

Advanced Analytical Chemistry

Credits: 3

Lecturer: Yu-Ju Chen 陳玉如老師

Classroom: A507, Institute of Chemistry, Academia Sinica

Class hour: Thursday, 09:10-12:00

Major Topics:

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

Course Syllabus:

Week	Date	Topic	Professor
1	2/25	Introduction 	Der-Lii Tzou
2	3/3	General principles in analytical chemistry 	Yu-Ju Chen
3	3/10 9:20	Fundamentals of Light Microscopy  	Chau-Hwang Lee
4	3/17 9:20	Super-resolution Light Microscopy  	Chau-Hwang Lee
5	3/24	Electron Microscopy	WeiHau Chang
6	3/31	Fundamental of Mass Spectrometry (I)	Yi-Sheng Wang
7	4/7	Fundamental of Mass Spectrometry (II)	Yi-Sheng Wang
8	4/14	Application of mass spectrometry to nanotechnology	Yu-Ju chen
9	4/21	Application of mass spectrometry to biology	Yu-Ju chen
10	4/28	Fundamental of Mass Spectrometry	Yi-Sheng Wang
11	5/5	NMR spectroscopy-fundamental and application	Der-Lii Tzou
12	5/12	Modern NMR techonolgy-Hand-on experimence	Der-Lii Tzou
13	5/19	Midterm Exam	Yu-Ju Chen
14	5/26	XPS	Jing-Jong Shyue
15	6/2	SIMS	Jing-Jong Shyue
16	6/9	no class	
17	6/16	SPR sensing	Pei-Kuen Wei
18	6/23	Biochip - Microarray and Microfluidic chip	Ji-Yen Cheng

Grading: Midterm exam: 50% Final team report: 40% Attendance: 10%