

UE Statistics and probability for life sciences - STA331 -

 ECTS
6 crédits

 Composante
Département
de la licence
sciences et
technologies
(DLST)

 Période de
l'année
Automne (sept.
à dec./janv.)

Diplômes intégrant cet élément

- Licence Sciences de la vie
- Licence Chimie

- › **Langue(s) d'enseignement:** Anglais
- › **Ouvert aux étudiants en échange:** Non
- › **Code d'export Apogée:** GBX3SA91

Présentation

Description

This course aims at acquiring the basics of descriptive and inferential statistics. It will deal in particular with methods of point estimation, estimation by confidence interval, and hypothesis testing in a parametric framework. The teaching in the form of lectures/tutorial is completed by practical work sessions on computer aimed at familiarising students with the handling of the R software for statistics.

Heures d'enseignement

TP	TP	36h
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Pré-requis recommandés

Basic knowledge in mathematics: calculus, fractions, powers and percentages, sequence of real numbers, etc.

Période : Semestre 3

Compétences visées

- Load, explore, and summarize graphically a set of data;
- Understand what is a probabilistic model, discrete or continuous;
- Perform simple computations on some basic models, in particular binomial and Gaussian;
- Identify a probabilistic model from a practical situation;
- Compute confidence interval estimates for proportions, means, and variances;
- Formulate hypotheses, compute tests statistics and p-values, interpret results and make practical decisions;
- Perform analyses of variance (anovas) under different models, and understand their outcomes;
- Adjust simple linear models, compute predicted values, test goodness-of fit by an anova;
- Use the R statistical software

Infos pratiques

Contacts

Responsable pédagogique

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Responsable pédagogique

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Lieu(x) ville

› Grenoble

Campus

› Grenoble - Domaine universitaire