MSc course Research Skills – course overview

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|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
|  | **Science and the scientific method**  **Finding a question**  Previous work  Novelty | **On the shoulder of giants: dealing with the scientific literature**  Morning practicals: Searching, Literat. DB, Jabref etc. | **Question rev.**  **Intro to statistics**  Regression, NHST  **Design of Experiments**  Planning  Statistical power | **Field day**  **Data collection** | **Scientific Ethics and Culture**  **Organizing your Research**  Misconduct, good scientific practice, reproducibility, scripting, archiving |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
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|  | **Introduction to Graphics in R**  *Morning practical: graphics with R*  *Afternoon exercise: visual data analysis* | **LaTeX**  *Morning practical: LaTeX*  *Afternoon exercise: your document in LaTeX* | **Regression analysis in R**  *Afternoon tutorial: help with analyzing your data in R* | **Writing 1**  Article types,  Publication  Process  **Structure of a research article** | **Practice day**  **Writing**  **Data analysis** |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
|  | **Writing 2**  Style  Paragraph structures  Choice of wording and common mistakes  **Logic** | **Communication**  Ends and means,  Social media  intercultural communication  **Poster**  What makes a good poster | **Reviewing**  Peer review  **Presentation Tips**  Conference presentation  **Choosing a career in science** | **Presentation** | **Practice day**  **Writing** |

**Morning schedule:** unless otherwise announced, lectures start at 9:00 s.t. and end before 12:30. CIP room DE.\_0.135 is reserved for us throughout the course and can be used for exercises.

**Afternoon schedule:** By default, assume that afternoons are reserved for unsupervised homework, i.e. you work in your own time and at your place of choice. However, as 1) you are working in groups, 2) we have computers and software here, it is highly recommended to work at the university if you can manage. **Exceptions** where we have supervised exercises in the afternoon marked in the timetable, notably at the beginning of week 2. Please block the afternoons for those, these practicals cover subjects that are essential for the final paper. Also, you should block Thursday of the first week for your group data collection.

The **main course homepage**, which contains **course material and further links** is here <http://florianhartig.github.io/ResearchSkills/> . **Lecture notes and assignments** will be posted on GRIPS, the online system of the university.

**All other organizational issues will be explained on the first day of the course. See you there!** / Florian Hartig