Management Decision Analysis

Module Code: ECO00030M  Credits: 10  Term: 1
Contact Hours: 9 Lectures, 1 Practical (20 contact hours)
Module Organiser: Dr. Y. Ju

Overview:

This module provides an introduction to management science, with focus on Linear Programming, Decision Analysis, and other related decision problems in real life. The emphasis throughout is on the principles of problem formulation, the choice of appropriate models, the identification of data needs, the algorithms of key models and the interpretation of results, rather than on mathematical proofs.

Aims:

The course will present various mathematical models and describe the appropriate solution methods, and show how these can be used to set up and solve some frequently encountered problems. At the heart of the subject is the idea of optimizing some relevant objective while subject to (possibly many) constraints in order to reach a decision. Hence, the course will firstly focus on problems that can be solved using Linear Programming. Moreover, we will also cover other important and useful topics like decision analysis, Markov processes, inventory and network models.

Objectives:

On completing the module a student will be able to structure practical decision problems into appropriate analytical frameworks and solve stylised numerical problems. That is, solving relevant daily life management issues with the help of quantitative methods.

Assessment:

The assessment for the module is by means of an unseen written examination in the main examination period at the start of the Spring Term. It will be a two-hour examination consisting of four questions. Mock examination exercises will be available to students before the end of the teaching period.

Pre-requisites:

None.

Main References:


This is an excellent and very comprehensive textbook.