

# APPLIED STATISTICS TO ENVIRONMENT

**LEVEL:** MASTER 1

**PERIOD:** SEMESTER 2

**LANGUAGE:** EN

**ECTS:** 3

**TEACHER/COORDINATOR:** KARIN SAHMER



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## 1-Main objectives

- › Gain methods for the analysis of environmental data with the statistical software R.
- › Become autonomous in the management of environmental data acquired during an internship.
- › Understand how your statistical skills will deepen the understanding of your data..

## 2-Skills developed

- › Learn how to use the R software.
- › Gain basic notions in inferential statistics.
- › Learn how to select the right statistical methods depending on your hypothesis.
- › Understand the limits and the conditions for applying those statistical methods.
- › Run statistical methods on data sets.

## 3-General content

Lectures followed by practical work using computers

The studied statistical analysis will be:

- › Analysis of variance (ANOVA) with 1 or 2 factors
- › Analysis of Covariance (ANCOVA)
- › Linear regression, simple and multiple
- › Principal component analysis

## 4- Evaluation

Case study (40% of the global mark for this module): The students will have to work in small groups to write a report about the data they will analyze during class.

Individual exam (60% of the global mark for this module): 2 hours individual test with computer about the studied methods.