

ABPL20053 Concrete Structures and Construction

Credit Points:	12.5								
Level:	2 (Undergraduate)								
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.								
Time Commitment:	Contact Hours: 2 X 2 hour lectures and 1 x 1 hour of 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> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	ABPL20042 Residential Construction and Structures	Semester 1	12.50
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ABPL20042 Residential Construction and Structures	Semester 1	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:	Dr Toong-Khuan Chan								
Contact:	<p>Email: tchan@unimelb.edu.au (mailto:tchan@unimelb.edu.au) 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 and high rise construction (excluding industrial buildings) relies heavily of the use of reinforced concrete for the structural components. The cost of the building structure is a significant portion of the total cost of the project. The interpretation of the information provided on the engineers' reinforced concrete drawings and specifications provides the necessary means to be able to transfer this data into the physical built form. As a result, this subject investigates the rheology of concrete and the use of admixtures. Structural design concepts for reinforced concrete structures are analysed and their influence on construction methods assessed. The concepts relate to reinforced concrete frames including slab and beam systems, prestressed concrete design concepts and construction methods and composite construction systems. Other related topics include exposed concrete surface finishes, sprayed concrete technology, concrete detailing and constructability.</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; 								

	<ul style="list-style-type: none"> # communicate construction solutions by means of sketches and drawings; # propose and evaluate alternate construction systems.
Assessment:	Assignment 1 equivalent to 400 words due in Week 5 reporting on reinforced concrete elements viewed during a site visit (10%); Assignment 2 equivalent to 1000 words due in Week 9 on the design and construction aspects of a beam and slab system (20%); One end-of-semester examination of three hours duration(70%). Hurdle requirement: A minimum mark of 40% must be achieved in both the 'construction' and 'structures' sections of the examination in order to pass the subject.
Prescribed Texts:	Subject Reader
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>