開 授 課 程 大 綱

開課單位系所		清華大學/統計所				
課　　　號	STAT 5550		班　次		學　分	3
名　　　稱	品質工程　(Quality Engineering)					
授 課 教 師	鄭少為					

一. 內容：

This is an advanced course on design and analysis of experiments. Various methodologies that use the technique of DOE (Design Of Experiment) to improve quality will be introduced. In this course, we will cover the following topics:

- three-level regular designs
- design and analysis of experiments at more than two levels
- orthogonal arrays and analysis of experiments with complex aliasing
- response surface methodology
- robust parameter design

二. 教科書及參考書：

Textbook: Wu, C.F.J. and Hamada, M. (2009), *Experiments: Planning, Analysis, and Parameter Design Optimization*, 2nd Edition. John Wiley & Sons.

References: TBA

三. 成績評量方式：

Homework 30%;　Midterm Exam 30%;　Final Exam 40%

四. Course webpage:

TBA

五. Prerequisites：

Knowledge of linear model (STAT 5410) and basic experimental design (STAT 5510)