Statistics

Component
École Nationale Supérieure d'Électrotechnique d'Électronique d'Informatique d'Hydraulique et des Télécommunications

Semester
Printemps

In brief

> **Code:** N6EE01C

Presentation

Objectives

The aim of this course is to enable the future engineer to build a mathematical model based on the observation of a random phenomenon and a collection of experimental or sampling data. This construction goes from the choice of model to its precise adjustment and its validation. This model must then allow a better understanding or analysis of the phenomenon and lead, if necessary, to decision-making or forecasts.

Description

1st course: Normal distributions; mean and variance.

2nd course: Basis of estimation; unbiased estimation of minimum variance.

3rd course: Fisher Information; Cramer-Rao inequality; maximum likelihood.

4th course: Basis of hypothesis testing; Lemma of Neyman and Pearson.

5th course: Likelihood ratio test; Linear regression. 6th course: Multilinear regression.

7th course: Complements; revisions. Tutorials

TD 1: Mean-variance independence, Gaussian case.

TD 2: Estimate (1).

TD 3: Estimation (2).

TD 4: Hypothesis testing.

Useful info

Place

> Toulouse