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## Survey Sampling 1 (3ST2016)

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 Automne

### Equipe enseignante

Prof. Yves Tillé  
Institut de statistique,  
Av. de Bellevaux 51  
CH - 2000 Neuchâtel

### Contenu

After a presentation of the general definition (sampling design, inclusion probabilities, Horvitz-Thompson estimator), the particular designs are introduced : simple random sampling, stratification, cluster sampling. A great part is dedicated to the problem of estimation of parameters of interest in the context of sampling.

### Forme de l'évaluation

2 hours written exam at any exams session. Authorized document - Y. Tillé, Survey Sampling. Course notes. without annotations.

### Documentation

- Y. Tillé (2020). Survey Sampling, Course Notes, Neuchatel.
- Y. Tillé (2020). Sampling and Estimation from Finite Populations, Hoboken Wiley.
- Y. Tillé (2006), Sampling Algorithms, New York, Springer-Verlag.
- P. Ardilly et Y. Tillé (2005). Sampling Methods : Exercises and Solutions, 382 pages, Springer-Verlag, New York.

### Pré-requis

Basics of calculus.

### Forme de l'enseignement

- 3 ECTS credits
- Autumn Semester
- Compulsory course for the master in statistics
- Exercises are put into practice based on the theory taught during the course. A part of the exercices are dedicated to simulations of sampling selection and estimation by means of the 'sampling' package of the R language.

URLs	1) <a href="https://moodle.unine.ch/course/view.php?id=2129">https://moodle.unine.ch/course/view.php?id=2129</a>
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