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|---|--|--|---|--|--|
| Tsuyama College   |  | Year   | 2021  | Course Title   | General Aspects of Integrated Engineering Ⅲ                    |
| Course Information  |  |  |   |  |  |
| Course Code   | 0062   |  | Course Category   | General / Elective   |  |
| Class Format  | Lecture  |  | Credits   | School Credit: 1   |  |
| Department  | Department of Integrated Science and Technology Communication and Informations System Program  |  | Student Grade   | 3rd  |  |
| Term  | Intensive  |  | Classes per Week  |  |  |
| Textbook and/or Teaching Materials  |  |  |   |  |  |
| Instructor  | CHO Feifei   |  |   |  |  |
| Course Objectives   |  |  |   |  |  |
| Learning purposes: To acquire knowledge of biology, which is the basis of total rational engineering, and to acquire the basic skills for understanding engineering phenomena and problem solving.  |  |  |   |  |  |
| Course Objectives:<br>1) To understand the commonality and diversity of living things<br>2) To explain the nature of DNA.<br>3) To explain the regulatory mechanisms of the body's environment.<br>4) To understand of ecosystems on earth. |  |  |   |  |  |
| Rubric  |  |  |   |  |  |
|   | Excellent  | Good   | Acceptable  | Not acceptable   |  |
| Achievement 1   | Understand the commonality and diversity of living things very well.   | Understand the commonality and diversity of living things.   | Understand the basics of the commonality and diversity of living things.      | Has not reached the required standards.                        |  |
| Achievement 2   | Explain the nature of DNA very well.   | Explain the nature of DNA.                                   | Cannot explain the nature of DNA very well.                                   | Has not reached the required standards.                        |  |
| Achievement 3   | Explain the regulatory mechanisms of the body's environment very well.   | Explain the regulatory mechanisms of the body's environment. | Cannot explain the regulatory mechanisms of the body's environment very well. | Has not reached the required standards.                        |  |
| Achievement 4   | Understanding of ecosystems on earth is very good.   | Understanding of ecosystems on earth.                        | Understanding of ecosystems on earth is not good.                             | Has not reached the required standards.                        |  |
| Assigned Department Objectives  |  |  |   |  |  |
| Teaching Method   |  |  |   |  |  |
| Outline   | General or specialized: General<br>Field of learning: Common and Basic Natural Sciences<br>Foundational academic disciplines: Biology/Basic Biology<br>Relationship with Educational Objectives :This class is equivalent to "(2) Acquire basic science and technical knowledge".<br>Relationship with JABEE programs : The main goals of learning / education in this class are "(A) , A-1".<br>Course outline: This course is designed for students who transfer from the departments of Mechanical Engineering, Electrical and Electronic Engineering, Electronic Control Engineering, and Computer Science and Engineering to the Department of Integrated Science and Engineering to acquire the academic skills that will not interfere with their studies. Specifically, lectures and exercises are given to first-year students of the Department of Integrated Science and Engineering with an emphasis on biology.                       |  |   |  |  |
| Style   | Course method : During long vacations, etc., lectures are given in an intensive course. Classes are based on assignment reports and exercises, and lectures are given as needed.<br>Grade evaluation method: Notes (50%) + reports (50%).  |  |   |  |  |
| Notice  | Precautions on the enrollment : : Subject to 3rd year transfer students from the departments of Mechanical Engineering, Electrical and Electronic Engineering, Electronic Control Engineering, and Computer Science and Engineering. This course is held as an intensive course during the long vacation.<br>Course advice: Biology is a basic subject in the Department of Integrated Science and Engineering, and it is a fundamental subject for students to learn after transferring. It is necessary to understand these subjects in order to transfer to a new department. Preparatory study to be done in advance.<br>Foundational subjects :<br>Related subjects: Chemistry I (2nd year), Chemistry II (3rd), Experiments in Science (2nd), General Biology (2nd), Molecular Biology (3rd), Applied Biology (4th), Developmental Biology (4th), Experiments in Biology (4th), Biochemistry (4th), Cell Biology (4th), Bioinformatics (5th) |  |   |  |  |
| Characteristics of Class / Division in Learning   |  |  |   |  |  |
| <input type="checkbox"/> Active Learning  |  | <input type="checkbox"/> Aided by ICT                        |   | <input checked="" type="checkbox"/> Applicable to Remote Class | <input type="checkbox"/> Instructor Professionally Experienced |
| Course Plan   |  |  |   |  |  |
|   |  |  | Theme   | Goals  |  |
| 1st Semester  | 1st Quarter  | 1st  | The course will not be offered this year.                                     |  |  |
|   |  | 2nd  |   |  |  |
|   |  | 3rd  |   |  |  |
|   |  | 4th  |   |  |  |
|   |  | 5th  |   |  |  |
|   |  | 6th  |   |  |  |
|   |  | 7th  |   |  |  |
|   |  | 8th  |   |  |  |

|              |             |      |  |  |
|--------------|-------------|------|--|--|
|              | 2nd Quarter | 9th  |  |  |
|              |             | 10th |  |  |
|              |             | 11th |  |  |
|              |             | 12th |  |  |
|              |             | 13th |  |  |
|              |             | 14th |  |  |
|              |             | 15th |  |  |
|              |             | 16th |  |  |
| 2nd Semester | 3rd Quarter | 1st  |  |  |
|              |             | 2nd  |  |  |
|              |             | 3rd  |  |  |
|              |             | 4th  |  |  |
|              |             | 5th  |  |  |
|              |             | 6th  |  |  |
|              |             | 7th  |  |  |
|              |             | 8th  |  |  |
|              | 4th Quarter | 9th  |  |  |
|              |             | 10th |  |  |
|              |             | 11th |  |  |
|              |             | 12th |  |  |
|              |             | 13th |  |  |
|              |             | 14th |  |  |
|              |             | 15th |  |  |
|              |             | 16th |  |  |

#### Evaluation Method and Weight (%)

|                         | Examination | Presentation | Mutual Evaluations between students | Behavior | Portfolio | Other | Total |
|-------------------------|-------------|--------------|-------------------------------------|----------|-----------|-------|-------|
| Subtotal                | 0           | 0            | 0                                   | 0        | 50        | 50    | 100   |
| Basic Proficiency       | 0           | 0            | 0                                   | 0        | 50        | 50    | 100   |
| Specialized Proficiency | 0           | 0            | 0                                   | 0        | 0         | 0     | 0     |
| Cross Area Proficiency  | 0           | 0            | 0                                   | 0        | 0         | 0     | 0     |