

INTRODUCTION TO STATISTICS WITH R

Professor: Gabriel Baud Bovy

Email: baud-bovy.gabriel@iit.it

Class: Wednesday, 14:00-16:00

Course 1. Elements of probability and R

- Introduction to statistics
- Probability distributions
- Estimation

- R Overview
- R Installation
- Importing/Exporting data with R
- Graphics with R
- R vs SPSS vs MATLAB

Course 2. Testing means

- Hypothesis testing
- Student test
- one-way ANOVA
- multiple comparisons
- ANOVA assumptions
- two-way ANOVA
- repeated-measure ANOVA

Course 3. Linear models

- linear regression
- multiple regression
- linear models
- model comparison
- linear model extensions

Course 4. R programming

- R control structures
- R data types
- Reshaping data
- R object oriented S3 flavor
- Extending R