

Course number	U-LAS13 10008 LE60					
Course title (and course title in English)	Basic Organic Chemistry I-E2 Basic Organic Chemistry I-E2		Instructor's name, job title, and department of affiliation	Institute for Chemical Research Assistant Professor, SINGH, Vaibhav Pal		
Group	Natural Sciences		Field(Classification)	Chemistry(Foundations)		
Language of instruction	English		Old group	Group B	Number of credits	2
Number of weekly time blocks	1	Class style	Lecture (Face-to-face course)		Year/semesters	2026 • First semester
Days and periods	Tue.4		Target year	Mainly 1st & 2nd year students	Eligible students	For science students
[Overview and purpose of the course]						
This course is intended for Japanese and international students registered in natural science majors who are interested in learning chemistry in English.						
Basic Organic Chemistry I explains the fundamental concepts of organic chemistry, aiming to help students understand the structures and properties of organic compounds. This course can be taken alone or in combination with Basic Organic Chemistry II.						
[Course objectives]						
Students will be able to analyze the structure of organic compounds and predicting their properties based on their bonding, atomic orbitals, hybridization state, intermolecular forces and resonance structures.						
[Course schedule and contents]						
The semester will be divided as follows:						
Week 1: Introduction to Organic Chemistry						
Week 2: Atomic Orbitals						
Week 3: Molecular Representations						
Week 4: Geometry of Compounds						
Week 5: Intermolecular Forces						
Week 6: Resonance						
Week 7: Mid-term Exam						
Week 8: Acids and Bases (Part 1)						
Week 9: Acids and Bases (Part 2)						
Week 10: IUPAC (International Union of Pure and Applied Chemistry) Nomenclature (Part 1)						
Week 11: IUPAC Nomenclature (Part 2)						
Week 12: Conformations of Alkanes and Cycloalkanes						
Week 13: Amino Acids and Proteins						
Week 14: Classification and Structures of Carbohydrates						
Week 15: Final Exam						
Week 16: Feedback						
----- Continue to Basic Organic Chemistry I-E2(2)						

Basic Organic Chemistry I-E2(2)

[Course requirements]

This course can be taken alone or in combination with Basic Organic Chemistry II.

[Evaluation methods and policy]

Evaluation will be based on class attendance and active participation (30%), mid-term exam (30%) and final examination (40%).

[Textbooks]

David Klein 『Organic Chemistry』 (Wiley) ISBN:1118452283 (not mandatory)

[References, etc.]

(References, etc.)

Handouts will be provided at the beginning of each lecture.

[Study outside of class (preparation and review)]

Students should review the course materials after each class.

[Other information (office hours, etc.)]

Teaching Approach:

The new concepts are introduced in a skill-building format with practice problems (in class) and exercises (in class) to help students master the course material (no homework).

[Essential courses]

Faculty of Science