanding of business techniques directed towards the streamlining of operations and supply chain events and processes. The unit includes a selection of topics from the following: Standard flow shop and job shop/scheduling techniques, Project scheduling and management, Critical Path analysis, PERT calculations, Time/cost trade offs in reducing project or lead time, Crashing and indirect costings, Time charting and Resource levelling, Project risk analysis and Materials Requirement Planning.

Reliability and Maintenance
The unit of study provides students with an understanding of the importance of the inter-related topics of systems reliability, maintainability and availability. A statistical approach is taken and methods are
tempered to meet practical considerations. The study will deliver: a sound practical study of reliability analysis; risk assessment and maintenance policies; importance of reliability models in component and system design; replacement strategies and specific techniques of systems reliability.

Supply Networks and Logistics Strategy
The unit covers the area of global business and the structure of supply networks; industrial and support capacity and its relationship to demand and supply. Topics include: behaviour through power and relationships through ownership, control and influence in supply networks; uncertainty and risk in supply networks; improving business outcomes in the supply network through revenue management and strategic alliances; design and costs of supply networks; development of a logistics strategy for an organisation; Asia Pacific supply networks and particular challenges within this geographical area.

Logistics Solutions and Systems
The unit aims to assist students in structuring a specific problem and analysing the current business environment in which the problem exists. Using audit report methods as a basis to provide management with options and viable solutions for a range of issues such as: Transport; Storage; Material Handling; Inventory; Procurement.

The unit enables the application of problem based learning techniques as the learning medium.

PATHWAYS TO OTHER VU COURSES
Currently the Master of Business in Global Logistics and Transport does not provide any pathways to other VU or external courses.

VU CONTACT
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LINK TO COURSE
SMLS - Master of Science in Logistics Systems and Support