| Akashi College | Year | 2022 | Course Title | Science Ⅲ B |
|---|---|---|---|---|

## Course Information

| | | | |
|---|---|---|---|
| Course Code | 4306 | Course Category | General / Compulsory |
| Class Format | Lecture | Credits | School Credit: 2 |
| Department | Architecture | Student Grade | 3rd |
| Term | Year-round | Classes per Week | 2 |
| Textbook and/or Teaching Materials | | | |
| Instructor | INOUE Tsutomu | | |

## Course Objectives

1. Can explain and calculate the basic matters related to the conditions of substances.
2. Can explain and calculate the basic matters related to chemical reactions.
3. Can explain and calculate the basic matters related to inorganic substances.
4. Can explain and calculate the basic matters related to organic substances.

## Rubric

| | Ideal Level | Standard Level | Unacceptable Level |
|---|---|---|---|
| Achievement 1 | Can fully and accurately explain and calculate the basic matters related to the conditions of substances. | Can explain and calculate the basic matters related to the conditions of substances. | Cannot explain and calculate the basic matters related to the conditions of substances. |
| Achievement 2 | Can fully and accurately explain and calculate the basic matters related to chemical reactions. | Can explain and calculate the basic matters related to chemical reactions. | Cannot explain and calculate the basic matters related to chemical reactions. |
| Achievement 3 | Can fully and accurately explain and calculate the basic matters related to inorganic substances. | Can explain and calculate the basic matters related to inorganic substances. | Cannot explain and calculate the basic matters related to inorganic substances. |
| Achievement 4 | Can fully and accurately explain and calculate the basic matters related to organic substances. | Can explain and calculate the basic matters related to organic substances. | Cannot explain and calculate the basic matters related to organic substances. |

## Assigned Department Objectives

## Teaching Method

| | |
|---|---|
| Outline | The objectives of this course is to gain a basic knowledge of chemicals, and to develop scientific thinking skills by understanding the basic theories of chemistry. |
| Style | Regular classes will be taught in a lecture style, and there will also be experiments in some weeks. |
| Notice | We hope that by observing their everyday lives scientifically, students will recognize that chemistry is all around us.<br>CBT may be done on a substitute date.<br>* Liaison: Ogasawara<br>Students who miss 1/3 or more of classes will not be eligible for a passing grade. |

## Characteristics of Class / Division in Learning

| | | | |
|---|---|---|---|
| ☐ Active Learning | ☐ Aided by ICT | ☑ Applicable to Remote Class | ☐ Instructor Professionally Experienced |

## Course Plan

| | | | Theme | Goals |
|---|---|---|---|---|
| 1st Semester | 1st Quarter | 1st | Conditions of substances 1 | Can explain and calculate the basic matters related to the conditions of substances. |
| | | 2nd | Conditions of substances 2 | Can explain and calculate the basic matters related to the conditions of substances. |
| | | 3rd | Conditions of substances 3 | Can explain and calculate the basic matters related to the conditions of substances. |
| | | 4th | Chemical reaction and energy 1 | Can explain and calculate the basic matters related to chemical reactions and energy. |
| | | 5th | Chemical reaction and energy 2 | Can explain and calculate the basic matters related to chemical reactions and energy. |
| | | 6th | Chemical reaction and energy 3 | Can explain and calculate the basic matters related to chemical reactions and energy. |
| | | 7th | Chemical reaction and energy 4 | Can explain and calculate the basic matters related to chemical reactions and energy. |
| | | 8th | Summary of the 1st Q | Can explain and calculate the basic matters learned in the 1st Q. |
| | 2nd Quarter | 9th | Conditions of substances / Chemical reaction and energy Summary | Can explain and calculate the basic matters related to the conditions of substances, chemical reactions, and energy. |
| | | 10th | Reaction rates and equilibrium 1 | Can explain and calculate the basic matters related to reaction rates and equilibrium. |
| | | 11th | Reaction rates and equilibrium 2 | Can explain and calculate the basic matters related to reaction rates and equilibrium. |
| | | 12th | Reaction rates and equilibrium 3 | Can explain and calculate the basic matters related to reaction rates and equilibrium. |
| | | 13th | Reaction rates and equilibrium 4 | Can explain and calculate the basic matters related to reaction rates and equilibrium. |

| | | | | |
|---|---|---|---|---|
| | | 14th | Reaction rates and equilibrium 5 | Can explain and calculate the basic matters related to reaction rates and equilibrium. |
| | | 15th | Reaction rates and equilibrium 6 | Can explain and calculate the basic matters related to reaction rates and equilibrium. |
| | | 16th | Final exam | |
| 2nd Semester | 3rd Quarter | 1st | Reaction rates and equilibrium Summary | Can explain and calculate the basic matters related to reaction rates and equilibrium. |
| | | 2nd | Inorganic substances 1 | Can explain and calculate the basic matters related to inorganic substances. |
| | | 3rd | Inorganic substances 2 | Can explain and calculate the basic matters related to inorganic substances. |
| | | 4th | Inorganic substances 3 | Can explain and calculate the basic matters related to inorganic substances. |
| | | 5th | Inorganic and organic substances 1 | Can explain and calculate the basic matters related to inorganic and organic substances. |
| | | 6th | Inorganic and organic substances 2 | Can explain and calculate the basic matters related to inorganic and organic substances. |
| | | 7th | Inorganic and organic substances 3 | Can explain and calculate the basic matters related to inorganic and organic substances. |
| | | 8th | Summary of the 3rd Q | Can explain and calculate the basic matters learned in the 3rd Q. |
| | 4th Quarter | 9th | Organic substance 1 | Can explain and calculate the basic matters related to organic substances. |
| | | 10th | Organic substance 2 | Can explain and calculate the basic matters related to organic substances. |
| | | 11th | Organic substance 3 | Can explain and calculate the basic matters related to organic substances. |
| | | 12th | Organic substance 4 | Can explain and calculate the basic matters related to organic substances. |
| | | 13th | Organic substance 5 | Can explain and calculate the basic matters related to organic substances. |
| | | 14th | Organic substance 6 | Can explain and calculate the basic matters related to organic substances. |
| | | 15th | CBT chemistry | |
| | | 16th | Final exam | |

Evaluation Method and Weight (%)

| | Examination | Report・Little test・Task | Total |
|---|---|---|---|
| Subtotal | 60 | 40 | 100 |
| Basic Proficiency | 60 | 40 | 100 |
| Specialized Proficiency | 0 | 0 | 0 |
| Cross Area Proficiency | 0 | 0 | 0 |