

The class is taught in English only!

This course will be offered **contingent** on sufficient interest.

Overview of the USNCO Mentorship Program offered in 2024-25 - Level 2/3/4

Modules			Module 1	Module 2	Module 3
Timeline			late Aug-mid Oct	late Oct-mid Dec	early Jan-late Feb
Topics in each Level/ Module	Level 2 [AP Plus and Local]: 8:30-10:00 PM ET on Saturday (tentative)	for motivated students taking AP Chemistry concurrently in the fall to prepare for Local 2026	Atomic Structures, Periodicity, Molecular Structures, Bonding, IMFs, Gases, Solids, and Solutions	Thermochemistry, Kinetics, Chemical Equilibrium, Acids&Bases, Buffer&Titrations	Descriptive, Laboratory, Fundamental Organic Chemistry, Electrochemistry, Thermodynamics
	Level 3 [Post-AP and National]: 8:30-10:00 PM ET on Sunday (tentative)	for students scored 35+ in Local 2025 or 4/5 in AP Exam to prepare for National 2026	Advanced Structures (Nodes, Exceptions, Bent's Rule, MOs, Solid Models, etc.) Laboratory&Reactions	Integrated Chemical Principles [Kinetics, Thermodynamics, Equilibrium, Electrochemistry]	Advanced Organic Chemistry based on structures and reactivities
	Level 4 [High Honor and Camp]: 8:30-10:00 PM ET on Friday (tentative)	for students who scored 35+ in National 2025 Part I to aim for High Honor and Camp	Coordination Chemistry, Analytical Chemistry, Reaction Writing, Explanations	ICHO-level Chemical Principles with an emphasis of problem solving	ICHO-level Integrated Organic Chemistry with an emphasis of problem solving

Level 4 Module 1 Overview

- Targeted students

It is recommended for students who **scored 35+ in National 2025 Part I** to aim for the **High Honor/Study Camp**. ([diagnostic test](#) or email chen@dcho.us for consultation)

The Level 4 class [**High Honor/Camp**] covers advanced topics in the level of **National Part II Exam and beyond**. The course emphasizes integrated **problem-solving** in Coordination Chemistry, Analytical Chemistry, Chemical Principles, Organic Chemistry, etc.

Students are expected to:

- Read textbooks prior to the class.
- Be engaged in class discussions and take notes.

- Complete the weekly problem set on time for practice and self-evaluation.

- Time & Scope

Module 1 is planned to start from late Aug 2025 with **8 live sessions** (1.5 hours per session, one session per week). This course will be offered **contingent** on sufficient interest, and the class meets on a weekly basis (**8:30-10 PM ET on Fridays**).

It will cover Advanced Reactions, Coordination Chemistry, Analytical Chemistry, etc.

- Payment

\$499 for all 8 live sessions, lecture notes, and problem sets.

Sign it up and pay the tuition by **Aug 29, 2025**.

Signup link for **L4M1** - <https://forms.gle/ZnrzekPbfPBDik7y6>

Payment Info

Payment options include Zelle QuickPay and Alternative payment.

Zelle QuickPay

Please send **\$499** to CHENQ2020@gmail.com if you would like to pay through Zelle QuickPay. In the payment memo, please also state the full name of the student and write L4M1 next to it.

E.g. Alex Han L4M1

Alternative payment

If you don't have Zelle Quickpay, you may contact chen@dcho.us for an alternative payment method, which has an additional 3% service fee.

Once we receive your payment, we will contact you as soon as possible and provide you all the relevant class information.

- Syllabus & Schedule

Sessions	Contents	Homework	Date of Class
Session 1	Advanced Atomic Structures/Periodicity	PS1	Aug 22 (Fri)
Session 2	Advanced Molecular Structures/Bonding	PS2	Aug 29 (Fri)
Session 3	Molecular Orbital Theory	PS3	Sep 5 (Fri)
Session 4	Coordination Chemistry	PS4	Sep 12 (Fri)
Session 5	Descriptive Chemistry and Laboratory	PS5	Sep 19 (Fri)
Session 6	Summary of Reactions	PS6	Sep 26 (Fri)
Session 7	Reaction Writing	PS7	Oct 3 (Fri)
Session 8	Module Review		Oct 10 (Fri)

Resources

- Textbooks

[Module 1&2] Chemical Principles, 6e or 7e or 8e; by Peter Atkins, Loretta Jones, Leroy Laverman.

[Module 3] Organic Chemistry, 2e or 3e or 4e; by David Klein.

- Online Platform

Instructor: Zoom (link will be shared with students in Google Classroom) + iPad (GoodNotes for annotations) + Apple Pencil

Students: A PC or laptop with a webcam and microphone is needed. Devices with a touchscreen are recommended but not required.

- Resource Platform

Google Classroom, all of the class materials including resources, assignments, lecture notes, problem sets and solutions, etc. are organized and shared in google classroom.

- Contact Information

Dr. Chen (chen@dcho.us)

Dr. Chen's website: <https://dcho.us>

