Subject Description Form

Subject Code	BRE263
Subject Title	Construction Economics and Finance
Credit Value	3
Level	2
Pre-requisite / Co-requisite / Exclusion	Nil
Objectives	This subject is intended to: 1. Provide students with an economics perspective of the real estate and construction sectors, and an understanding of their roles on the general economy. 2. Introduce to students the financial markets, institutions and instruments in the context of the construction and real estate industry. 3. Enable students to identify and analyze industry-wide problems based on an understanding of the market structure, performance and behaviour of the industry.

Intended Learning Outcomes	Upon completion of the subject, students will be able to:
	
	a. Describe the size and market structure of the property and construction industries, and consequently articulate why construction and real estate has played an important role on economic development, particularly in the case of Hong Kong. In particular, students would be able to:
	
	  1) describe the contribution of the property and construction industries to economic growth;
	  2) describe how much the construction output has been in countries around the globe;
	  3) describe some salient features of the property and construction sectors, including new-build and retrofitting works.
	
	b. Apply macroeconomics theories, in particular those concerning business fluctuations, aggregate demand, and the Keynesian multiplier model to understand and describe the economic and social role of the property and construction industries. With such competence, students would be able to:
	
	  1) evaluate whether fiscal plans adopted by governments around the globe would work as intended to stimulate the general economy;
	  2) give their own ideas of how such fiscal policies should be formulated and implemented in view of constraints and limitations;
	  3) articulate the inter-relationship between the property and construction industries, the banking industry and the macro-economy;

	4) identify problems related to the market structure and the behaviours of the stakeholders.
	
	 c. Estimate the profitability of projects and firms with an understanding of how project and corporate finance can be raised from the money and capital markets. In particular, students would be able to:
	
	     1) understand the time value of money, and calculate net present value and internal rate of return (IRR) of projects;
	     2) estimate the weighted average cost of capital (WACC) of a firm or a project;
	     3) evaluate the profitability of a project based on WACC;
	     4) describe the various financial instruments and understand how their costs could be estimated.
	
	 d.. Be able to articulate the roles and interdependence of participants in the construction and real estate industry, including developers, consultants, contractors, property managers and the government.
	
	 e. Be able to effectively communicate their ideas, to make contributions to teamwork and to demonstrate their leadership potential. Students are required to present their works and findings in groups and lead the discussions afterwards, learning to communicate their ideas and advance their arguments in an effective and convincing manner. The group work setting will also facilitate their understanding of group dynamics, cultivating their leadership skills and nurturing their sense of responsibility being part of a team. They are assessed both individually and as a group.

Subject Synopsis/ Indicative Syllabus	An overview of macro-economic theories. Roles of property and construction on the economy, with comparisons between some economies around the globe and the particular case of Hong Kong. The relationship between the property/construction industry, the financial institutions, markets and the participants. Pricing of financial instruments including debts, equities and REITs. Economic viability and financial feasibility of projects including their externalities such as carbon emissions. An overview of market structure, performance and behaviour of the real estate and construction industry in Hong Kong. Economic problems associated with the Asian Financial Crisis, the Sub-prime Crisis and globalisation.
Teaching/Learning Methodology	Students spend half of their total contact hours in mass lectures, and another half in seminars. Tutorials are interactive and students are encouraged to participate in discussions. Topics are introduced in the lectures and the key issues highlighted as well, supplemented with further learning and reference materials downloaded from the web. Subsequent seminars provide the opportunity for more in-depth discussion of the main issues delivered in the lectures. Themes of the seminars will follow closely that of the lectures, so that the framework introduced in the lectures can be further illustrated, exemplified and elaborated. Learning materials will also be assessible from the web.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d	e	
	1. Seminar / Group Report 1	20%	√	√	√		√	
	2. Seminar / Group Report 2	20%		√		√	√	
	3. Examination	60%	√	√	√	√	√	
	Total	100%						

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

Learning outcomes	*Assessed principally through*			
	Oral Seminar Presentation	Written Seminar Report	Attendance and Performance in Class	Examination
All-rounded attributes:				
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			√	√
Intended learning outcomes of course:				
1. An ability to describe the size and market structure of the property and construction industries are and consequently an understanding of why construction and real estate has played an important role on economic development, particularly in the case of Hong Kong.	√	√		√

		C1	C2	C3	C4
2.	Be capable of applying macroeocnomics theories, in particular those concerning business fluctuations, aggregate demand, and the Keynesian multiplier model on the economic and social role of the property and construction industries: identifying problems related to the market structure and the behaviours of the stakeholders	√ √	√ √		√
3.	Be able to evaluate economic viability and financial feasibility of projects including their life-cycle costing, costs of externalities, alternative sources of finance and explain the basis of the pricing of the basic financial instruments.	√	√		√
4.	Be able to articulate the roles and interdependence of participants in the construction and real estate industry, including developers, consultants, contractors, property managers and the government.	√	√		√
5.	Be able to effectively communicate ideas and to make contributions to teamwork			√	

The assessment criteria adopted in tutorial seminars

Nature of Coursework: Individual Presentation and Group Report

Assessment criteria (% are indicative only, may be varied by distributed rubrics):

1. Seminar (oral presentation) – individual assessment (40%)
2. Seminar (Group report) – overall (group) assessment (40%)
3. Attendance and active participation in Q and A (20%)

1. Seminar (oral presentation) – individual assessment (40%)

    Individual assessment is based on:
    a. Clarity of presentation
    b. Oral presentation skills
    c. Facilitation of Q & A session

2. Seminar (Group report) – overall (group) assessment (40%)

Assessment of the group is based on:
   a. Understanding of the central theme and identification of relevant issues
   b. Collection of data / information
   c. Data interpretation and analyses
   d. Written communication skills.
   e. Conclusion

3. Attendance and active participation in Q and A (20%)

Each student is encouraged to participate actively in the Q & A session. Each student will be asked to raise at least one question.

