Global Learning Initiatives Program Course Syllabus

Please complete the following form in English. The information will be updated to the Global Learning Initiatives Program website for students' reference. If you will be offering more than one course, please fill out one form per course offered. Examples in grey.

Course Information

Course Name *provide the **English** course name of the course.	Operations Research (I)
Lecturer(s) *provide the lecturers' **English** name. If there are more than one lecturer, please indicate all lecturers in the column.	1: Chin Sum SHUI
Course Description *briefly describe the contents covered in the courses.	This course is an introduction of operations research designed for junior students with interest in using operations research models for making decisions under a deterministic environment. We will cover fundamental topics to provide students with the knowledge to leverage mathematical programming for contemporary problems, as well as solution approaches for linear programming.
Course Objectives *list out knowledge or skills students should acquire upon completion of course.	The students are equipped with the ability of modelling and solving basic deterministic optimization problems and applied to problems in different management fields.
Suggested Proficiencies (if any) *list preferred knowledge or skills students should have before taking the course.	Linear Algebra
Reading List (if any) *list out the textbooks, references, or other reading materials.	Introduction to Operations Research, Frederick S. Hillier and Gerald J. Lieberman, 11th Edition, McGraw-Hill, 2020.

Grading Criteria *how would the students be assessed during the course.	70% Two Examinations 20% Quizzes 10% Assignment

Course Schedule

Please complete the following table with the dates and expected course topics. If there are more than one lecturers instructing the course, please also indicate the lecturer for each class.

Class	Date (YYYY/MM/DD)	Course Topic	Lecturer
1	2022/09/13	Introduction and Modeling Approach (Ch1 and Ch 2) Linear Programming Model (3.1, 3.2)	
2	2022/09/20	Assumptions of LP (3.3) Additional Examples (3.4)	
3	2022/09/27	The Simplex Method (4.1, 4.2, 4.3)	
4	2022/10/04	The Simplex Method (4.4, 4.5, 4.6)	
5	2022/10/11	The Simplex Method (4.7, 4.8)	
6	2022/10/18	The Theory of Simplex Method (5.1, 5.2)	
7	2022/10/25	The Theory of Simplex Method (5.3, 5.4)	
8	2022/11/01	Midterm Exam	
9	2022/11/08	Duality Theory (6.1, 6.2, 6.3, 6.4, 6.5)	
10	2022/11/15	Sensitivity Analysis (7.1, 7.2)	
11	2022/11/22	Transportation problems (9.1)	
12	2022/11/29	Transportation problems (9.2)	
13	2022/12/06	Assignment Problems (9.3, 9.4)	
14	2022/12/13	Assignment Problems (9.4) Network Optimization Models (10.1, 10.2)	
15	2022/12/20	Network Optimization Models (10.3, 10.4, 10.5)	
16	2022/12/27	Final Examination	