HE3011 Course Benefit Analysis

Cost benefit analysis is concerned with the theory and application of criteria for public investment decision-making. The purpose of this course is to develop an understanding of the principles of cost benefit analysis and to indicate the usefulness and limitations of the method by way of project evaluations and other varied examples on its implementation. Such questions as what costs and benefits are to count, what alternative investment decision criteria exist besides the popular discounted cash flow method, how do we appraise projects under conditions of uncertainty, and what could be done about distributional considerations? The problem of including non-market goods and their valuation is also highlighted and discussed in this course. Such commodities as scenic views, human life, time, environmental externalities, and recreation which are not exchanged explicitly in the market require shadow-efficiency prices for inclusion into cost benefit analysis. Throughout the course, emphasized be on cost-benefit analysis and the environment. Helpful prerequisites to this course will be a microeconomics principles course and some knowledge of basic calculus and algebra. Exercises and cases involving real and simulated cost benefit studies will be given where appropriate.

**Topics for Seminar Discussion**
Introduction: some examples and scope of CBA
Measurement of benefit and costs: welfare gains, transfer payments and double counting
Efficiency pricing: market and non-market goods
Investment decision criteria: dcf, npv, irr, bc ratio, choice of rate of discount
Uncertainty and risk: probability adjustment for risk, decision rules
Distributional considerations: some approaches, constraint and weight determination
Some examples and case studies: City subway system; Flood control project; Anti-poverty training programme; New highway project; Recreational facilities; Underwater tunnel project; Materials recycling scheme; Nuclear power programme; Not in My Backyard facilities

**Suggested Readings:**
Cost-Benefit Analysis; Cases and Materials by Euston Quah and Raymond Toh. United Kingdom: Routledge 2012
Cost-Benefit Analysis by E. J. Mishan and Euston Quah ; 5th Edition ; Routledge 2007

**Course Assessment:**
Final Examination: 50%
Term paper: 30%
Participation: 20%

**Instructors**
Professor Euston Quah

**Guest Lecturer**
Associate Professor Chia Wai Mun