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

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

Objectifs:

By the end of the lecture, the student will be familiar with the principles and the basic techniques in Bayesian statistics

Contenu:

- bayesian models for some classical data generating processes: Bernoulli, binomial, multinomial, gamma, gaussian linear regression
- bayesian decision theory
- tests and confidence regions
- point estimation
- choice of prior distributions
- bayesian calculations
- introduction to bayesian nonparametrics

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

Forme de l'enseignement:

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