Advanced Decision Models

Course Title	Advanced Decision Models		
Course Code	BUS316B	Course Type	Free Elective
Credit	3	Contact Hours	45
Prerequisites	BUS208C	Co-Requisites	None
Duration	15 weeks	Class Type	Lecture

SolBridge GACCS Objectives	%
1. Global Perspective	25
2. Asian Expertise	20
3. Creative Management Mind	40
4. Cross Cultural Communication	5
5. Social Responsibility	10

Learning Objectives

1. Model and effectively help to solve a wide range of business problems.
2. Become familiar with the concepts, the solution approaches, their limitations and underlying assumptions, and practical use.
3. Use some Excel-based decision support tools to analyze business problems.

Course Description

In this course we explore and develop skills and techniques that help students become effective decision makers. We introduce a number of modeling concepts that are used in the area of decision science, management science and such. We point out how these concepts can be used to model and effectively help to solve a wide range of business problems. Through examples, class discussion, case studies and computer workshops the students become familiar with the concepts, the solution approaches, their limitations and underlying assumptions, and practical use. We also teach you to use some Excel-based decision support tools to analyze business problems.

Learning and Teaching Structure

This course provides introduction to concepts in quantitative methods and their applications to real world problems. Sessions will consist of lectures and diverse activities including but not limited to in-class exercises, computer-based exercises and cases. Through these activities the students will develop decision making knowledge as well as mastery of the most relevant Excel decision making routines and functions. Students will get ample details of these activities with enough lead time for proper preparation.

Assessment	%
Attendance	20
Midterm Examination	20
Final Examination	40
Assignments	20

Text and Materials

Title: Introduction to Operation Research
Edition: 9th Edition or higher
Author(s): Hillier, Lieberman
Publisher: McGraw-Hill (ISBN-13: 9780071238281)

Course content by Week

1-2	Introduction to Decision Making and Operations Research, Overview of the Operations Research Modeling Approach.
3-4	Introduction to Linear Programming and Solving Linear Programming Problems: The Simplex Method
5-6	The Theory of the Simplex Method, Duality Theory and Sensitivity Analysis
7	Mid-Term Exam
8	Other Algorithms for Linear Programming
9-10	Dynamic Programming
11	Game Theory
12-13	Decision Analysis
14	Markov Chains
15	Final Examination