

ABPL90208 Construction Measurement and Estimating

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2014.
Time Commitment:	Contact Hours: 4 hours a week (48 hours total). Total Time Commitment: 120 hours
Prerequisites:	Admission to the 200-point Master of Construction Management OR completion of the first 100 points of the 300-point Master of Construction Management.
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>
Contact:	<p>Environments and Design Student Centre Ground Floor, Baldwin Spencer (building 113)</p> <p><i>Enquiries</i> Phone: 13 MELB (13 6352) Web: http://edsc.unimelb.edu.au/ (http://edsc.unimelb.edu.au/) Email: edsc-enquiries@unimelb.edu.au (mailto:edsc-enquiries@unimelb.edu.au)</p>
Subject Overview:	<p>Upon completion of this subject students should be able to:</p> <ol style="list-style-type: none"> 1. Analyze the concept and various issues in Building Information Model as well as BIM workflow. 2. Develop a BIM for a building. 3. Extract quantities of building work items using 2D and 3D measurement approach as well as 5D BIM estimating with relevant software; 4. Apply the Australian Cost Management manual to cost planning of construction works. 5. Prepare a Cost Plan for a building 6. Able to develop unit rate and price for measured construction works items 7. Write specifications for building works and analyze the impact of specifications on project pricing.
Learning Outcomes:	<p>Upon completion of this subject students should be able to:</p> <ul style="list-style-type: none"> # Develop a Building Information Model (BIM) for a simple residential building; # Extract quantities of building work items from BIM using take-off software; # Apply the Australian Standard Method of Measurement to measurement, quantification and description of construction works; # Prepare a bill of quantities for work items measured from drawings; # Develop unit rate and price for measured construction works items; and # Write specifications for building works and analyze the impact of specifications on project pricing.
Assessment:	<ul style="list-style-type: none"> • Two assignments equivalent to a total of 3500 words (35% each) due in week 7 and 11, focussing on demonstrating technical and communication skills to produce building design

	documents in two dimensions and three dimensions, using ICT as an enabler and on that basis producing cost plans and cost models. • One and a half hour examination equivalent to 1500 words during the examination period (30%) demonstrating understanding of process and the role of ICT in financial representation of building design and construction. A minimum mark of 40% has to be achieved in the examination in order to pass this subject.
Prescribed Texts:	Marsden, P. (1998) Basic Building Measurement. University of New South Wales Press. AIQS et al (1990) Australian Standard Method of Measurement. AIQS & MB-CHAA. Picken, D. (1999) Building Measurement: worked examples, Deakin University Press. Geelong. Browne, P.W. (1988) An Analytical approach to Construction Estimating. University of New South Wales Press. Sierra, J. (2007) The A TO Z Guide to Builders' Estimating. Australian Institute of Quantity Surveyors.
Recommended Texts:	<ul style="list-style-type: none"> # Sierra, J.J.E. (1991) Building Measurement: A Guide to the Australian Standard Method of Measurement of Building Works. OTEN, Redfern, NSW. # Murray, G.P. (1997) <i>Measurement of Building Services</i>. Macmillan, London. # Seeley, Ivor H, (1989) Advanced Building Measurement. Macmillan, London. # Buchan R., Fleming, F.W., and Grant, F.E. (2003) Estimating for Builders and Surveyors, 2nd edn. Butterworth-Heinemann, Oxford.
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:	<ul style="list-style-type: none"> # Effective participation as a team member. # Written, verbal and visual presentation of ideas # Correct use of technical terminology relating to quantification of building works and cost estimating. # Information gathering and critical synthesis skills # Electronic measurement skill # Identification and familiarity with building components # Understanding of construction documentation used in residential construction.
Related Majors/Minors/Specialisations:	Building Building Systems and Trade Specialties Cost Management Melbourne School of Design multidisciplinary elective subjects Project Management