APPENDIX I

MASTER OF ENGINEERING STRUCTURES

(Part of New Postgraduate Program in Engineering Structures)

1. Background

This proposal is part of broader University strategic and operational goals of increasing the number of full fee postgraduate coursework enrolments. The proposal builds on the existing postgraduate program in the International Technologies Centre (IDTC) of the Department of Civil and Environmental Engineering and is part of IDTC's strategy to expand and improve the flexibility of the program to cater for a broader range of domestic and international students.

This proposal is for a new specialist course titled 'Engineering Structures' to be added to the existing postgraduate program in IDTC. In particular, the new course involves the addition of 3 new Level 600 subjects to the pool of subjects already available in the IDTC program. The introduction of this new course is in response to the numerous inquiries from prospective international students seeking a postgraduate coursework program in 'Engineering Structures'. The proposed course will enable students to develop their skill levels beyond the skills acquired in a typical undergraduate curriculum.

The existing IDTC program has been in operation for 24 years, during which period the course has been attended by over 500 students from over 35 countries. The courses and subjects have been very well received in the past, and many international alumni currently occupy high level positions in academia, research and consulting.

Leading universities such as University of California, Colorado State University and Loughborough University and a number of Universitas 21 members offer some elements of the proposed program.
The staff involved in the program have extensive research and consulting experience in their discipline with an extensive "peer reviewed" publication record. IDTC staff makes frequent visits to other Universities both in Europe and Asia and receive frequent visits by international colleagues that provide opportunities to compare course structure, content and quality of delivery.

2. Entry Requirements

Master of Engineering Science (Engineering Structures) – 150 credit points
Master of Engineering Structures – 100 credit points

- a 4 year undergraduate degree in Civil Engineering with an average grade of at least H3 (65%); or
- a 3 year undergraduate degree in Civil Engineering with an average grade of at least H3 (65%) plus at least 2 years of full time, documented, relevant, work experience; or
- a 3 year undergraduate degree in Civil Engineering and a Postgraduate Diploma in Engineering (Engineering Structures), or equivalent; or
- a 3 year undergraduate degree in Civil Engineering and a Postgraduate Certificate in Engineering (Engineering Structures) and at least one year's full time relevant, documented work experience.

Postgraduate Certificate in Engineering (Engineering Structures) – 50 credit points
Postgraduate Diploma in Engineering (Engineering Structures) – 100 credit points

- an undergraduate degree in Civil Engineering.

3. Course Structure

The course structure for the proposed course 'Engineering Structures' is consistent with the IDTC program which is listed as follows:

Graduate Certificates and Diplomas

Candidates with a three-year degree must complete a Graduate Diploma in Engineering before entering the Postgraduate Program. The selection of subjects will be based on discussion with the respective Course Coordinator to ensure that any deficiencies in the candidate's background are adequately addressed.

Postgraduate Certificate and Diploma

Candidates may exit the postgraduate program with a Postgraduate Certificate after completing 50 points, or a Postgraduate Diploma after completing 100 points. The Certificate or Diploma will be labelled with a stream specialisation, provided the candidate satisfies the specific requirements of the course.

A candidate enrolled in a Postgraduate Diploma who does not pass all 8 subjects may graduate with a Postgraduate Certificate if the requirements for that degree are met.

Named Masters

Candidates are required to complete 100 points of level 5 and 6 subjects in accordance with the requirements of the course concerned, and achieve a grade of >50% in all subjects and average >70% to obtain a Named Master qualification.

Candidates who do not achieve an average of 70% across their best 8 subjects may choose to either graduate with a Postgraduate Diploma or Certificate provided the requirements for those degrees are met, or take additional subjects approved by the course coordinator to improve their average.

Master of Engineering Science/Applied Science

Students are required to complete 100 points of level 5 and 6 subjects in accordance with the requirements of the respective Named Masters, In addition, a grade of >70% in the subject 421-642 Research Project. Additionally, students must undertake 50 points of research over a full time semester.

The specific requirements for each new award are as follows:

Degree Type	Core Subjects	Restricted Elective Subjects	Elective Subjects
Postgraduate Certificate in Engineering (Engineering Structures)	421-317: Structural Engineering 2 (12.5 pts) 421-410:Structural Steel Theory & Design (6.25 pts) 421-411: Concrete Theory & Design (6.25 pts)		25 points of level 4 subjects chosen from Electives Table or such other subjects as are approved by the course coordinator (not more than 12.5 points by research)

Postgraduate Diploma in Engineering (Engineering Structures)	421-317: Structural Engineering 2 (12.5 pts) 421-410:Structural Steel Theory & Design (6.25 pts) 421-411: Concrete Theory & Design (6.25 pts)		75 points of subjects chosen from Electives Table or such other subjects as are approved by the course coordinator (not more than 25 points by research and no more than 50 points of level 5 subjects)
Master of Engineering Structures	421-670: Sustainable Buildings 421-6xx: Advanced Design of Building structures	25 points from: 421-6xx: Dynamic Loading of Structures 421-6xx: Design of Structures for Blast, Impact and Fire 421-654: Principles of Asset Management	50 points of subjects chosen from Electives Tables or such other subject as are approved by the Course Coordinator (Not more than 25 points by research)
Master of Engineering Science or Applied Science in Engineering Structures	As for Master of Engineering Structures plus: 421-642: Research Project (12.5 points) 421-644 Research Project (50 points)	As for Master of Engineering Structures	37.5 points of subjects chosen from Electives Tables or such other subject as are approved by the Course Coordinator.

Program Features

- Student intake may be in either Semester 1 or Semester 2.
- Students who complete a Postgraduate Certificate may apply to the Selection Committee to transfer to a Masters Degree with credits for level 5 subjects if they choose not to take out their degree.
- Named Masters students are required to complete 100 points of level 5 & 6 subjects with an average mark of > 70% in their best 8 subjects.
- Master students with an average grade < 70% at the end of the program will graduate with a Postgraduate Diploma.
- Master of Eng Sc/ App Sc students are required to average 70% in the first 100 points of study and 70% in the subject 421-642 Research Project (12.5 pts) before progressing to the research semester.
- Students may be granted an award different to that in which they are enrolled. This may involve a change in award level, e.g. a student enrolled in Master of Engineering Science may be awarded a Named Masters, Postgraduate Diploma, Postgraduate Certificate, Graduate Diploma or Graduate Certificates; or a change in the stream specialisation provided the requirements of the course are met.

- The structure of this program has been designed to accommodate the special requirements of AUSAid sponsored students[4].

4. EFTSU and Budgetary Consequences

The proposal involves the addition of 3 new level 600 subjects which will be resourced internally from the Department with existing staff and therefore does not have additional budgetary implications.

The existing IDTC program is already available and attended primarily by overseas students and this course will also be available to overseas students. The course will not be available as distance education.

All courses in this proposal will be available to full-fee paying Australian students.

[4] Preliminary studies may be prescribed to AusAID sponsored students to meet award rules.