

Module: “Statistical Basics for Ph.D Students“
Examination requirements

For obtaining the certificate for the class, you have to hand in a written presentation of an own research project. The text has to address in particular the choice of appropriate statistical methods depending on your data properties and your investigation's objectives and has to cover the methods of the attended 5 sub-modules of the course. It shall not exceed five pages.

Please address the following issues:

1. Research objective(s) of your exemplary project: Main objective and specific research questions.
2. Description of site(s) and object(s) of investigation.
3. Experimental design and sampling scheme with details on the measured properties
4. Translation of the research objective(s) into the language of statistical analysis, including in particular
 - a) Specifying of variable(s) of interest as dependent (target) variables and independent variables (factors) and defining their type.
 - b) Formulation of statistical hypotheses to answer the research questions.
5. Please provide reasons that the selected experimental and sampling design allows to answer the research question of your project.
6. Please select from the statistical methods discussed in the 5 attended sub-modules methods that are appropriate for answering your research questions. Please justify your choice of methods. In particular, the question must be addressed as to whether the assumptions of the chosen statistical methods selected are fulfilled.
7. Please provide a brief summary of the most important results of the statistical analysis of your data and their interpretation.
8. Optional: You can additionally discuss other statistical methods that you could use for data analysis of your project. This could be advisable if you need feedback on statistics of your PhD project.

Evaluation and feedback about your presentations.

If your presentation requires substantial corrections you will be informed and invited to discuss the corrections needed.

If your presentation does not require corrections, you are also welcome to discuss your project personally and in detail. Please make an appointment via e-mail (ikuzyak@gwdg.de).