Prof. Dr. P. Nolin **ETH Zürich, FS 13**

Probability Theory and Statistics
(D-ITET)

Lectures: Mondays 10:15 – 12:00 in room HG F 1.

Exercise classes: Mondays 16:15 – 17:00 (Group distribution: see below).

The lectures **as well as the exercise classes** start on Monday February 18, 2013.

Content: The basic notions of probability theory, illustrated with many examples. In particular: the concept of probability space, the axioms of Kolmogorov, discrete and continuous models, product spaces, densities, distribution functions, transformations of probability distributions. Independence, conditional probabilities, Bayes' formula, conditional distributions. Expectation of a random variable, variance and covariance, linear estimator, conditional expectation, Law of Large Numbers, Central Limit Theorem. Introduction to statistics: estimation of parameters, testing of hypotheses.

Exercise coordinator:

Laurent Huber (E-mail: laurent.huber@math.ethz.ch, Office: HG G 47.1)

Exercise sheets:

Exercise sheets will be uploaded on Wednesdays in PDF format on the website (see below). The uploaded exercise sheet will be due 12 days after on Monday at the exercise class as a general rule (see website for more information on exercise sheet submission).

Testat requirements: At least two thirds of the exercises must be attempted.

Group leaders for the exercise classes: *(Attn: changes can occur, see website)*

Students	Room	Group leader
A – Di	ETZ H 91	Celine Eggenberger
Du – Hal	ETZ J 91	Jonas Giné
Hat – Li	HG F 26.3	Nicoletta Gabrielli
Lu – Re	HG F 26.1	Laurent Huber
Ri – Ste	ML J 34.3	Albert Altarovici
Sti – Z	ML J 37.1	Maria Veiga

Lecture notes: A script will be distributed in class and will also be available during office hours.
As a complement, the following book is a good reference:
P. Brémaud: *An Introduction to Probabilistic Modeling*, Springer, 1988.

Office hours: Mondays und Thursdays 12:00 - 13:00 in room HG G 32.6.

Website: https://www.math.ethz.ch/education/bachelor/lectures/fs2013/other/wt_s

Please reach out to Laurent Huber if you have any additional question.