

Fall 2024 KAIST General Chemistry Courses

■ CH101 General Chemistry I, Chemistry Around Us

Time (Tuesdays and Thursdays)	Class	Lecturer
09:00~10:30	A	Professor Kiyoung Park
13:00~14:30	B	Professor Soon Hyeok Hong

A new foundational required chemistry course that deals with chemical understanding of our society's environmental, energy, and food issues, as well as food, nutrition, and health.

Target Students:

1. Students curious about the relationship between chemistry and our society and life.
2. Freshmen at KAIST who do not plan to major in a chemistry-related field.
3. Students who have sufficiently acquired knowledge of general chemistry and do not wish to take a redundant general chemistry course.

■ CH101 General Chemistry I, Chemical Principles

Time (Tuesdays and Thursdays)	Class	Lecturer
09:00~10:30	C	Professor Hyunwoo Kim
13:00~14:30	D	Professor David G. Churchill

A traditional foundational required chemistry course covering the basic chemical principles necessary for understanding compounds and chemical reactions.

(Essential content that students studying natural sciences and engineering must know.)

Target Students:

1. Students who have not studied chemistry in depth during high school.
2. Freshmen at KAIST who will major in chemistry / materials / life sciences.
3. Students who wish to enhance their understanding of chemistry through high-level chemistry lectures.

■ CH103 General Chemistry II

Time (Tuesdays and Thursdays)	Class	Topics	Lecturer
13:00~14:30	A	MetalloChemistry in Biology	Professor Mi Hee Lim
13:00~14:30	B	Chemistry of Plastic Age	Professor Sang Youl Kim

This is an elective introductory course in chemistry that introduces how existing chemical concepts are applied to the latest research findings.

Target Students:

1. Students who intend to major in chemistry / materials / life sciences.
2. Students who want to study chemistry in more depth.
3. Students who wish to experience and understand the latest research findings in chemistry.

■ Notice for All General Chemistry Courses

1. **Grading: A-F**
2. There is a minimum score requirement for each subject based on a 100-point scale. If the minimum requirement is not met, an **F grade** will be given

2024 Fall

Syllabus for General Chemistry [CH101-B]

1. Course: **General Chemistry I (CH101-B)** [lecture: Experiment: Credit = 3:0:3]

2. Lecture Timetable

Time (Tue, Thu)	Class	Professor	Lecture Room(E11)
13:00~14:30	B	Soon Hyeok Hong	301

3. Summary of Lecture

- o The lecture highlights how chemistry is linked to everyday life, environmental concerns, and important societal issues.
- o The lecture covers basic principles of chemistry in a way that shows their practical importance in the real world.
- o This lecture will focus on applying chemistry concepts to real-world scenarios. It starts with discussing the chemistry behind portable electronics and linking it to the periodic table. The lecture then explores topics such as air quality, solar radiation, climate change, and water resources, emphasizing their chemical aspects. It will also cover energy topics like combustion and alternative energy sources, as well as materials science, including plastics. Additionally, it will touch on the chemistry of food, health, and genetics. This approach makes chemistry relevant and understandable for non-science majors.

4. Material for Teaching:

- o Chemistry in Context, 10th ed, McGraw-Hill
- o Lecture materials will be provided through the KLMS website of each class (<https://klms.kaist.ac.kr/>).
- o CH101-B Board (This will be open near the end of August, and the link will be posted): Details on homework and the lecture schedule.

5. General Guidelines

* The grading and homework system could differ from the CH101-A. Grading is done independently from CH101-A.

** There will be significant penalties for lateness, absence, late or no submission of assignments, no or less participation of the class activity, etc.*

- 1) **Grading System:** The grading system will be based on the total scores achieved by students. The distribution of A grades (including A+, A, and A-) will be less than 50% of the total class.

To earn credit for the course, students must obtain a minimum score of 50 points out of a normalized 100 points. If a student's score falls below 50 points, they will receive an F grade.

- 2) **Class Activity:** There will be class activity requirements such as discussions and group activities.
- 3) **QAIST Questions and Gradings:** Student will be assigned to create questions and evaluate other students' questions.
- 4) **Oral Presentation:** All students will be required to deliver a brief oral presentation on contemporary issues in chemistry. Each presentation should be under 12 minutes in length and submitted as a recorded video file (using PPT, Zoom, or other software) along with the PPT file. Students will also participate in evaluating the presentations.

5) **Grading Criteria and Points Distribution**

- I. Attendance & Attitude: 20 points
- II. Assignments such as QAIST questions and Gradings, and Class Activities: 50 points
- III. Oral Presentation: 30 points
- IV. Any Plagiarism and Misconduct: F grade
- V. Less than 50 points: F grade

6. **Waiver Examination**

There is no waiver examination General Chemistry.

7. **Lecture Schedule**

About one chapter per week (total 13 Chapters) will be covered. The homework submission schedule and details will be announced at the CH101-B board.