Guide for the exam, *Statistics for Data Science*, WS2024/25

Exam format:

The course exam will be a written test consisting of 5 questions. Most questions will include subparts (e.g., (a), (b), and (c)), which may involve short computations that can be done by hand, simple mathematical proofs, or may require you to explain, describe or interpret some of the statistical methods covered during the course. Additionally, you may be provided with data and asked to determine which statistical test should be used to analyze a given population parameter, explain the statistical assumptions underlying the test, etc.

The exam questions are generally a bit easier than the exercise questions, but cover similar topics to those explored in the course exercises. Unlike the exercises, the focus in the exam is not on implementation, but more on being able to explain how the statistical methods discussed during the course work as well as being able to interpret the results and output of these methods.

Since the focus of the course is on statistical methods, the distribution of exam questions is approximately

1 question about probability theory (weeks 1–5)
2–3 questions about frequentist statistics (weeks 6–11)
1–2 questions about Bayesian inference (weeks 12–14)

The exam is based on the lecture notes available on the course Whiteboard page. You do not need to register for the exam.

Admissible examination documents:

- A handwritten single A4 page with personal notes. You may use both sides of the sheet.
- Other aids (e.g., lecture notes, calculators, cell phones or other electronics) are **not** permitted.
- Bring your student ID card and your identity card (or passport or driving license) for us to verify your identity.

Non-examinable material:

The course exam will cover all of the material covered during the lectures and exercises, with the following exceptions: pages 447–473, 532–533, 576, and 584–586 of the lecture notes are not part of the course exam