Academic Year 2021 Summer Course Syllabus－General Chemistry A(1)

(6/20-7/31; 6 weeks)

Available only for retake, makeup or selective purposes (external students included)

1. Course Meeting Times: M Tu Th F 234 (9:10 am -12:10 pm)
2. Classroom:
3. Course grade is based on average of both phases
4. Textbook: S. S. Zumdahl, D. J. DeCoste, *Chemical Principles, 8th edition*, 2017, CENGAGE Learning: USA.
5. Teaching assistant: Mr. Ni (d07223104@ntu.edu.tw)
6. This course is co-instructed by two professors and divided into two phases, each consists of 12 lectures:

Instructor	Phase	Duration	Chapter
A. Prof. Yeun-Min Tsai	1	6/20~7/8 (12 lectures)	1~7
B. Prof. Wann-Yin Lin	2	7/15~8/2 (12 lectures)	8~11

Schedule

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week 1	**6/20** **A(1)**	**6/21** **A(2)**	6/22	**6/23** **A(3)**	**6/24** **A(4)**	6/25	6/26
Week 2	**6/27** **A(5)** **Recitation (TA)**	**6/28** **A(6)** **1st midterm exam**	6/29	**6/30** **A(7)**	**7/1** **A(8)**	7/2	7/3
Week 3	**7/4** **A(9)**	**7/5** **A(10)**	7/6	**7/7** **A(11)** **Recitation (TA)**	**7/8** **A(12)** **2nd midterm exam**	7/9	7/10
Week 4	**7/11** **B (1)**	**7/12** **B (2)**	7/13	**7/14** **B (3)**	**7/15** **B (4)**	7/16	7/17
Week 5	**7/18** **B(5)** **Recitation (TA)**	**7/19** **B (6)**	7/20	**7/21** **B (7)**	**7/22** **B (8)**	7/23	7/24
Week 6	**7/25** **B(9)**	**7/26** **B(10)**	7/27	**7/28** **B(11)** **Recitation (TA)**	**7/29** **B(12)** **Final exam**	7/30	7/31

Chapter

1	Chemists and Chemistry	12	Quantum Mechanics and Atomic Theory
2	Atoms, Molecules, and Ions	13	Bonding: General Concepts
3	Stoichiometry	14	Covalent Bonding: Orbitals
4	Types of Chemical Reactions and Solution Stoichiometry	15	Chemical Kinetics
5	Gases	16	Liquids and Solids
6	Chemical Equilibrium	17	Properties of Solutions
7	Acids and Bases	18	The Representative Elements
8	Applications of Aqueous Equilibria	19	Transition Metals and Coordination Chemistry
9	Energy, Enthalpy, and Thermochemistry	20	The Nucleus: A chemist's View
10	Spontaneity, Entropy, and Free Energy	21	Organic and Biochemical Molecules
11	Electrochemistry		

Academic Year 2021 Summer Course Syllabus－General Chemistry A(2)

(8/1-9/4; 5 weeks)

Available only for retake, makeup or selective purposes (external students included)

1. Course Meeting Time: M Tu W Th F 234 (9:10 am -12:10 pm)
2. Classroom:
3. Course grade is based on both phases
4. Textbook: S. S. Zumdahl, D. J. DeCoste, *Chemical Principles, 8th edition*, 2017, CENGAGE Learning: USA.
5. Teaching assistant:
6. This course is co-instructed by two professors and divided into two phases, each consists of 12 lectures:

Instructor	Phase	Duration	Chapter
C. Prof. Chih-Kai Lin	1	8/1~8/20 (12 lectures)	12~15
D. Prof. Jerry Chun-Chung Chan	2	8/21~9/2 (12 lectures)	16~21

Schedule

Session 2	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week 1	**8/1 C(1)**	**8/2 C(2)**	**8/3 C(3)**	**8/4 C(4)**	**8/5 C(5)**	8/6	8/7
Week 2	**8/8 C(6) 1st midterm exam**	**8/9 C(7)**	**8/10 C(8)**	**8/11 C(9)**	**8/12 C(10)**	8/13	8/14
Week 3	**8/15 C(11) Recitation (TA)**	**8/16 C(12) 2nd midterm exam**	**8/17 D(1)**	**8/18 D(2)**	**8/19 D(3)**	8/20	8/21
Week 4	**8/22 D(4)**	**8/23 D(5)**	**8/24 D(6)**	**8/25 D(7)**	**8/26 D(8)**	8/27	8/28
Week 5	**8/29 D(9)**	**8/30 D(10)**	**8/31 D(11) Recitation (TA)**	**9/1 D(12) Final exam**	9/2	9/3	9/4

Chapter

1	Chemists and Chemistry	12	Quantum Mechanics and Atomic Theory
2	Atoms, Molecules, and Ions	13	Bonding: General Concepts
3	Stoichiometry	14	Covalent Bonding: Orbitals
4	Types of Chemical Reactions and Solution Stoichiometry	15	Chemical Kinetics
5	Gases	16	Liquids and Solids
6	Chemical Equilibrium	17	Properties of Solutions
7	Acids and Bases	18	The Representative Elements
8	Applications of Aqueous Equilibria	19	Transition Metals and Coordination Chemistry
9	Energy, Enthalpy, and Thermochemistry	20	The Nucleus: A chemist's View
10	Spontaneity, Entropy, and Free Energy	21	Organic and Biochemical Molecules
11	Electrochemistry		