

- Faculté des sciences
- [www.unine.ch/sciences](http://www.unine.ch/sciences)

### Statistical learning (3ST2020)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en statistique</b>	<b>Cours: 2 ph</b>	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. Caren Hasler  
Institut de statistique  
Av. de Bellevaux 51 , CH-2000 NEUCHATEL

#### Contenu

This course is meant as an overview of commonly used methods in statistical learning. If time permits, the following topics will be covered:

- Introduction to statistical learning
- Linear regression (brief review)
- Classification
- Resampling methods
- Linear model selection and regularization
- Moving beyond linearity
- Tree-based methods
- Support vector machines
- Deep learning

#### Forme de l'évaluation

The final mark will be based on a 2 hour written examination.

#### Documentation

James, G., Witten, D., Hastie, T., and Tibshirani, R. (2021) An Introduction to Statistical Learning with Applications in R. Springer, New York, 2nd edition

#### Forme de l'enseignement

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