

2022 Spring - Advanced Analytical Chemistry

Credits: 3

Lecturer: Der-Lii Tzou 鄒德里老師 tzougate@gate.sinica.edu.tw

Classroom: A507, Institute of Chemistry, Academia Sinica

Class hour: Thursday, 09:00-12:00

Major Topics:

- Basics of Analytical Chemistry
- Physical Methods for Structural Characterization (NMR, MS, EM)
- Optical Microscopy
- Biosensor

Course Syllabus:

Week	Date	Topic	Professor
1	2/17	Orientation	Der-Lii Tzou
2	2/24	NMR Spectroscopy-Fundamental and Application I	Der-Lii Tzou
3	3/3	NMR Spectroscopy-Fundamental and Application II	Der-Lii Tzou
4	3/10	Fundamental of Mass Spectrometry	Yi-Sheng Wang
5	3/17	General Principles in Analytical Chemistry	Yu-Ju Chen
6	3/24	Application of Mass Spectrometry	Yu-Ju Chen
7	3/31	Lab (MS & NMR)	Der-Lii Tzou Yu-Ju Chen
8	4/7	Fundamentals of Light Microscopy	Chau-Hwang Lee
9	4/14	Super-resolution Light Microscopy	Chau-Hwang Lee
10	4/21	Electron Microscopy	Wei-Hau Chang
11	4/28	Midterm Exam	Der-Lii Tzou
12	5/5	Biophysical Fluorescence Spectroscopy	Jen-Tse Huang
13	5/12	SPR sensing	Pei-Kuen Wei
14	5/19	Biochip- Microarray and Biosensor	Ji-Yen Cheng
15	5/26	Microfluidics- Integration and Application	Hsiung-Lin Tu
16	6/2	Final Exam week (no class)	Der-Lii Tzou
17	6/9	Final Presentation (Final report deadline)	Der-Lii Tzou Yu-Ju Chen

Grading: Midterm Exam: 50% Final Presentation: 40% Attendance: 10%