

746-ST Master of Engineering Structures

Year and Campus:	2009																																
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees																																
Level:	Graduate/Postgraduate																																
Duration & Credit Points:																																	
Coordinator:	Assoc.Professor Nelson Lam Dept. of Civil and Environmental Engineering Tel: +61 3 83447554 Email: ntkl@unimelb.edu.au																																
Contact:	<p>Engineering Student Centre Ground Floor, Old Engineering Building The University of Melbourne Victoria 3010 AUSTRALIA</p> <p>Tel: +61 3 8344 6703 Fax: +61 3 9349 2182 Email http://eng-unimelb.custhelp.com (http://eng-unimelb.custhelp.com/)</p>																																
Course Overview:	<p>The Graduate Program in Engineering Structures is designed to meet the needs of graduates involved in disciplines associated with the advanced design of engineering structures. The Program includes contemporary issues such as ecologically sustainable buildings and the design of structures for extreme loading, such as earthquake, wind, blast and fire. Participants are also able to choose from a wide range of elective subjects including subjects focusing on project management and architecture. The major themes of this course are: structural systems, conceptual design, sustainable design, extreme loading and advanced analysis techniques.</p> <p>A three-semester program on a full-time basis comprised of 150 points, consisting of the subjects required for the Master of Engineering Structures with the addition of two research subjects and a corresponding reduction in the number of points allocated to elective subjects.</p>																																
Objectives:	-																																
Course Structure & Available Subjects:	-																																
Subject Options:	<p>Core subjects: 25 points</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>421-670 Sustainable Buildings</td> <td>Semester 2</td> <td>12.500</td> </tr> <tr> <td>421-694 Advanced Design of High Rise Structures</td> <td>Semester 1</td> <td>12.500</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>421-612 Earthquake Resistant Design of Buildings</td> <td>Semester 1</td> <td>12.500</td> </tr> <tr> <td>421-613 Advanced Concrete Design and Technology</td> <td>Semester 2</td> <td>12.500</td> </tr> <tr> <td>421-614 Structural Dynamics and Modelling</td> <td>Semester 2</td> <td>12.500</td> </tr> <tr> <td>421-654 Principles of Asset Management</td> <td>Semester 1</td> <td>12.500</td> </tr> <tr> <td>421-695 Extreme Loading of Structures</td> <td>Semester 1</td> <td>12.500</td> </tr> <tr> <td>421-632 Design in Steel & Other Materials</td> <td>Semester 2</td> <td>12.500</td> </tr> </tbody> </table> <p>Electives</p> <p>37.5 points of subjects chosen from Electives Table or such other subject as are approved by the Course Coordinator. (Not more than 25 points by research).</p>			Subject	Study Period Commencement:	Credit Points:	421-670 Sustainable Buildings	Semester 2	12.500	421-694 Advanced Design of High Rise Structures	Semester 1	12.500	Subject	Study Period Commencement:	Credit Points:	421-612 Earthquake Resistant Design of Buildings	Semester 1	12.500	421-613 Advanced Concrete Design and Technology	Semester 2	12.500	421-614 Structural Dynamics and Modelling	Semester 2	12.500	421-654 Principles of Asset Management	Semester 1	12.500	421-695 Extreme Loading of Structures	Semester 1	12.500	421-632 Design in Steel & Other Materials	Semester 2	12.500
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Subject	Study Period Commencement:	Credit Points:
175-501 Presenting Academic Discourse	Semester 1, Semester 2	12.500
421-505 Engineering Hydraulics	Semester 1	12.500
421-516 Hydraulics and Hydrology	Semester 2	12.500
421-519 Design of Environmental Systems	Semester 2	12.500
421-522 Environmental Engineering Design	Semester 2	12.500
421-523 Occupational Health and Safety Basics	Semester 1, Semester 2	12.500
421-525 Field Data Acquisition and Analysis	Semester 1	12.500
421-539 Geotechnical Applications	Semester 2	12.500
421-580 Hydrological Processes 1	Semester 1	12.500
421-581 Hydrological Processes 2	Semester 1	12.500
421-602 Air Quality Control	Semester 1	12.500
421-604 Environmental Management ISO 14000	Semester 2	12.500
421-605 Managing Water Borne Risks	Semester 2	12.500
421-606 Solid Wastes to Sustainable Resources	Semester 1	12.500
421-609 Technology in Society	Not offered 2009	12.500
421-616 Technology Assessment	Semester 1	12.500
421-626 Design of Energy Systems	Semester 2	12.500
421-627 Sustainable Water Resources Management	Semester 2	12.500
421-629 Energy Efficiency Technology	Semester 2	12.500
421-640 Water Supply and Waste Water Management	Semester 1	12.500
421-642 Research Topic	Semester 1, Semester 2	12.500
421-643 Research Investigation	Semester 1, Semester 2	25.000
421-644 Research Project	Semester 1, Semester 2	50.000
421-663 Engineering Project Management	Semester 1	12.500
421-664 Project Delivery	Semester 2	12.500
421-666 Management of Project Resources	Semester 2	12.500
421-667 Project Management Practices	Semester 2	12.500
421-668 Sustainable Irrigation System Management	Not offered 2009	12.500
421-671 Financial Analysis of Complex Projects	Semester 1	12.500
421-672 Management of Technological Enterprises	Semester 1	12.500
421-673 Sustainable Supply Chain Management	Semester 2	12.500
421-680 Engineering for Sustainable Environments	Summer	12.500

	421-681 Management for the Environment	Semester 2	12.500
	421-682 Engineering Systems Management	Semester 2	12.500
	421-692 Biological Systems Engineering	Not offered 2009	12.500
	421-693 Anatomy & Physiology for Engineers	Semester 2	12.500
	421-697 Heating, Ventilation and Airconditioning	Semester 1	12.500
	421-699 Forces, Fields and Flows in Bio Systems	Semester 1	12.500
	421-632 Design in Steel & Other Materials	Semester 2	12.500
Entry Requirements:	<p>The academic requirements for admission to the Masters program are: 4 year degree in engineering or science in a relevant discipline with an average grade of at least 65% or via pathway (average grade equivalent to at least 65% at the University of Melbourne)</p> <p>Language Requirements</p> <p>International students and students whose prior qualifications are from a university where English is not the official language of instruction and examination need to supply proof of academic English language competency.</p> <p>Proof acceptable to the University includes:</p> <p>Original evidence of an English Language test score at a sitting within the last 24 months of either -</p> <p>TOEFL - at least 577 and a TWE of at least 4.5 (paper based) or a TOEFL of at least 233 with an Essay Rating of at least 4.5 (computer based)</p> <p>or</p> <p>IELTS - at least 6.5. (A minimum band score of 6 is required in the Academic Writing module).</p> <p>Entry under a slightly lower Engineering alternative* English Language entry requirement is available as follows:</p> <p>TOEFL - at least 550, with a TWE of 4 or the computer based TOEFL of at least 213 with an Essay Rating Score of at least 4 and agreeing in writing to undertake and pass an ESL subject in the first semester of study at the University of Melbourne</p> <p>or</p> <p>IELTS - at least 6 and agreeing in writing to undertake and pass an ESL subject in the first semester of study at the University of Melbourne.</p> <p>* The Faculty of Engineering's English Language alternative may affect the duration and cost of your course.</p>		
Core Participation Requirements:	-		
Graduate Attributes:	-		
Generic Skills:	-		