

## ABPL90208 Construction Measurement and Estimating

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 4 hours a week (48 hours total). Total Time Commitment: 120 hours
<b>Prerequisites:</b>	Admission to the 200-point Master of Construction Management OR completion of the first 100 points of the 300-point Master of Construction Management.
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	For the purposes of considering requests for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Coordinator:</b>	Dr Ajibade Aibinu
<b>Contact:</b>	<b>Environments and Design Student Centre</b> Ground Floor, Baldwin Spencer (building 113) <i>Enquiries</i> Phone: 13 MELB (13 6352) Website: <a href="http://www.msd.unimelb.edu.au">http://www.msd.unimelb.edu.au</a> ( <a href="http://www.msd.unimelb.edu.au/">http://www.msd.unimelb.edu.au/</a> )
<b>Subject Overview:</b>	This subject builds on design cost management and cost management and understanding from construction services. It comprises further measurement, quantification and documentation of building works and measurement of civil engineering works. Topics include: measurement of building works including substructure (foundation on sloping sites, stepped foundation, columns bases and basement construction, non linear strip foundation, raft foundation); further measurement of superstructure; reinforced concrete structures including frames, columns, beams and slabs; stair in timber and concrete; doors and windows in timber and steel including ironmongery; glazing; floor, wall and ceiling finishing; painting and decorations; measurement of mechanical and electrical installation for simple buildings; measurement of civil engineering works including roads and simple railway work; piling; simple bridges and culverts. The subject will be focused on electronic measurement with CostX software and Building Information Model using Autodesk Revit Architecture Building Design Software.
<b>Objectives:</b>	Upon completion of this subject students should be able to: <ol style="list-style-type: none"> <li>1 Develop a Building Information Model (BIM) for a simple residential building.</li> <li>2 Extract quantities of building work items from BIM using take-off software;</li> <li>3 Apply the Australian Standard Method of Measurement to measurement and quantification of construction works.</li> <li>4 Prepare a bill of quantities for work items measured from drawings.</li> <li>5 Able to develop unit rate and price for measured construction works items</li> <li>6 Write specifications for building works and analyze the impact of specifications on project pricing.</li> </ol>

<b>Assessment:</b>	Two written assignments each worth 20% (total 40%); 3 hour exam (60%). Students are required to achieve a mark of at least 40% in the exam in order to pass the subject. Attendance and participation in 80% of the tutorials is a mandatory requirement for passing the continuous assessment component of this subject.
<b>Prescribed Texts:</b>	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.
<b>Recommended Texts:</b>	<ul style="list-style-type: none"> <li># Sierra, J.J.E. (1991) Building Measurement: A Guide to the Australian Standard Method of Measurement of Building Works. OTEN, Redfern, NSW.</li> <li># Murray, G.P. (1997) <i>Measurement of Building Services</i>. Macmillan, London.</li> <li># Seeley, Ivor H, (1989) Advanced Building Measurement. Macmillan, London.</li> <li># Buchan R., Fleming, F.W., and Grant, F.E. (2003) Estimating for Builders and Surveyors, 2nd edn. Butterworth-Heinemann, Oxford.</li> </ul>
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<ul style="list-style-type: none"> <li># Effective participation as a team member.</li> <li># Written, verbal and visual presentation of ideas</li> <li># Correct use of technical terminology relating to quantification of building works and cost estimating.</li> <li># Information gathering and critical synthesis skills</li> <li># Electronic measurement skill</li> <li># Identification and familiarity with building components</li> <li># Understanding of construction documentation used in residential construction.</li> </ul>
<b>Related Majors/Minors/Specialisations:</b>	Building Building Systems and Trade Specialties Cost Management Project Management