

**Course: IEEM301000 Operations Research (I)**

**Semester:** Fall 2010

**Number of credit hours:** 3

Instructor: Professor Kuo-Hao Chang ([chang@mx.nthu.edu.tw](mailto:chang@mx.nthu.edu.tw))  
Room 713R. Phone (03) 5742337

Lecture Time: M 13:10 pm-14 pm, Th 13:10-14 pm

TA: 賴志皓 (junesnow39@gmail.com), 詹涵雅(hanyachan.206@gmail.com)  
Office Hours: Th 11-12 pm or by appointment

**Prerequisites:** IEEM202100 (Discrete Mathematics), IEEM201000 (Linear Algebra) or equivalent courses.

**Textbook:** *Introduction to Operations Research, Hiller and Lieberman, 2010*

**Student Learning Objectives:**

- To develop an ability to model operational problems;
- To develop an ability to solve deterministic optimization problems;
- To develop an ability to explain and implement the solutions derived from the models.

**Course Topics**

- Introduction to Operations Research (Chap.1,2)
- Linear Programming and Simplex method (Chap.3,4,5)
- Duality Theory (Chap.6)
- Transportation and Assignment Problems (Chap.7,8)
- Network Optimization (Chap.9)
- Other topics (Dynamic Programming, Integer and Nonlinear Programming if time permits)

**Grading Elements, Weighting and Scale:**

Grade Element	Weighting
Midterm 1	20%
Midterm 2	20%
Final	40%
Quizzes	20%
Class Participation	5%

Note: You are granted 5% extra in this grading system.

## **General Policies:**

### **Homework:**

Homework will be assigned approximately once a week while I will not collect them. You should do the homework at home yourself. You are encouraged to discuss homework with your classmates.

### **Exams:**

Exams will cover all materials taught in class. The two examinations are close book and notes. The midterm exam is temporarily scheduled for the 8<sup>th</sup> week of the semester and the exact date will be announced 3 weeks before the exam.

### **Quizzes:**

There will be quizzes in class on a weekly basis. All the quiz problems are strongly related with the homework problems. You should fully understand every homework problem in order to succeed in the quizzes.