

Machine Learning 1

— Course Organization —

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Schedule and Format

▷ Lectures

Tuesday, 2–4pm, room HE 101

▷ Exercise

Monday, 2–4pm, room H 2013

▷ Office Hours

Thursday, 4–6pm, via zoom

Friday, 4–6pm, via zoom

Homework

- ▷ Groups of 5–6 people
- ▷ Group formation procedure will be announced on ISIS
- ▷ Homework assignments will be graded starting with homework sheet 3

Exam

- ▷ Registration is planned to open January 2025
- ▷ Prerequisites ML1 (9 ECTS)
 - 5 passed homework assignments
- ▷ Prerequisites ML1-X (12 ECTS)
 - 5 passed homework assignments
 - successfully completed elective
- ▷ Dates
 - **Exam A:** March 7, 2025, 8–10am, room H 0105
 - **Exam B:** March 25, 2025, 2–4pm, room H 0104

Content

- ▷ Prerequisites
 - No formal prerequisites
 - Good knowledge of linear algebra, calculus, probability theory, and programming are however recommended
 - Lack of some of these prerequisites will result in additional work

- ▷ Topics
 - Bayes Decision Theory, Parameter Estimation, Component/Discriminant Analysis
 - Model Selection, Learning Theory
 - SVMs, Regression, Neural Nets, Boosting, Decision Trees
 - Clustering, Explainability

Textbook

- ▷ Duda et al. “Pattern Classification”, 2nd Edition (2000)
 - The first four lectures will be based on this textbook
 - Remaining lectures will be slides-based

