科目ナンバリング	U-LAS30 20038 SE10				
授業科目名<英訳>	Programming Practice (R)-E2 :For managing and analysing data Programming Practice (R)-E2 :For managing and analysing data	担当者所属職名・氏名	農学研究科　教授　Daniel Epron		
群	情報学科目群	分野(分類)	(各論)	使用言語	英語
旧群		単位数	2単位	週コマ数	1コマ	授業形態	演習（対面授業科目）
開講年度・開講期	2026・後期	曜時限	月5	配当学年	主として1・2回生	対象学生	全学向

[授業の概要・目的]

R is a programming language whose purpose is to be able to process and organize data sets, and to represent these data graphically. Since the two last decades, R is widely used by scientists worldwide for data management and statistical analyses. This course aims to get students to start using R for analysing data and interpreting the output of basic statistical tests. Classes are taught in the form of practical exercises on computers.

[到達目標]

Upon successful completion of this course students will be able (i) to design and statistically analyse a simple experimental plan using R, (ii) to find and perform by themselves an accurate test for solving their scientific question, even if it has not been specifically addressed during the course and (iii) to produce smart graphics for the presentation of analysed data.

[授業計画と内容]

The course will simultaneously address how to use the R language to manage data, to implement relevant statistical tests and to generate graphical output
Course schedule:
1. Introduction
2. object in R: vectors, matrix, functions
3. data frame -importing data
4. Descriptive statistics
5. Programming with R and random numbers
6. Study of the distribution of quantitative variables
7. Importing, managing and analysing data (1)
8. Importing, managing and analysing data (2)
9. Linear model: linear regression
10. Importing, managing and analysing data (3)
11. Linear model: analysis of variance
12. Improving the quality of graphics for a presentation or report
13. Analysing a dataset: building the script and writing a report (1)
14. Analysing a dataset: building the script and writing a report (2)
≪Final exercise≫
15. Feedback

Programming Practice (R)-E2 :For managing and analysing data(2)へ続く↓↓↓

Programming Practice (R)-E2 :For managing and analysing data(2)

[履修要件]

All students are welcome
Students will have to bring their own laptops to use in class that they will also use for homework. Students have to download and install R software and R-studio software before starting the course.

[成績評価の方法・観点]

Grading: Homework (three to five, 50%), script and report based on the final exercise (50%).
In no case will English language proficiency be a criterion for evaluating students.
Class attendance is expected: students who are absent more than three times without sound reasons (documented unavoidable absence) will not be credited.

[教科書]

Lecture notes will be provided before the class and R scripts will be provided after each class (uploaded on LMS).

[参考書等]

（参考書）
An Introduction to R (https://cran.r-project.org/manuals.html)

[授業外学修（予習・復習）等]

Work not finished in class time should be finished at home. Self-training is recommended: exercises will be provided.

[その他（オフィスアワー等）]

Students are encouraged to ask questions and to make comments during the class.
Students are welcome to arrange appointments by email, even outside the official office hour, for questions and discussion

[主要授業科目（学部・学科名）]