 Subject Code: BRE324  
Level: 3  
Contact Hours: Lect:21 Sem/Tut:21  
Student Effort Hours: 120  
Assessment Method: Coursework 50% Examination 50%  
Credit Value: 3  
Pre-requisites: Nil  
Co-requisites: Nil  
Exclusions: Nil  
Subject Leader/Lecturer/Dept.: S.W. Fong (BRE) Y.H. Chiang (BRE)  

**Subject Aim:**  
Engineers are members of one of the principal 'spending professions' in the sense that they carry responsibility for the design and production of infrastructure and the built environment. Economic analysis as applied to engineering and construction is concerned with pursuing the better use of resources, and providing the analytical support for decisions about achieving value for money and choosing between competing alternatives.  

*This subject is intended to:*  
 Equip students with theories and analytical skills necessary to make well informed decisions.

**Learning Outcomes:**  
*Students will demonstrate their ability to:*  
1. Ability to conduct project appraisal across a combination of project objectives, including, economical, technical, social and environmental.  
2. Ability to evaluate business opportunities under given constraints, competing objectives and allocated resources.  
3. Ability to appraise projects critically in order to achieve value for money.  
4. Ability to work collaboratively with other team members.  

**Brief Syllabus Content:**  

*Principles of Project Appraisal:* Time value of money. Net present value and internal rate of return. Project investment appraisal and feasibility studies.  


*Budgeting and Cost Control:* Cumulative expenditure and revenue curves. Design and production cost control.  

*Cost and Break-even Analysis:* Fixed costs, variable costs. Working capital. Cost control curves. Calculation of break-even point.

**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)
### Learning and Teaching Approach

(tasks and activities designed to achieve learning outcomes):

Lectures are used to present theories and principles of different economic analyses. Case-based learning and tutorials are used to give the students the opportunity to identify and diagnose business problems accurately and effectively across a wide range of engineering or construction domains.

### Assessment strategy

(assessment of student performance resulting from learning tasks):

Examination and coursework will constitute 50% and 50% of the overall mark for the subject respectively. The coursework mark will be based on case projects, seminar presentations and multiple choice test.

### Reading List:

**Recommended:**

*Essential Texts*


**Reference**