

BK-005-EN Mathematics and Statistics

Short information Orientation Week WiSe 2026/27

1 Structure of the module

- Hybrid format: In-class lecture and videos for exercises
- 6 ECTS = 180 hours workload
- **In-class: Monday 2 - 6 pm, Großer Chemischer Hörsaal**, find on a map:
<https://www.uni-giessen.de/JLUmaps/jlu.standort.php?id=177081&lang=en&standort=index>
- 11 units: 90 minutes lecture (in-class) and 90 minutes exercises (video)
- Additional workload: Homework, voluntary Q & A sessions and exam preparation
- In-class sessions on Monday: 90 minutes lecture, 90 minutes Q & A sessions (Upload questions or ask directly in class. Optional: do your homework and get help from tutors.)
- Strong focus on practical data analysis: Learn to analyze data with softwares R and RStudio.
- All lecture slides, videos, exercises, datasets, R scripts are available on Stud.IP
- Forum in Stud.IP moderated on a daily basis by tutors: additional option to ask questions.
- Final two lecture dates are reserved for exam preparation and Q & A sessions (preliminary schedule next page)

2 Exam

- 100% written exam in single-choice format with answer options. Covers theory from the lectures, R code, interpretation of R outputs as well as arithmetic calculations with a pocket calculator.

3 Software

- R and RStudio, potentially Office (LibreOffice or OpenOffice are fine)
- All required programs are free and can be used without registration.
- Instructions for installation with screenshots will be published about one week before the semester starts. The first Q & A session is reserved for installation support.

4 Additional information on the module and updates: Check Stud.IP!

- Important up-to-date information will always be published as an announcement on the module overview page in Stud.IP → **please check at least once per week, starting from October!**

Have a great start! We are looking forward to meeting you in October! :-)
Dr. Eva Herzog & the Biometry Team

5 Preliminary schedule (Updated July 2026)

Date	Lecture, Mo 2.15-3.45 pm	Exercise video	Q & A session, Mo 4-5.30 pm (Upload questions until...)
12.10.2026	Module organization, descriptive statistics	Descriptive statistics	R installation support
19.10.2026	Descriptive statistics, Scale of measures	Introduction to R	Fr, 16.10.2026 2 pm
26.10.2026	Theory of statistical tests	Additional R basics	Fr, 23.10.2026 2 pm
02.11.2026	Experimental design, statistical tests I	t tests and F tests	Fr, 30.10.2026 2 pm
09.11.2026	Statistical tests II	χ^2 tests and Wilcoxon test	Fr, 06.11.2026 2 pm
16.11.2026	One-way ANOVA	Statistical tests in R	Fr, 13.11.2026 2 pm
23.11.2026	_____ Catch-up week, no in-class sessions, time for study and homework _____		
30.11.2026	Two-way ANOVA	ANOVA	Fr, 27.11.2026 2 pm
07.12.2026	One-factor linear regression	Multiple comparisons	Fr, 04.12.2026 2 pm
14.12.2026	Q & A session	One-factor linear Regression	Fr, 11.12.2026 2 pm
21.12.2026-08.01.2027	_____ Christmas vacation, time for study and homework _____		
11.01.2027	Multiple linear regression	Multiple linear regression	Fr, 08.01.2027 2 pm
18.01.2027	Vectors and matrices	Vectors and matrices	Fr, 15.01.2027 2 pm
25.01.2027	Q & A session	-	Fr, 22.01.2027 2 pm
01.02.2027	Q & A session	-	Fr, 29.01.2027 2 pm
15.02.2027	_____ Preliminary date for exam, 1st examination period _____		
05.04.2027	_____ Preliminary date for exam, 2nd examination period, Might be changed due to the Easter holidays!!! _____		

The final exam dates will always correspond to the official dates published by the examination office. They will be published ASAP as an announcement in Stud.IP. Rooms for the exams and additional information will be published about one week before the exams.