[Keywords] research topic, scientific reasoning, hypothesis, experiment, data analysis, discussion

[Academics] Hisayoshi Ishii

[Course aims]

The aim is to motivate students to initiate simple research topics involving dental medicine, and to learn research methods used in the natural sciences, using scientific reasoning and the process of hypothesis, experiment, data analysis, and discussion.

[Course objectives]

- The goals of this course are for the student to be able to:
- 1. Explain procedures aimed at determining research topics.
- 2. Explain scientific reasoning
- 3. Eexplain how to formulate a hypothesis.
- 4. Explain the course of experiments.
- 5. Explain data analysis methods
- 6. Explain the role of discussion, as well as the content

[Course content]

| Class | Theme  | Content | Academics       |
|-------|--|---------|-----------------|
| 1     | Study of procedures aimed at determining research topics |         | Hisayoshi Ishii |
| 2     | Study of scientific reasoning                            |         | Hisayoshi Ishii |
| 3     | Study of how to formulate a hypothesis                   |         | Hisayoshi Ishii |
| 4     | Study of the course of an experiment                     |         | Hisayoshi Ishii |
| 5     | Study of data analysis methods                           |         | Hisayoshi Ishii |
| 6     | Study of the role of discussion, as well the content.    |         | Hisayoshi Ishii |

[Class implementation method]

Combination of face-to-face learning and distance learning

Class implementation depends on the implementation policy of each department (graduate school) or school.

[Grading policies]

Attendance status, contents of publications, and presentations

[Textbook] Will be indicated during class.

[Reference book] Same as above

[Preparation for course]

Students are expected to prepare for the lessons by using reference literature and documents relevant to the study, on the basis of goals that will have been identified beforehand.