

NATIONAL TSING HUA UNIVERSITY
DEPARTMENT OF POWER MECHANICAL ENGINEERING
2013 Spring Semester

Course No.: PME 3120 00
Course Title: **Heat and Mass Transfer (熱傳與質傳學)**
Credits: 3 (T2F3F4 at R215)
Students: For those junior and senior undergraduates to understand the macro- and micro-scale heat and mass transfer.
Teacher: Prof. Che-Wun Hong (洪哲文 教授)

Contents:

Chapter 1 Introduction

Chapter 2 Introduction to Conduction

Chapter 3 Steady Heat Conduction

Chapter 4 Transient Heat Conduction

Chapter 5 Numerical Methods in Heat Conduction (Midterm Exam I)

Chapter 6 Introduction to Convection

Chapter 7 External Forced Convection

Chapter 8 Internal Forced Convection

Chapter 9 Natural Convection (Midterm Exam II)

Chapter 12 Radiation

Chapter 14 Mass Transfer

Chapter 15 Micro/Nanoscale Heat and Mass Transfer (Final Exam)

References:

1. Cengel, S. A., Ghajar, A., Heat and Mass Transfer, (4th ed., 2011)
2. Incropera, F. P., Dewitt, D. P., Bergmann, T.L., and Lavine, A.S., Fundamentals of Heat and Mass Transfer, (7th ed., 2013)
3. White, F. M., Heat and Mass Transfer, (1988)
4. Zhang, Z. M., Nano/Microscale Heat Transfer, (2007)

Grades:

Homework+ 簽到 20%

1st Midterm Exam (closed-book) 30%

2nd Midterm Exam (closed-book) 30%

Final Exam (open-book) 20%