

Guidelines on how to prepare your seminar

In this seminar, each week participants are responsible for presenting a mathematical argument. The idea is to pick topics that are light on mathematical jargon, so that the focus can lie on the ideas and how they can be best communicated to an audience of peers. We suggest picking an argument from ‘Proofs from the BOOK’, but other choices are possible.

The choice of your topic should be set already two weeks prior to your seminar, when you are planned to meet with Peter Feller to discuss math questions you might have and your general ideas on how you plan to present the topic. You are expected to have a *detailed and finished* outline of your talk ready one week before; present this to the course organiser Martina Jørgensen so she can give you further suggestions and approve it. We expect you to practice your talk in the week that remains.

The preparation of your presentation should consist of several parts, and below we aim to provide some guidelines that might help you structure your work and final result.

- be sure that you understand all the mathematics involved in your chosen argument before you begin writing.
- make reasonable assumptions about the mathematical knowledge of your peers. What prior knowledge can you assume? Keep in mind that the presentation should focus on mathematical ideas and *not* on complicated details that you might have encountered during your readings.
- ask yourself, whilst you think about how to structure your seminar: *if I was in the audience of my own presentation, would I be able to follow if this was my first time hearing about the topic?* (the answer should clearly be yes).
- aim to prepare a talk of 35 min, leaving the rest of the lesson for questions and discussion.
- consider starting your talk by giving a brief outline of what you will discuss; present the structure of your session. Maybe you are planning to motivate the relevant mathematics before you present the details of the theorems? Perhaps you would like to conclude with some open questions, conjectures or interesting facts? Every book starts with a table of content that helps the reader navigate through the pages, and in the same spirit such a summary will help the audience follow your flow and thoughts.
- we recommend that you give a blackboard talk; if you feel that your talk is better suited for a different medium, please discuss this with us early. If you consider a non-blackboard talk, consider a hybrid version, where maybe the beamer is mostly used to show some illustration.
- practice your talk before presenting in front of the class! A suggestion would be to pair up with the other student talking in the same week as yourself.