- Faculté des sciences
- www.unine.ch/sciences

Generalized linear model (3ST2008)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en statistique	**Cours: 2 ph**	**Voir ci-dessous**	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante

Dr. Pierre-Yves Deléamont
Institut de statistique
Av. de Bellevaux 51 , CH-2000 NEUCHATEL

Contenu

This course will, if time permits, cover the following topics:
- Basic theory of generalized linear models (exponential family, link function,...)
- Estimation and inference for generalized linear models
- Applications to specific data types: binary data, polytomous data, count data, survival data
- Extensions: generalized estimating equations, generalized linear mixed models, generalized additive models
Specific examples in R will be considered throughout.

Forme de l'évaluation

CA graded: The final mark will be based on a 2-hour written exam which takes place during the last week of the lecture. Unless the lecturer and the student both agree on a different date, the re-examination will take place at the same time as the examination for the students of the following year. The re-examined students will pass the 2-hour written exam under the same conditions as the ones which apply to the students of the following year. This includes possible changes regarding the program of the lecture.

Documentation

- McCullagh, P., and Nelder, J.A., Generalized Linear Models (2nd edition). Chapman and Hall, 1989.
- Dobson, A.J., and Barnett, A.G., An Introduction to Generalized Linear Models (4th edition). Chapman and Hall, 2018.
- Faraway, J.J., Extending the Linear Model with R: Generalized Linear, Mixed Effects and Nonparametric Regression Models (2nd edition). Chapman and Hall, 2016.

Pré-requis

Linear regression models, Inferential statistics and knowledge of R.

Forme de l'enseignement

- Compulsory course for master in statistics
- Spring Semester
- Course + practical exercises on computer: 2 hours