

Epidemiology

(Code: 4811 1st – 2nd year, 2 units)
(Course ID: GS-c4811-L)

1. Instructors

Name	Position	Department	Contact Information
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2. Classroom/Lab Lecture Location

G-Lab, M&D Tower 8F

3. Course purpose and Outline

Course Purpose

This course introduces the principles and methods used in epidemiologic research.

Outline

This course is a lesson to learn the basics of the Clinical Statistics and Bioinformatics Graduate Program of the Integrative Biomedical Sciences Programs for Preemptive Medicine aiming at the training of personnel who can promote precision medicine.

Epidemiology is defined as the study of the causes and distribution of health-related states or events in specified populations, and the application of this knowledge to control those health problems.

Throughout the course we will focus on conceptual and practical issues in the design, conduct, and analysis of epidemiologic studies for description and causal inference.

4. Course Objectives

By the end of this course, students will be able to:

- Describe and calculate measures of disease frequency and measures of effect.
- Explain main types of epidemiologic study, and discuss appropriate design to use in a given situation.
- Explain potential biases in epidemiologic study and how to deal with these biases, and control confounding by stratifying data.
- Explain how epidemiology can be applied to evaluate health policy, investigate infectious diseases and genetic factors with examples.

5. Format

This course will consist of lectures and case-based class activities. Students will be required to write a final report.

6. Course Details

No.	Topics
1	Case and group activity: Measurement (Watch videos relevant to lecture prior to the session) (1)
2	Case and group activity: Measurement (Watch videos relevant to lecture prior to the session) (2)
3	On- demand and self-study (Study design and confounding) (Watch videos relevant to lecture) (1)
4	On- demand and self-study (Study design and confounding) (Watch videos relevant to lecture) (2)
5	Case and group activity: Measurement (Presentation)
6	Case and group activity: Critical appraisal (Presentation)
7	On- demand and self-study (Watch videos relevant to lecture) (1)
8	On- demand and self-study (Watch videos relevant to lecture) (2)
9	Case and group activity: Data analysis (1)
10	Case and group activity: Data analysis (2)
11	Case and group activity: Q&A session (1)
12	Case and group activity: Q&A session (2)
13	Case and group activity: Data analysis (Presentation) (1)
14	Case and group activity: Data analysis (Presentation) (2)
15	Exam
16	Exam review

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the student's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and report assignments (40%). If the course is taken through E-learning, there will be a confirmation exam after the coursework is completed (also through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

Reading materials will be available online through the course webpage. Students are expected to have worked through the materials before attending the corresponding class.

9. Reference Materials

Gordis L. Epidemiology: with student consult. 5th edition. Philadelphia: Elsevier; 2013

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: FUJIWARA Takeo, Department of Global Health Promotion

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Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Permission from the chief instructor is required in order to register for this course.