

Introduction into Matlab

Teaching Contents

- First steps in Matlab
- Scalar, vector, matrices and computations
- Graphical presentation of data
- Programming
- Data formats, import and export
- Image and video processing
- Sound

Knowledge acquisition

- Competence in programming with Matlab
- Creating first functions
- Data handling in scientific experiments
- Publication-ready presentation of data

Day 1

Unit 1: First steps with Matlab

- Checking correct installation
- Usage of Matlab (command window, editor, help)
- Scripts and sections

Unit 2: Data types

- Scalars, vectors, matrixes
- Computations with data
- Cells and tables

Unit 3: Graphical data presentation

- Create figures from data
- Format figures in a publication-ready format

Day 2

Unit 4: Programming

- From scripts to functions
- If – comparisons
- Switch – case
- For, while, break, continue...

Unit 5: Data handling

- Data import
- Interactive data analysis
- Generate reports

Unit 6: Video

- Import of video streams
- Modification of videos using Image Processing Toolbox
- Generation of sounds
- Export of videos and sound