

Course Schedule of MST Program ,TIGP

Semester: Fall, 2015(104 學年度上學期)

Course(科目): Advanced Physical Chemistry (I)-高等物化一

Time(時間): 13:20-15:10 Tuesday, 9:10-10:00 Thursday

Room(教室): R121 of Chemistry Building in NTU,臺大化學系館 121 教室(NTU campus)

NTHU coordinator(清大教師): 倪其焜

Course speakers(授課老師): Chun-Yi David Lu 陸駿逸

Core course(必選課), credit(學分): 3

Course No.(科號): TIGP727100(NTHU),PHT015(NCU)

Speaker	Prof. Chun-Yi David Lu 陸駿逸教授
Class Outline	This course covers the principles and methods of equilibrium statistical mechanics for applications to chemical physics problems. The lectures will be divided into three parts: 1/4 on a review of thermodynamics principles, 1/4 on the concepts of ensemble theory and thermodynamic fluctuations, and the last 1/2 with applications to chemical systems.
Introduction	Planned topics: laws of thermodynamics, thermal equilibrium and temperature, ensemble theory, entropy, non-interacting systems, Monte Carlo method, Ising models, phase equilibria, chemical equilibrium, imperfect gases, classical liquids, ionic and non-ionic solutions, biological systems, quantum statistics.
Grading	
Textbook	[Recommended reference book] Statistical Mechanics by Donald Allan McQuarrie, University Science Books; 2nd edition [MQ].