- Faculté des sciences
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Bayesian statistics 2 (3ST2019)

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. Clément Chevalier

Contenu

- Multivariate Bayesian models (including Bayesian multiple regression, and other models)
- R programming, in live, during the lecture
- Introduction to Markov Chains
- Markov Chain Monte Carlo methods (Metropolis-Hastings and Gibbs)

Forme de l'évaluation

A) First attempt
CA graded: written 2 hours exam during the last week of the semester.
B) Second attempt
Unless the professor and the student both agree on a different date, the reexamination will take place at the same time as the examination for the students of the following year.
The student will pass the 2 hour written examination 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

C. Robert (2007). The bayesian choice: From Decision-Theoretic Foundations to Computational Implementation. Springer Texts in Statistics
A. Gelman, J. B. Carlin, H. S. Stern, D. B. Rubin (2003). Bayesian Data Analysis, second edition, CRC Press.
P Lee (2012) Bayesian Statistics: An Introduction. Fourth Edition
C. Robert, Casella, C. (2009). Introducing Monte Carlo Methods with R. Springer-Verlag, New York.

Pré-requis

- Bayesian statistics 1 and all its background.
- Very strong taste for R programming

Forme de l'enseignement

- 3 ECTS credits
- Spring Semester
- Elective course for master in statistics (choose 18/24 ECTS)