

## Subject Description Form

<b>Subject Code</b>	BRE350
<b>Subject Title</b>	Project Management and Procurement
<b>Credit Value</b>	3
<b>Level</b>	3
<b>Pre-requisite</b>	CE123
<b>Objective</b>	Extend students' understanding of management principles and develop the knowledge of project management and procurement in the construction industry.
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> <li>a. Apply knowledge of time, quality, safety and environmental management for construction projects.</li> <li>b. Negotiate and resolve conflicts between management and employees.</li> <li>c. Communicate with others in a clear and articulate manner.</li> <li>d. Identify and propose solutions to problems.</li> <li>e. Identify the different forms of procurement and assess their impacts on the success of a project.</li> <li>f. Describe the principles underlying the choice of appropriate procurement systems.</li> <li>g. Apply and compare alternative procurement systems for all types of construction work.</li> </ol>
<b>Subject Synopsis/ Indicative Syllabus</b>	<p><b><i>Quality, Safety and Environmental Management</i></b> Quality assurance system, safety management system and environmental management.</p> <p><b><i>Human Resources Management</i></b> Recruitment, selection and engagement of personnel in construction organizations, and industrial relations.</p> <p><b><i>Planning and Programming Techniques</i></b> Planning and programming techniques including bar chart, critical path analysis and line of balance.</p> <p><b><i>Construction Procurement</i></b></p> <ul style="list-style-type: none"> <li>● The nature of building process, models of the process.</li> <li>● Categorization of procurement systems.</li> <li>● Alternative procurement systems such as traditional sequential, traditional accelerated, competitive design and build, enhanced design and build, novated design and build, management contracting and construction management, guaranteed maximum price and target cost contracting, and public private partnership.</li> <li>● Choice of appropriate procurement methods, allocation of risks and liabilities of the major parties to the arrangement.</li> <li>● Relational contracting and its impact on procurement.</li> <li>● Subcontracting management in construction.</li> </ul>

<b>Teaching/Learning Methodology</b>	Lectures will be used to introduce systems and techniques whilst the small group work will be used for the application of management skills through role-play and seminar presentation.
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<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
			a	b	c	d	e	f	g
	1. Role Play	25%		√	√	√			
	2. Seminar Presentation / E-learning Participation	25%			√	√	√	√	√
	3. Examination	100%	√			√	√	√	√
	Total	100%							

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

<i>Learning outcomes</i>	Role Play	Seminar Presentation/ E-learning Participation	Examination
1. to possess skills to identify, analyze and solve problems	√	√	√
2. to have an understanding of professional, social and ethical responsibilities	√		√
3. to communicate effectively	√	√	√
4. to contribute as team member and to lead effectively	√	√	
5. to identify contemporary issues			√

The assessment criteria adopted in tutorial/seminars  
 (“plus” grade for enhanced performance possible for each grade except F)

1. Role Play – individual assessment (25%)
  - Oral presentation skills: A for excellent, B for good, C for clear, D for reading from script, F for mumbling.
  - Familiarity with the topic: A for excellent, B for good, C for adequate, D for poor, F for no knowledge.
  - Answer during discussion: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor.
2. Seminar Presentation/ E-learning Participation – overall (group) assessment (25%)
  - Oral communication skills: A for excellent, B for good, C for clear, D for barely sufficient, F for poor.
  - Data/information collection: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor.

	<ul style="list-style-type: none"> <li>• Data interpretation &amp; analysis: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor.</li> <li>• Identification of problem/issue: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor.</li> <li>• Conclusion: A for excellent, B for convincing, C for adequate, D for barely sufficient, F for poor.</li> <li>• Frequency of Participation (for E-learning Participation only): A for high, B for medium, C for low, F for none.</li> </ul>	
<b>Student Study Effort Expected</b>	Class contact:	
	▪ Lectures	26 Hrs.
	▪ Seminars / Tutorials	12 Hrs.
	Other student study effort:	
	▪ Independent study	120 Hrs.
	Total student study effort	158 Hrs.
<b>Reading List and References</b>	<p><b>Recommended Reading List:</b></p> <p><b><u>Project Management</u></b></p> <p>Chan, A.P.C., Wong, K.W., Li, Y., &amp; Guo, Y.P. (2015) The development of anti-heat stress clothing for construction workers in hot and humid weather, <i>Ergonomics</i>, ISSN: 0014-0319, September, 59(4), pp. 479-495.</p> <p>Chan, A.P.C., Yang, Y., Wong, F.K.W., Chan, D.W.M., and Lam, E.W.M. (2015). Wearing comfort of construction work uniforms. <i>Construction Innovation: Information, Process, Management</i>, Volume 15, Issue 4, September, pp. 473-492.</p> <p>Chan, P.C., Wong, K.W., Wong, D., Lam, W.M., and Yi, W., (2012) Determining an Optimal Recovery Time after Exercising to Exhaustion in a Controlled Climatic Environment: Application to Construction Works, <i>Building and Environment</i>, Volume 56, pp. 28-37.</p> <p>Chan, P.C., Wong, K.W., Chan, W.M., , Cheung, E., Choy, E., Chung, S.K., Kwok, W.K., Lam, W.M., Lee, W.C., Liu, C.H., Lo, C.H., Siu, K.W., Wong, C.W., &amp; Yam, C.H., (2009) Developing a Prototype for the Rapid Demountable Platform (RDP) – Stage II of CII-HK Research on “Construction Safety Involving Working at Height for Residential Building Repair and Maintenance”, Research Summary Report, Construction Industry Institute – Hong Kong, ISBN No. 1978-988-99558-7-8, April, 43pp.</p> <p>Chan, A.P.C., Wong, F.K.W., Chan, D.W.M., Chan, E.H.W., Cheung, E., Kwok, A.W.K., Lam, E.W.M., Yam, M.C.H. and Yiu, E.C.Y. (2007). <i>Construction Safety Involving Working at Height for Residential Building Repair and Maintenance</i>, Summary Report, Construction Industry Institute – Hong Kong, Research Report No. 9, 52 pages, ISBN 978-988-99558-1-6, November 2007.</p> <p>Chan A.P.C., Wong F.K.W., Yam M.C.H., Chan D.W.M., Ng J.W.S. and Tam C.M. (2005). <i>From Attitude to Culture - Effect of Safety Climate on Construction Safety</i>, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-432-5, 160 pages.</p>	

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Poon, S.W., Tang, S.L., & Wong, K.W. (2008) Management and Economics of Construction Safety in Hong Kong, Hong Kong University Press, June, ISBN No. 978-962-209-906-7, 169pp.

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### **Construction Procurement**

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Chan, A.P.C., Chan, D.W.M., and Yeung, J.F.Y. (2010) *Relational Contracting for Construction Excellence – Principles, Practices and Case Studies*. Spon Press of Taylor & Francis Group, 1<sup>st</sup> Edition, ISBN: 978-0-415-46669-1, HD9715.A2C47 2009, 338 pages.

Chan A.P.C. and Chan D.W.M., Editors (2004). *Proceedings of the CII-HK Conference 2004 on Construction Partnering: Our Partnering Journey - Where Are We Now, and Where Are We Heading?* Construction Industry Institute – Hong Kong, 9 December 2004, Hong Kong, China, ISBN 988-98153-2-X, 206 pages.

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