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	Mi Hee Lim
13:00~14:30	B	Chemistry of Plastic Age	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 Semester

Syllabus for General Chemistry I-Chemistry Around Us

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

2. **Lecture Timetable**

Time (Tue, Thu)	Class	Professor	Lecture Room(E11)
09:00~10:30	A	Kiyoung Park	TBA

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. We will begin with discussion on the chemistry behind portable electronics and link it to the periodic table. The lecture will explore 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, and delve into materials science with polymers and plastics. Additionally, it might touch on the chemistry of food, health, and genetics. This approach will make 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/).

5. General Guidelines

1) The grading system will be determined based on the total scores achieved by students. The distribution of A grades (including A+, Ao, 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**. If a student's score falls below 50 points, they will receive an F grade.

2) **Oral Presentation**: Over the course, all students will be required to deliver a brief oral presentation on contemporary issues in chemistry. Each presentation should be under 15 minutes in length and will be assessed using an A-C grading scale.

3) **Grading Criteria and Points Distribution**

I. Attendance & Participation: 20 points

II. Assignments: 20 points

III. Mid-term Exam: 30 points

IV. Oral Presentation: 30 points

V. Plagiarism of Book reports: F grade

6. Waiver Examination

The waiver examination on General Chemistry I will be held at the beginning of the semester, but only for those, who did not take any previous General Chemistry I classes.

7. Lecture Schedule

Week (Mon, Wed)	Chapters#	Notes
1st (9/3, 9/5)	1	No attendance check
2nd (9/10, 9/12)	2	
3rd (9/17, 9/19)	3	9/17 Chuseok, No class
4th (9/24, 9/26)	4	
5th (10/1, 10/3)	5	
6th (10/8, 10/10)	6	10/3 National Foundation Day (개천절), No class
7th (10/15, 10/17)	7	10/17: Study day, no class
8th (10/XX)	Mid-term Exam	(19:00 ~ 21:00)
9th (10/29, 10/31)	8	10/23: Midterm Claim
10th (11/5, 11/7)	9, 10	
11th (11/12, 11/14)	11, 12	
12th (11/19, 11/21)	13	
13th (11/26, 11/28)	Presentation	

14th (12/3, 12/5)	Presentation	
15th (12/10, 12/12)	no class	
16th (12/XX)	Final Exam	(19:00 ~ 21:00)

After each chapter, students will be required to submit a brief essay on the class topic. Due dates will be notified during the class.