| Category<br>(科目区分)                | Cluster of Social Medicine                                       |                         |     |
|-----------------------------------|--|-------------------------|-----|
| Course Title<br>(授業科目名)           | How to write statistical command of SAS and put it into practice |                         |     |
| Instructors<br>(担当者名)             | Kyoko Nomura   | Academic Year<br>(配当年次) | 1st |
| Required course / Elective Course | Elective Course  | Credits<br>(単位数)        | 2   |
| Class Format<br>(授業形態)            | Webclass(on demand)  |                         |     |
| Schedule<br>(開講期間)                | Late April 2025 – January 31, 2026                               |                         |     |
| Class Date/Period<br>(開講曜日 • 時間)  | Every 4th Tuesday of the month, 13:30-15:00                      |                         |     |

### Course Outline/ Course Objectives (授業の概要・到達目標)

The purpose of the course: Students will be able to write programs, analyze data, and interpret numerical results.

Objective of the course: To acquire and practice methods of clinical epidemiology and medical statistics through exercises.

Outline of the class: Statistical software is provided in a wide variety these days, but by actually writing and understanding the programs by yourself, you will be able to use various types of statistical software at any situations given. The SAS is the most versatile statistical software in the field of medical writing and is highly trusted by researchers. There are countless programs openly available. In this course, students will write and run various programs by themselves to enhance a basic understanding of biostatistics. SAS installers will be provided for use on individual PCs.

# Course Planning (授業計画)

| Course Outline/ Course Objectives(授業の概要及び到達目標)<br>(Contents of Class) ((授業内容)) | <mark>Instructor</mark><br>(担当教員名)  | Department (講座名) Class Room [実施場所]  |
|--|---|---|
| Preparation  |   |   |
| Basic rules and summary of statistics  |   |   |
| t-test and one-way Aanalysis of variance                                       | Department of<br>Environmental Health<br>Science and Public   |   |
| Correlation  |   |   |
| Chi-square test and Fisher's exact test  | Kyoko Nomura<br>(Professor)   | Health, Akita University<br>Graduate School of<br>Medicine  |
| Logistic regression analyses   |   |   |
| Linear regression analyses   | [WebClass]  |   |
| Survival analyses  |   |   |
| How to write macro program   |   |   |
|  | (Contents of Class) ((授業内容)) Preparation Basic rules and summary of statistics t-test and one-way Aanalysis of variance Correlation Chi-square test and Fisher's exact test Logistic regression analyses Linear regression analyses Survival analyses | (Contents of Class) ((授業内容))  Preparation  Basic rules and summary of statistics t-test and one-way Aanalysis of variance  Correlation  Chi-square test and Fisher's exact test Logistic regression analyses Linear regression analyses Survival analyses How to write macro program  (担当教員名) |

## Grading Criteria (成績評価の基準と方法)

Students will be evaluated based on 45 hours webclass on-demand watching + self-study 45 hours.

### Contact Information (問い合わせ先(氏名, メールアドレス等))

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# Comment (その他特記事項)

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