Subject Description Form

Subject Code	BRE350
Subject Title	Project Management and Procurement
Credit Value	3
Level	3
Pre-requisite	None
Objective	1. Extend students' understanding of management principles and develop the knowledge ofproject management and procurement in the construction industry.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: 1. Apply advanced knowledge of the project management processes, and life cycle phases 2. Understand the construction industry, including the legal and organizational structures of construction corporation. 3. Apply knowledge of schedule, cost, procurement, quality, safety, and environmental, human resources management to construction projects. 4. Understand the principles of sustainability and be aware of different sustainable construction technologies
Subject Synopsis / Indicative Syllabus	• **Introduction to the Project Management** • **Procurement and Project Delivery Systems** • **Project Planning** • **Project Scheduling** • **Project Time/Cost Control & Financial Management** • **Legal & Organizational Structures of Construction Corporation** • **Sustainability of Construction Projects** • **Environmental Management in Construction** • **Safety Management in Construction** • **Quality Management in Construction** • **Human Resources Management in Construction**
Teaching / Learning Methodology	Lectures will be used to introduce systems and techniques whilst the small group work willbe used for the application of management skills through quizzes and project presentation.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
		1	2	3	4			
1. Course Work	60%	√	√	√	√			
2. Examination	40%	√	√	√	√			
Total	100 %							

Explanation of the appropriateness of the assessment methods in assessing the intendedlearning outcomes:

Students will be assessed through course work (60%) and examination (40%). The course work includes: case study/problem-based assignment (30%) and subject project (30%). Both examination and course work assess the seven learning outcomes.

Student Study Effort Expected

Class contact:	
▪ Lectures	26 Hrs.
▪ Project Seminars/Tutorials	13 Hrs.
Other student study effort:	
▪ Independent study	96 Hrs.
Total student study effort	135 Hrs.

Reading List and References

Recommended Reading List:

<u>Project Management</u>

Chan, A.P.C., Wong, K.W., Li, Y., & Guo, Y.P. (2015). The development of anti-heat stress clothing for construction workers in hot and humid weather, Ergonomics, ISSN: 0014-0319, September, 59(4), pp. 479-495.

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. Construction Innovation: Information, Process, Management, Volume 15, Issue 4, September, pp. 473-492.

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, *Building and Environment*, Volume 56, pp. 28 - 37.

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., & 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.

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) *Construction Safety Involving Working at Height for Residential Building Repair and Maintenance*, Summary Report, Construction Industry Institute – Hong Kong, Research Report No. 9, 52 pages, ISBN 978- 988-99558-1-6, November 2007.

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)

From Attitude to Culture - Effect of Safety Climate on Construction Safety, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-432-5, 160 pages.

Chan P.C., Wong K.W., Lam T.I. and Choi C.W. (2004) *Quality Relationships in Public Housing of Hong Kong*, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-426-0, 77 pages.

Harris F. and McCaffer R. (2001) *Modern Construction Managemen*t, 5th Edition, BlackwellScience: Oxford

Hon, C., Chan, P.C., and Wong, K.W., (2010). An Analysis for the Causes of Accidents of Repair, Maintenance, Alteration and Addition Works in Hong Kong, *Safety Science*, Volume 48, Issue 7, August, pp. 894 - 901.

Hon, C.K.H., Chan, A.P.C. and Chan, D.W.M. (2011). Strategies for Improving Safety Performance of Repair, Maintenance, Minor Alteration and Addition (RMAA) Works, *Facilities - Special Issue on Infrastructure Management*, Volume 29, Issue 13/14, pp. 591-610.

Lam T.I., Wong K.W., Chan P.C., Shea C.Y. and Poon C.K. (2004) *Development of a Quality Assessment Mechanism for Private Residential Building Projects in Hong Kong*, ResearchMonograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-421-X, 69 pages.

Lavender S. (1996) *Management for the Construction Industry*, Longman: UK

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

Tang S.L., Ahmed S.M., Aoieong R.T. and Poon S.W. (2005) *Construction Quality Management*, Hong Kong University Press: Hong Kong

Tang S.L., Poon C.S., Ahmed S.M. and Wong F.K.W. (2003) *Modern Construction Project Management*, 2nd Edition, Hong Kong University Press: Hong Kong

Walker Anthony (2002) *Project Management in Construction*, 4th Edition, Blackwell Sciences: Oxford

Yam, C.H., Wong, K.W., Chan, P.C., Cheung A.C., Chan, W.M., Chan, W.T., & Chan, H.L. (2007). Safety Considerations for Residential Repair and Maintenance Works on Facadesin the Design Phase in Hong Kong, Research Monograph, The Hong Kong Polytechnic University, August, ISBN No. 978-962-367-515-4, 148pp.

Construction Procurement

Chan, APC and Cheung, E (2014). Public Private Partnerships in International Construction: Learning from Case Studies, Routledge, Taylor & Francis Group, London and New York, 190 pages.

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, 1st 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 2004on 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.

Chan A.P.C., Chan D.W.M., Fan L.C.N., Lam P.T.I. and Yeung, J.F.Y. (2004) *A*
Comparative Study of Project Partnering Practices in Hong Kong, Summary Report, Construction Industry Institute – Hong Kong, Research Report No. 1, ISBN 988-98153-1-1, 40 pages.

Chan A.P.C., Chan D.W.M., Ho K.S.K., Chiang Y.H., Chan E.H.W. and Tang B.S. (2002) *An Analysis of Project Partnering in Hong Kong*, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-363-9,96 pages.

Chan A.P.C., Ho D.C.K., and Tam C.M. (2003) *Evaluation of Integrated Procurement Systems in Hong Kong*, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-286-1, 75 pages.

Chan A.P.C. and Yu A.T.W. (2003) *Construction Process Improvement – A Case Study of the North District Hospital*, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-287-X, 63 pages.

Chan A.P.C and Yung E.H.K. (2003) *Procurement Selection Model for Hong Kong*, Research Monograph, Department of Building and Real Estate, The Hong Kong Polytechnic University, ISBN 962-367-285-3, 143 pages.

Chan, D.W.M., Chan, A.P.C., Lam, P.T.I., Lam, E.W.M. and Wong, J.M.W. (2007). An Investigation of Guaranteed Maximum Price (GMP) and Target Cost Contracting (TCC)Procurement Strategies in Hong Kong Construction Industry, *Research Monograph*, Department of Building and Real Estate, The Hong Kong Polytechnic University, 152 pages, ISBN 978-962-367-593-2, October 2007.

Cheung, E., Chan, A.P.C., Lam, P.T.I., Chan, D.W.M. and Ke, Yongjian (2012). A Comparative Study of Critical Success Factors for Public Private Partnerships (PPP) between Mainland China and the Hong Kong Special Administrative Region, *Facilities - Special Issue on Facilities Management Development*, Volume 30, Issue 13/14, October,pp. 647-666.

Hong, Y.M., Chan, D.W.M., Chan, A.P.C. and Yeung, J.F.Y. (2012). Critical Analysis of Partnering Research Trend in Construction Journals, *Journal of Management in Engineering*, ASCE, Volume 28, Issue 2, April, pp. 82-95.

Masterman J.W.E. (2002) *An Introduction to Building Procurement Systems,* 2nd Edition, E&FN Spon, London.

Turner A. (1997) *Building Procurement*, UK MacMillan

Halpin, Daniel W. and Bolivar A. Senior (2010) *Construction Management*, John Wiley& Sons, New York.