# MGT578
# Decision Making Using Spreadsheet
# Module 1st, 2022-2023

## Course Information

***Instructor: Ehsan Bolandifar***
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Office Hour: Monday-Thursday 15:30pm-16:30pm

***Teaching Assistant:***
Phone:
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***Classes:***
Lectures: Monday-Thursday 13:30pm-15:20pm
Venue: PHBS Building, Room

## 1. Course Description

### *1.1 Context*

Course overview:

This course provides an introduction to the most commonly used quantitative methods in business and shows how these tools can be implemented using computer applications. Topics to be covered include applications of linear, integer, and nonlinear programming, as well as decision analysis and business simulation. Although this course is quantitative in nature, almost no mathematical theory will be emphasized (of course, there will be time when some mathematics is required). Except for some illustrative examples, which may be solved manually, most of the problems will be solved with computer applications. It is the major objective of this course that, after taking this course, we will be able to use computers comfortably to model and solve decision-making problems that we may face in our work.

Prerequisites:

We will utilize computers and Microsoft Excel intensively in this course. Hopefully by the end of the course, we will find that computers are very helpful in our modelling and solving many decision-making problems. Here are comments related to computers:

- Microsoft Excel comes along with Microsoft Offices, which we typically have easy access to.
- Presumably, we have some knowledge of computers prior to taking this course. For instance, we know how to use basic functions of Microsoft Excel. Of course, we will learn how to use its advanced features in the course.
- Starting from the second lecture, we are encouraged to bring our own notebooks to the class. In case there is any lecture in which no computers are needed, we will be notified in advance.

## *1.2 Textbooks and Reading Materials*

S. C. Albright and W. Winston, Management Science Modeling, 4th edition.

S. Powell and K. Baker. Management Science: The Art of Modeling with Spreadsheets

# 2. Learning Outcomes

## *2.1 Intended Learning Outcomes*

| **Learning Goals** | **Objectives** | **Assessment (YES with details or NO)** |
|---|---|---|
| 1. Our graduates will be effective communicators. | 1.1. Our students will produce quality business and research-oriented documents. | Yes |
| | 1.2. Students are able to professionally present their ideas and also logically explain and defend their argument. | Yes |
| 2. Our graduates will be skilled in team work and leadership. | 2.1. Students will be able to lead and participate in group for projects, discussion, and presentation. | Yes |
| | 2.2. Students will be able to apply leadership theories and related skills. | No |
| 3. Our graduates will be trained in ethics. | 3.1. In a case setting, students will use appropriate techniques to analyze business problems to provide a solution and defend it. | Yes |
| | 3.2. Our students will practice ethics in the duration of the program. | Yes |
| 4. Our graduates will have a global perspective. | 4.1. Students will have an international exposure. | Yes |
| 5. Our graduates will be skilled in problem-solving and critical thinking. | 5.1. Our students will have a good understanding of decision tools in their fields. | Yes |
| | 5.2. Our students will be prepared to face problems in various business settings and find solutions. | Yes |
| | 5.3. Our students will demonstrate competency in critical thinking. | Yes |

## *2.2 Course specific objectives*

- Introduce you to the art and science of modeling managerial problems as a way to enhance decision-making performance.
- Enable you to become intelligent users of management science techniques and methodologies.
- Develop your confidence in utilizing spreadsheet technology.

## *2.3 Assessment/Grading Details*

There will be several homework assignments and a final examination. The breakdown towards the final grade is as follows:

Class Participation – 10%
Homework Assignments – 30%

Midterm Exam – 20%
Final Exam – 40%

Please note that no late homework will be accepted without informing the instructor in advance the reasons of delay. Same policy applies to the final exam. No make-up exam will be given unless an excuse formally written by the student's parents (in case of family emergency), by a school official (in case of school related activity), or by a physician (in case of illness) is received by the instructor. Non-attendance without acceptable reasons will affect your grade unfavourably.

### *2.4 Academic Honesty and Plagiarism*

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.
For more information of plagiarism, please refer to *PHBS Student Handbook*.

## 3. Topics, Teaching and Assessment Schedule

A tentative course schedule is as follows:

| Lecture | Date | Content |
|---|---|---|
| 1 | 29-Aug | Course introduction |
| 2 | 1-Sep | Mathematical programming |
| 3 | 5-Sep | |
| 4 | 8-Sep | |
| 5 | 14-Sep | |
| 6 | 15-Sep | |
| 7 | 19-Sep | |
| 8 | 22-Sep | |
| 9 | 26-Sep | |
| 10 | 29-Sep | Midterm |
| 11 | 10-Oct | Decision analysis |
| 12 | 13-Oct | |
| 13 | 17-Oct | |
| 14 | 20-Oct | Business simulation |
| 15 | 24-Oct | |
| 16 | 27-Oct | |
| 17 | 31-Oct | |
| 18 | 3-Nov | Course summary |
| 19 | TBD | Final Exam-6:30-9:00 pm |