<u>Evidences students are expected to give to get the various grades under the criteria (this list below is indicative only, and may be varied by distributed rubrics; minus grades are possible due to spotted deficiencies pertaining to a main grade):</u>

Grade		Report	Presentation
A+	1.	2. Excellent understanding of the central theme and identification of relevant issues 3. Insightful and stimulating 4. Very good collection of data / information (with some extra reading) 5. Very good data interpretation and analyses (good illustration by examples, case studies, figures and other evidences) 6. Display excellent written communication skills. 7. Excellent conclusion	1. Clarity of presentation 2. Stimulating presentation 3. Excellent oral presentation skills 4. Excellent Facilitation of Q & A session
A	1.	2. Very good understanding of the central theme and identification of relevant issues 3. Good collection of data / information 4. Good data interpretation and analyses (Good illustration of the answer by examples, case studies, figures and other evidences). 5. Display very good written communication skills. 6. Very good conclusion	1. Clarity of presentation 2. Good oral presentation skills 3. Facilitation of Q & A session
B+	1.	2. Good understanding of the central theme and identification of relevant issues 3. Good collection of data / information	1. Clarity of presentation 2. Good oral presentation skills 3. Good facilitation of Q & A session

			4. Good data interpretation and analyses 5. Display good written communication skills 6. Good conclusion	
	B	1.	2. Good understanding of the central theme and identification of relevant issues 3. Sufficient data collection, interpretation and analyses 4. Display good written communication skills 5. Good conclusion	1. Clarity of presentation 2. Good oral presentation skills 3. Facilitation of Q & A session
	C+	1.	2. Understanding of the central theme and display adequate knowledge of the subject 3. Sufficient data collection and analyses 4. Display reasonably good written communication skills 5. Reasonably good conclusion	1. Familiarity with the topic 2. Reasonably good oral presentation skills 3. Some facilitation and participation of Q & A session
	C	1.	2. Reasonable understanding of the central theme and display adequate knowledge of the subject 3. Provide sufficient data and information 4. Display some written communication skills 5. May have a reasonably good conclusion	1. Familiarity with the topic 2. Reasonably good oral presentation skills 3. Poor participation of Q & A session
	D+	1.	2. Display inadequate knowledge of the subject 3. Provide poor and insufficient data / information 4. Display poor written communication skills 5. May not have a conclusion	1. Poor knowledge of the topic 2. Poor oral presentation skills 3. Poor participation of Q & A session
	D	1.	2. Display poor knowledge of the subject 3. Provide poor and insufficient data / information 4. Display poor written communication skills 5. May not have a conclusion	1. Very poor knowledge of the topic 2. Poor oral presentation skills 3. Poor participation of Q & A session
	F	1.	2. Display no knowledge of the subject 3. Provide poor and insufficient data / information 4. Display poor written communication skills	1. No knowledge of the topic 2. Poor oral presentation skills 3. Poor participation of Q & A session

Student Study Effort Required	Class contact:	
	▪ Lecture	26 Hrs.
	▪ Seminars/Tutorials	13 Hrs.
	Other student study effort:	
	▪ Independent Study	96 Hrs.
	Total student study effort	135 Hrs.
Reading List and References	**Recommended:** Park, Chan S. (2011). *Contemporary Engineering Economics*. 5th Edition. Upper Saddle River, N.J.: Prentice Hall. Samuelson, P.A. and Nordhaus, W.D. (2010). *Economics*, 19th Edition. McGraw-Hill International Edition. (Additional references may be given via online teaching materials, e.g., Learn@PolyU) **Supplementary:** Chiang, Y.H., Anson, M. and Raftery, J. (2004). *The Construction Sector in Asian Economies*. London and NewYork: Spon Press. 491pp. Eccles, T., Sayce, S. and Smith, J. (1999). *Property and Construction Economics,* International Thomson Business Press. Genberg, H. and Hui, C.H. ed. (2008). *The Banking Sector in Hong Kong: Competition, Efficiency, Performance and Risk.* NY: Palgrave MacMillan. Glahe, F. and Lee, D. (1989). *Microeconomics,* Harcourt Brace Jovanovich: New York. Hong Kong Government. *Annual Economic Reports and Reviews,* H.K. Government Printer (various years). Hong Kong Polytechnic University. *AsiaConstruct Annual Country Reports on Construction and Real Estate Industry (Available via: http://www.asiaconst.com/past_conference/index.html).* Hsu, B., Arner, D., Tse, K.S., Johnstone, S., Li, L. (ed.) and Lejot, P. (ed.) (2006) *Financial Markets in Hong Kong: Law and Practice.* Oxford University Press. 560pp. Jao, Y.C. (1997). *Hong Kong as An International Financial Centre: Evolution, Prospects and Policies*. HK: City University of Hong Kong Press. Low, C.K. ed. (2000). *Financial Markets in Hong Kong*. Singapore and NY: Springer.

Raftery, J. (1998), *Principles of Building Economics,* Blackwell Scientific Publications: Oxford.

Young, L.S.F and Chiang, R.C.P. ed. (1997). *The Hong Kong Securities Industry,* 3rd Edition. HK: The Stock Exchange of Hong Kong, and Asia-Pacific Institute of Business, The Chinese University of Hong Kong.

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