CVEN90026 Extreme Loading of Structures

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2013.
Time Commitment:	Contact Hours: 36 hours, comprising of three hours of lectures/practice classes per week Total Time Commitment: 120 hours
Prerequisites:	# Admission to Master of Engineering (Structural Engineering) OR # Admission to Master of Engineering (Civil Engineering) OR # Admission to Master of Engineering Structures
Corequisites:	None
Recommended Background Knowledge:	Learning in this subject will be assisted by knowledge gained in the following:

Subject	Study Period Commencement:	Credit Points:
CVEN90049 Structural Theory and Design 2	Not offered 2013	12.50

Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Contact:	Assoc Prof Nelson Lam **ntkl@unimelb.edu.au (mailto:ntkl@unimelb.edu.au)**
Subject Overview:	At the conclusion of this subject students should be capable of modelling a variety of abnormal loads based on advanced concepts for structural engineering analyses and integrating the modelling methodologies with modern design philosophies and performance based principles. Topics include design loads philosophies and codification issues, and modelling loadings arising from earthquakes, blasts, impact and wind.
Objectives:	On completion of this subject students should be able to: # Use risk analysis techniques to inform performance based design criteria # Use numerical techniques to model both the loading and response of structures to the transient actions of earthquake ground shaking, accidental impact, strong wind and blast # Assess the output to these models to inform the design process for safety and serviceability
Assessment:	Two 1000 word assignments, due in week 8 and late semester (15% each) One 3 hour examination held in the examination period (70%)
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	# Ability to apply knowledge of science and engineering fundamentals # Ability to undertake problem identification, formulation, and solution # Ability to utilise a systems approach to complex problems and to design and operational performance # Proficiency in engineering design # Capacity for creativity and innovation # Understanding of professional and ethical responsibilities, and a commitment to them
Related Course(s):	Master of Engineering Structures Master of Engineering Structures Master of Philosophy - Engineering Ph.D.- Engineering Postgraduate Certificate in Engineering
Related Majors/Minors/ Specialisations:	Master of Engineering (Civil) Master of Engineering (Structural)