

# Statistical modelling: Theory and practice

## Introduction

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# Schedule

- 13 weeks
- weekly time slot: Tuesday 13:00-17:00
  - lecture approx. 2 hours + 2 hours exercises  
or
  - 4 hours on an assignment

# Evaluation

- Two project reports
  - Report 1 due by week 9
  - Report 2 due by week 14
- Oral exam combining
  - general questions on lecture topics
  - specific questions on project

# Course overview

- Thorough presentation of the most important topic in statistics: The Linear Model
- Solid base inferential methods: Likelihood and Bayesian methods
- Application-oriented: the R program
- Window on more specialized statistical methods: times series, stochastic simulation, survival data analysis.

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- **Project II**

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- General linear model theory
- **Project I**
- Resampling and stochastic simulation methods
- Introduction to time series analysis
- Introduction to survival data analysis
- **Project II**
- **Oral exam**

# References

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- Other refs TBA