Course number	U-LAS13 20006 LE60				
Course title (and course title in English)	Introduction to Inorganic Chemistry B-E2 Introduction to Inorganic Chemistry B-E2	Instructor's name, job title, and department of affiliation	Graduate School of Engineering Associate Professor,ZHU, Tong		
Group	Natural Sciences	Field(Classification)	Chemistry(Development)		
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・Second semester
Days and periods	Tue.3	Target year	Mainly 1st & 2nd year students	Eligible students	For science students

[Overview and purpose of the course]

These lectures will introduce students to the fundamentals of inorganic chemistry. This series of lectures will aim at giving students a basic comprehension of chemical reactions (acid-base and redox) as well as the structure of inorganic substances, their properties and their applications in our daily lives. This course is designed for both Japanese and International students.

[Course objectives]

(1) To understand the theories of acid-base and redox reactions.
(2) To be able to analyze the symmetry of complex molecules and their related properties.
(3) To understand the fundamental mechanisms behind characterization techniques related to inorganic chemistry and their applications in studying inorganic compounds.

[Course schedule and contents)]

The course will cover the following topics, and each of them is read in 1 or 2 weeks

(1) Brønsted acids and bases
(2) Lewis acids and bases
(3) Oxidation and reduction
(4) Representation of potentials and applications
(5) Molecular symmetry and coordination compounds
(6) Electronic structure of d-metal complexes: crystal-field theory and ligand-field theory
(7) Properties of d-metal complexes
(8) Introduction to the characterization techniques in inorganic chemistry
(9) Material chemistry
(10) Catalysis

Total 14 classes and 1 Feedback

[Course requirements]

None

Continue to Introduction to Inorganic Chemistry B-E2(2)↓↓↓

Introduction to Inorganic Chemistry B-E2(2)

[Evaluation methods and policy]

Evaluation will be based on attendance and participation (30%), assignments (70%).

[Textbooks]

Weller, Overton, Rourke, Armstrong 『Inorganic Chemistry』 （Oxford University Press）ISBN:978-0-19-964182-6

[References, etc.]

（References, etc.）

Introduced during class
Will be announced during the lecture

（Related URL）

(Will be announced during the lecture)

[Study outside of class (preparation and review)]

Students are required to do their homeworks and when trouble is encountered during homework, please ask me.

[Other information (office hours, etc.)]

Office hour: Anytime by email and appointments should be made via email.

[Essential courses]

Faculty of Science