

Course Schedule of MST Program ,TIGP

Semester: Spring, 2010(98 學年度下學期)

Course(科目): 高等物化二- Advanced Physical Chemistry (II)

Time(時間): 9:1 0~12:00 am, Tuesday(T2T3T4)

Room(教室): 311 IAMS 中研院原分所 R311(台大校園)

NTHU coordinator(清大教師): 倪其焜

Course speakers(授課老師): Wen-Bih Tzeng 曾文碧、Shang-Bin Liu 劉尚斌、
Chau-Chung Han 韓肇中

Required(必修課), credit(學分): 3

Course No.(科號): TIGP727200

| Date | lecturer | Date | lecturer |
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| 2/23 Tuesday 9:1 0~12:00 | Prof. Wen-Bih Tzeng | 4/27 Tuesday 9:1 0~12:00 | Prof. Shang-Bin Liu |
| 3/2 Tuesday 9:1 0~12:00 | Prof. Wen-Bih Tzeng | 5/4 Tuesday 9:1 0~12:00 | Prof. Chau-Chung Han |
| 3/9 Tuesday 9:1 0~12:00 | Prof. Wen-Bih Tzeng | 5/11 Tuesday 9:1 0~12:00 | Prof. Chau-Chung Han |
| 3/16 Tuesday 9:1 0~12:00 | Prof. Wen-Bih Tzeng | 5/18 Tuesday 9:1 0~12:00 | Prof. Chau-Chung Han |
| 3/23 Tuesday 9:1 0~12:00 | Prof. Wen-Bih Tzeng | 5/25 Tuesday 9:1 0~12:00 | Prof. Chau-Chung Han |
| 3/30 Tuesday 9:1 0~12:00 | Prof. Shang-Bin Liu | 6/1 Tuesday 9:1 0~12:00 | Prof. Chau-Chung Han |
| 4/6 Tuesday 9:1 0~12:00 | Prof. Shang-Bin Liu | 6/8 Tuesday 9:1 0~12:00 | Prof. Chau-Chung Han |
| 4/13 Tuesday 9:1 0~12:00 | Prof. Shang-Bin Liu | 6/15 Tuesday 9:1 0~12:00 | |
| 4/20 Tuesday 9:1 0~12:00 | Prof. Shang-Bin Liu | 6/22 Tuesday 9:1 0~12:00 | |

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| Speaker | Part 1 (Week 1-week5) Prof. Wen-Bih Tzeng 曾文碧教授 |
| Class Outline | <ol style="list-style-type: none"> 1. The characteristics of electronic transitions 2. The fates of electronically excited states 3. Lasers 4. Electronic spectroscopy 5. Vibronic spectroscopy 6. Photoionization spectrscopy 7. Photoelectron spectroscopy |

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| Introduction | In this section, we will cover some topics related to electronic, vibronic, photoionization, and photoelectron spectroscopies as well as lasers. |
| Grading | (1) class attendance, (2) quiz |
| Textbook | Physical chemistry (P.W. Atkins) + class notes |

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| Speaker | Part 2 (Week 6-week10) Prof. Shang-Bin Liu 劉尚斌教授 |
| Class Outline | Introduction to NMR Spectroscopy |
| Introduction | <ol style="list-style-type: none"> 1. Background and History of NMR Spectroscopy 2. Fundamental NMR: Theories and Introduction 3. High-resolution and Solid-State NMR: Techniques and Applications |
| Grading | Two take home exams |
| Textbook | Lecture notes |

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| Speaker | Part 3 (Week 11-week16) Prof. Chau-Chung Han 韓肇中教授 |
| Class Outline | <ol style="list-style-type: none"> 1. Molecular interactions—Molecular properties that underlie intermolecular interactions and the effects of these interactions will be introduced. 2. Macromolecules and aggregates— Techniques used in the study of molecular size and shape will first be introduced; and will then explore dynamic structures and properties of macromolecules and their aggregates. |

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| Introduction | The outline of Chapters 18-19 will be followed with related materials added. |
| Grading | Homework assignment. |
| Textbook | Atkin's Physical Chemistry, 8 th edition(Oxford Univ., 2006) |