

**Course: IEEM302000 Operations Research (II)**

**Semester:** Spring 2018

**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: W 10:10 pm-12 pm, F 10:10-11 pm

TA: 楊蕙宇([alice834210@gmail.com](mailto:alice834210@gmail.com)), 王薇雅([gagalei626@gmail.com](mailto:gagalei626@gmail.com))

Office Hours: Th 11-12 pm or by appointment

**Prerequisites:** IEEM203000 (Probability Theory) or equivalent courses.

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

**Student Learning Objectives:**

- To develop an ability to model stochastic processes;
- To develop an understanding of important qualitative characteristics of stochastic processes;
- To develop an ability to analyze basic stochastic processes.

**Course Topics**

- Markov Chains (Chap. 29)
- Queueing Theory (Chap. 17)
- Inventory Theory (Chap. 18)
- Markov Decision Process (Chap. 19)
- Simulation (Chap. 20)
- Other interesting topics

**Grading Elements, Weighting and Scale:**

Grade Element	Weighting
Midterm 1	15%
Midterm 2	15%
Final	20%
Class exercises	20%
Class projects	20%
Quizzes	10%
Class Participation	5%

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

**General Policies:**

This class will be based on a flipped classroom approach. The lecture video will be provided beforehand and you will be expected to watch the video before coming to the classroom. We will discuss your

questions regarding the lectures and do extensive exercises to enhance your understanding of the materials. Some class projects will also be given from time to time as a class activity.

**Exams:**

There will be two midterm exams and one final exam. All examinations are close book and notes. The final exam will be accumulative. The exact date will be announced 3 weeks before the exam.

**Quizzes:**

There will be a quiz every week to make sure everyone has watched the lecture video. All the quiz problems are strongly related or same with the problems taught in the lecture video. You should fully understand every homework problem in order to succeed in the quizzes.

**Don't be late to the class!**