

# Statistical Inference I - Syllabus

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## Timetable:

Date	Time	Room
10/02/2023	14.00 - 17.00	2104
13/02/2023	14.00 - 17.00	2104
15/02/2023	14.00 - 17.00	2104
17/02/2023	14.00 - 17.00	2062
20/02/2023	14.00 - 17.00	2104

## Program:

- Introduction to statistical inference.
- Estimates and estimators: definitions and properties.
- The likelihood function and related quantities.
- Likelihood-based inference:
  - the maximum likelihood estimator (MLE) and its properties;
  - hypothesis testing.
  - likelihood-based confidence regions.
- Mathematical and computational tools to deal with the likelihood approach.
- Linear models.

## References:

- Casella, G. and Berger, R.L., Statistical Inference, Second Edition.
- Everitt, B. and Hothorn, T., An Introduction to Applied Multivariate Statistics with R.