

**Department of Chemical Engineering and Materials Engineering  
National Kaohsiung University of Applied Sciences,**

**Course: Chemical Process Design**

**Instructor:**

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Goal: 使學生瞭解個別化學程序的要求，以及組成完整程序之流程與設計考量。

**Contents:**

Preface; Ch1 The nature of chemical process design and integration; ~~Ch2 Process economics; Ch3 Optimization~~; Ch4 Thermodynamic properties and phase equilibrium; Ch5 Choice of reactor I – reactor performance; Ch6 Choice of reactor II – reactor conditions; Ch7 Choice of reactor III – reactor configuration; Ch8 Choice of separator for heterogeneous mixtures; Ch9 Choice of separator for homogeneous fluid mixtures I - distillation; Ch10 Choice of separator for homogeneous fluid mixtures II – other methods; Ch11 Distillation sequencing; ~~Ch12 Distillation sequencing for azeotropic distillation~~; Ch13 Reaction, separation and recycle systems for continuous processes; ~~Ch14 Reaction, separation and recycle systems for batch processes~~; Ch25 Environmental Design for Atmospheric Emissions

**Website:** in construction

**Instruction Time:** Wed. 09:10 ~ 12:00

**Office Hour:** Fri. 13:00 ~ 15:00

**Classroom:** 南 108

**Text Book:**

Robin Smith, “*Chemical Process Design and Integration*”, John Wiley & Sons, Ltd, 2005 (代理：高立圖書, 02-2290-0318, 0932-083861 黃金崑)

**Reference Books:**

王文洋 著，化工廠建廠工程電腦輔助設計實務與經濟，81 年，歐亞書局

**Grade Calculation:**

Quiz: 80-100% ; Homework/report/presentation/other: 10-30%