

Language: English 

Print

Close

2021 Academic Year Course Description and Syllabus

Course Name	Instructor Name
Fundamental Inorganic Chemistry(2credits) [ENES303]	Shinjiro Sato
Inorganic Chemistry(2credits) [SESI341]	

Course numbers are displayed in blue color after course names.

Semester Spring Semester

Course Sub Title (for general course and seminars)

Study on basic chemical characteristics of materials

General Description

Materials have particular characteristics which greatly depend on electrons within the materials. Students learn about those characteristics of the materials understanding physical structures, chemical bonds, chemical forms (solid and liquid), and electrical characteristics of the materials. Classes are offered through lectures and quizzes.

Goals and Objectives

1. Understand structure of atoms, and relationships between atoms and their characteristics using periodical table
2. Understand chemical bonds and structure of molecules
3. Understand solid, liquid, and electrical characteristics of the materials
4. Understand structure and characteristics of complexes
5. Understand characteristics of each element according to periodical table

Each student will obtain [B] grade as long as he/she understands the points above.

General Education / Faculty Courses: Most relevant Learning Outcomes for this course.

- Students are able to learn the knowledge necessary in the specialized field and utilize it.
- Students are able to have an inquiring mind/intellectual curiosity and collect the related knowledge from a wide range of information media.
- Students are able to analyze the issues/problems and solve them through critical/creative thinking.
- Students are able to communicate with each other in a group.
- Students are able to properly describe opinions and claims of their own.
- Students are able to actively take an action under their self-management and display their leadership.
- Students are able to have a sense of ethics and be aware of the social contribution and responsibility.
- Students are able to be conscious of their contribution to the international communities.

Course Syllabus

Content

Class 1	Lecture contents	Guidance Unit, chemical terminology, concentration, significant digit (Chapter 1) (Chapter number in lecture contents correspond to chapter in the textbook.)
	Self-study Assignments	Preparation for Chapter 1
Class 2	Lecture contents	Structure of atom (Chapter 2)
	Self-study Assignments	Preparation for Chapter 2
Class 3	Lecture contents	Chemical bond (1) (Chapter 3)
	Self-study Assignments	Preparation for Chapter 3
Class 4	Lecture contents	Chemical bond (2) (Chapter 3)
	Self-study Assignments	Preparation for Chapter 3
Class 5	Lecture contents	Chemistry of solid (1) (Chapter 4)
	Self-study Assignments	Preparation for Chapter 4
Class 6	Lecture contents	Chemistry of solid (2) (Chapter 4)
	Self-study Assignments	Preparation for Chapter 4
Class 7	Lecture contents	Chemistry of liquid (1) (Chapter 5)
	Self-study Assignments	Preparation for Chapter 5
Class 8	Lecture contents	Chemistry of liquid (2) (Chapter 5)
	Self-study Assignments	Preparation for Chapter 5
Class 9	Lecture contents	Electrochemistry (1) (Chapter 6)
	Self-study Assignments	Preparation for Chapter 6
Class 10	Lecture contents	Electrochemistry (2) (Chapter 6)
	Self-study Assignments	Preparation for Chapter 6
Class 11	Lecture contents	Chemistry of complex (1) (Chapter 7)
	Self-study Assignments	Preparation for Chapter 7
Class 12	Lecture contents	Chemistry of complex (2) (Chapter 7)
	Self-study Assignments	Preparation for Chapter 7
Class 13	Lecture contents	Chemistry of main group elements
	Self-study	

	Assignments	None
Class 14	Lecture contents	Chemistry of main group and transition elements (1)
	Self-study Assignments	None
Class 15	Lecture contents	Chemistry of main group and transition elements (2) Preparation for exam
	Self-study Assignments	None

Evaluation/Assessment

Assessment	Percentage	Evaluation Criteria (Explanation)
Final Exam	70%	Allowed to bring only lecture notes.
Midterm		
Papers		
Performance/Works		
Continuous Assessment (quizzes, assignments, etc.)	30%	A quiz during each class as review of the previous class contents.
Other		
Remarks about grading		Must bring a scientific calculator for class and exam. Calculator in cellphones are not allowed to use.

Grading Method:ABC

Course Materials

1. [新しい基礎無機化学、合原眞、三共出版、2007年初版、2600円+税](#)

Lecture notes are provided in classes, but strongly recommended to read the textbook before and after classes.

Reference Materials

Refer to textbooks designated at library.

Advice for Prospective Students

Strongly recommended for students who will enroll in "Analytical Chemistry" in Fall semester to enroll in this class.

Estimated time to prepare and to review for each class session. (incl. assignments, tests, papers, etc) : 4hrs

Implementation of Active Learning

Yes

- Discussion and/or debate
- Group Work

Will you use ICT for class or to support self-learning?

- Yes
- Portal site (forum, questionnaire functions)

How to give feedback for assignments (mid-term exams, reports, etc.)

- Make time to review or explain in class.
Correct and return tests or reports.

Language used in class

Japanese

Print

Close

Link URL: <https://plas.soka.ac.jp/csp/plas/slb.csp?nd=2021&sm=1&mk=11&lc=108658>