Subject Code: BRE439
Level: 4
Contact Hours: Lect: 21 Sem/Tut: 21
Student Effort Hours: 120
Assessment Method: Coursework 50% Examination 50%
Credit Value: 3
Pre-requisites: BRE349 or equivalent
Co-requisites: Nil
Exclusions: Nil
Subject Leader/Lecturer/Dept.: K.D. Wong (BRE)

**Subject Aim:**

This subject is intended to:

1. Develop an understanding of the technological, practical, procedural, contractual and economic characteristics of engineering work including building services in building projects and civil engineering work.

**Learning Outcomes:**

Students will demonstrate their ability to:-

1. Possess the knowledge of the technological practices of engineering work.
2. Understand the practices of procurement and contractual arrangements of engineering work.
3. Produce and evaluate the measurement and documentation of engineering work.
4. Appraise and apply the principle and practices of contractual procedures and administration in engineering work.
5. Communicate effectively with contractual negotiation skills.

**Brief Syllabus Content:**

1. Technological aspects of building services work and civil engineering work.
2. Cost appraisal and cost planning for building services and civil engineering projects.
3. Procurement systems and contractual arrangements for building services and civil engineering projects.
4. Documentation, measurement and valuation of building services and civil engineering work.
5. Contract administration and procedure in building services and civil engineering projects.

**Learning and Teaching Approach (tasks and activities designed to achieve learning outcomes):**

Contract documentation and administration will form the main thrust of the course, to be underpinned on a comprehensive engineering work technologies and practices. Interactive lectures on the various technologies, practice and economic aspects will be conducted with a view of providing the background knowledge necessary for developing competence in documentation, procurement and administration in the field of engineering work. Interactive lecture and case studies will be utilized. Professional practitioners will be invited to facilitate problem based learning on different contract strategies in different projects. Tutorial sections will be provided to conduct systematic in discussions.

*Teaching activities: Lecture (LT)/Tutorial (TU)/Seminar (SM)/Drawing (DW)/Laboratory or Practical (LB)/Studio (ST)/Workshop (WS)/Project (PJ)/Field Study (FS)/Guided Study (GS)/Visit (VS)*
Assessment strategy (assessment of student performance resulting from learning tasks):

Examination and coursework will constitute the 50% and 50% of the overall mark for the subject respectively. The coursework mark will be based on the assignments by producing documentation, seminar presentations and discussions. At least two assignments with equal contribution will be set.

The assessment by examination will be based on a 2 hour examination. The coursework will be evaluated on:
(i) a basic understanding of engineering work practices, economics of engineering work development, and its impact on the economy;
(ii) a working knowledge of the contract documentation and administration of typical engineering work;
(iii) a critical appraisal of alternative contract strategies, procedures and administration in engineering work.

Reading List:

Recommended:

Hong Kong Standard Method of Measurement for Building Services.
Barnes, M., (Editor)(1990), Financial Control, Thomas Telford

Supplementary:
Government of Hong Kong, (1988) SMM for Civil Engineering Works, Hong Kong Government Printer
ICE Civil Engineering Standard Method of Measurement 3 Examples

Loo F. (1991) *Property Management in Hong Kong*, HKU
