### Fundamentals of Biostatistics

**Affiliated department, Job title, Name**
Graduate School of Medicine
Professor, SATO TOSIYA

<table>
<thead>
<tr>
<th>Target year</th>
<th>Professional degree students</th>
<th>Number of credits</th>
<th>Course offered year/period</th>
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<td>2</td>
<td>2017/First semester</td>
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<tr>
<th>Day/period</th>
<th>Class style</th>
<th>Language</th>
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<tr>
<td>Tue. 2</td>
<td>Lecture</td>
<td>Japanese</td>
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### [Outline and Purpose of the Course]

While biostatistics is recognized necessary for practice and research work in public health fields, many do not like it because of troublesome mathematics and formulas.

Still biostatistics is really interesting.

To mediate that biostatistics is interesting, we are trying to explain biostatistical concepts without any mathematical or technical details.

Preparations are not required. Come to the class, listen lectures carefully, and think with us. You will get handouts after the class and go over the class every week. To understand biostatistical concepts, it is better to go over and over. Every class starts with a review of the previous class.

### [Course Goals]

- Be familiar with biostatistics
- Understand causal relationship
- Learn various epidemiologic study and clinical trial designs
- Be able to explain basic statistical concepts

### [Course Schedule and Contents]

1. Apr 11 Control
2. Apr 18 H. pylori and stomach cancer
3. Apr 25 Types of epidemiologic study designs
4. May 2 A post marketing clinical trial
5. May 9 Types of clinical trial designs
6. May 16 Measures of exposure and treatment effects
7. May 23 Concepts of statistical testing
8. May 30 Interpretation of confidence interval
9. Jun 6 Sample size calculations
10. Jun 13 More on statistical tests
11. Jun 20 Validity of epidemiologic studies: Cohort studies
12. Jun 27 Validity of epidemiologic studies: Case-control studies
13. Jul 4 New epidemiologic study designs
14. Jul 11 Confounding confounding

### [Class requirement]

Classes are given in Japanese.
[Method, Point of view, and Attainment levels of Evaluation]

Intermediate examination 30%
Final report 70%

[Textbook]
Distribute handouts before each class.

[Reference books, etc.]
(Reference books)
Sato T “Space Phenom Shimarisu Learning Biostatistics” (Iwanami Science Library 114) ISBN:978-4-00-007454-7 (In Japanese)
Sato T “Space Phenom Shimarisu Learning Statistical Tests” (Iwanami Science Library 194) ISBN:978-4-00--29594-9 (In Japanese)
Tsubaki H, Fujita T, Sato T “Coming Clinical Trials” (Asakura Publisher) ISBN:978-4-254-32185-6 (In Japanese)

(Related URLs)
http://www.kbs.med.kyoto-u.ac.jp/

[Regarding studies out of class (preparation and review)]
Review the contents of the previous class

(Others (office hour, etc.)
*Please visit KULASIS to find out about office hours.