

Subject Description Form

| | |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject Code | BRE363 |
| Subject Title | Construction Economics |
| Credit Value | 3 |
| Level | 3 |
| Pre-requisite | Nil |
| Objectives | <ol style="list-style-type: none">1. Enable students to understand the factors affecting construction cost2. Enable students to contribute to the economic efficiency of construction throughout a project life cycle in conjunction with its stakeholders |
| Intended Learning Outcomes | <ol style="list-style-type: none">a. Analyse the factors affecting construction cost at an industry and project level.b. Compile and use cost data effectively for forecasting and controlling purposec. Compare cost of alternative designsd. Evaluate life cycle cost of constructione. Communicate principles and cost data effectively.f. Identify contemporary issues related to construction economics |
| Subject Synopsis/ Indicative Syllabus | <p>Demand and supply for construction Factors affecting construction cost at industry and project level Productivity and its measurement Types of client and the client's brief Real estate developers and their costs The roles of construction and property professionals Compilation and use of cost data Building cost and tender price indices Design economics Cost planning and cost analysis An introduction to cost modeling Life cycle costing Cost control measures</p> |

Teaching/Learning Methodology

The principles and concepts are delivered through lectures (each at 2 hrs per week), with application and discussion being covered in seminars and tutorials (each at 1 hrs per week in small groups), for a total period of 13 weeks.

The syllabus on construction economics will take students through the macro and micro factors affecting construction cost, both from the client and contractor's perspectives. Seminar topics (some of which are case-based) and reports demand students' individual research and data analysis, as well as presentation.

Apart from face-to-face lectures and discussion, students can download teaching materials from an electronic teaching platform.

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 | f |
| 1.Seminars/reports | 40 % | √ | √ | √ | √ | √ | √ |
| 2. Examination | 60 % | √ | √ | √ | √ | √ | |
| Total | 100 % | | | | | | |

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

| <i>Learning outcomes</i> | Oral Seminar Presentation | Written Seminar Report | Examination |
|--------------------------------------------------------------------------------------|---------------------------|------------------------|-------------|
| 1. to possess skills to identify, analyze and | | √ | √ |
| 2. to have an understanding of professional, social and ethical | √ | √ | |
| 3. to communicate effectively | √ | √ | √ |
| 4. to contribute as team member and to lead effectively | √ | √ | |
| 5. to identify contemporary issues | √ | √ | |
| 6. Analyse the factors affecting construction cost at an industry and project level. | √ | √ | √ |
| 7. Compile and use cost data effectively for forecasting and controlling purpose | √ | √ | √ |
| 8. Compare cost of alternative designs | √ | √ | √ |
| 9. Evaluate life cycle cost of construction | √ | √ | √ |

| | | |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| | <p><u>The assessment criteria adopted in tutorial/seminars</u> (“plus” grade for enhanced performance possible for each grade except F; students may work on one or more topics, hence averaging coursework grades may apply)</p> <ol style="list-style-type: none"> 1. Seminar (oral presentation) – individual assessment (20%) <ul style="list-style-type: none"> • 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 • Quality of visuals: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor • Answer during discussion: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor 2. Seminar (Group report) – overall (group) assessment (20%) <ul style="list-style-type: none"> • Written 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 • Data interpretation & analysis: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor • Identification of problem/issue: A for excellent, B for good, C for adequate, D for barely sufficient, F for poor • Conclusion: A for excellent, B for convincing, C for adequate, D for barely sufficient, F for poor | |
| <p>Student Study Effort Required</p> | <p>Class contact:</p> | |
| | <ul style="list-style-type: none"> ▪ Lectures | <p>26Hrs.</p> |
| | <ul style="list-style-type: none"> ▪ Seminars/Tutorials | <p>13Hrs.</p> |
| | <p>Other student study effort:</p> | |
| | <ul style="list-style-type: none"> ▪ Independent study | <p>120Hrs.</p> |
| | <p>Total student study effort</p> | <p>159Hrs.</p> |
| <p>Reading List and References</p> | <p>Gruneberg, S. and Francis, N. (2019) <i>The Economics of Construction</i>, Agenda Publishing Ltd. Ferry, D. & Brandon, P.S., (2007) <i>Cost planning of Buildings</i>, 7th Edition, Oxford, Blackwell Publications</p> <p>Ive, G.J. and Gruneberg, S. (2000) <i>The economics of the modern construction sector</i>, Basingstoke: Macmillan Myers, D. (2017) <i>Construction Economics: a new approach</i>, Abingdon, Oxon: Routledge, 4th edition (online version available)</p> <p>Ashworth A., (2010) <i>Cost Studies of Buildings</i>, Harlow, England: Pearson</p> <p>Supplementary: Smith, J. (1998) <i>Building Cost Planning for the Design Team</i>, Deakin University Press Seeley, I. (1996) <i>Building Economics</i>, MacMillan Pilcher, R. (1994) <i>Project Cost Control in Construction</i>, Blackwell Scientific Publication Chris, M. (2009) <i>Finance and control for construction</i>, Taylor & Francis Samuelson, P.A. and Nordhaus, W.D. (2010). <i>Economics</i>, 19th edition. McGraw-Hill</p> | |

| | |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | International Edition. <i>Hong Kong Statistics</i> (current issues), Hong Kong SAR Government Websites of major QS practices Journal articles (e.g., <i>Construction Management and Economics</i> : update issues) |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|