

ABPL30046 Structures and Construction Systems

Credit Points:	12.5									
Level:	3 (Undergraduate)									
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.									
Time Commitment:	Contact Hours: 2 x 2 hour lectures per week; 1x1 hour tutorial per week Total Time Commitment: 170 hours									
Prerequisites:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ABPL20042 Residential Construction and Structures</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>ABPL20053 Concrete Structures and Construction</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ABPL20042 Residential Construction and Structures	Semester 1	12.50	ABPL20053 Concrete Structures and Construction	Semester 2	12.50
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ABPL20042 Residential Construction and Structures	Semester 1	12.50								
ABPL20053 Concrete Structures and Construction	Semester 2	12.50								
Corequisites:	None									
Recommended Background Knowledge:	None									
Non Allowed Subjects:	None									
Core Participation Requirements:	<p><p>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.</p> <p>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</p></p>									
Coordinator:	Mr Omid Touranisama									
Contact:	<p>Subject Coordinator email: omid.touranisama@unimelb.edu.au (mailto:omid.touranisama@unimelb.edu.au)</p> <p>The Eastern Precinct (building 138) (between Doug McDonnell building and Eastern Resource Centre)</p> <p>Enquiries: Current Student: http://ask.unimelb.edu.au/ (http://ask.unimelb.edu.au/) Web: http://edsc.unimelb.edu.au/ (http://edsc.unimelb.edu.au/)</p>									
Subject Overview:	<p>Commercial construction can take many forms and often includes a multitude of complex systems with specific plant and equipment requirements. These commercial buildings can include high, medium or low rise office or apartment buildings, hospitals and institutional buildings, shopping centres, sporting facilities and warehouse industrial sheds. Each project has characteristic structural forms and resultant methods of construction. This subject investigates the various structural design concepts and their influence on construction. The topics covered include the interpretation of steelwork drawings and specifications, steel frame buildings and wide span industrial sheds, warehouse concrete pavements, basement construction and site retention methods, piling systems and construction methods to suit various geotechnical conditions, tilt slab construction methods, precast concrete building systems. Construction detailing and constructability are the key issues covered within each topic together with organisation of the construction process and hybrid construction systems.</p>									

Learning Outcomes:	<p>On successful completion of this subject, students should be able to:</p> <ul style="list-style-type: none"> # link structural design concepts and relate these to current construction practices; # interpret concrete structural drawings and be conversant with engineering terminology; # evaluate alternative construction systems; # communicate construction solutions by means of sketches and drawings; # research and analyse new construction methods and new products.
Assessment:	<p>Assignment 1: Design and proposed construction system for either a steel frame, steel portal frame, or industrial ground slab equivalent to 700 words worth 15% due in Week 5. Assignment 2: Design and proposed construction method for a precast, post-tensioned or composite concrete structures system equivalent to 700 words worth 15% due in Week 9. 3 hour written exam worth 70% held during the examination period. Hurdle requirement: A minimum mark of 40% must be achieved in the examination in order to pass the subject.</p>
Prescribed Texts:	Course notes / reader available from the university bookshop
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2016/B-ARTS) # Bachelor of Biomedicine (https://handbook.unimelb.edu.au/view/2016/B-BMED) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2016/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2016/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2016/B-MUS) # Bachelor of Science (https://handbook.unimelb.edu.au/view/2016/B-SCI) # Bachelor of Engineering (https://handbook.unimelb.edu.au/view/2016/B-ENG) <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>On successful completion of this subject, students should have developed the following generic skills:</p> <ul style="list-style-type: none"> # Analytical and evaluation skills; # Communication skills; # Problem solving skills; # Team working skills.
Notes:	Students undertaking this subject will be expected to regularly access an internet-enabled computer primarily for technical construction product information and for the LMS.
Related Majors/Minors/Specialisations:	<p>Architecture major Civil (Engineering) Systems major Construction major Engineering Systems Environments Discipline subjects Property major Restrictions for Breadth Options within the Bachelor of Environments - relating to specific majors</p>
Related Breadth Track(s):	<p>Construction Construction Technologies and Principles</p>