

## Quantitative Methods for Management

**Enseignant(s):** Jérôme Reboulleau

**Langue d'enseignement:** Anglais

**Période d'enseignement:** Automne: 2.0h. de cours et 2.0h. d'exercices (moyenne hebdomadaire)

**Crédits ECTS:** 6 crédits

**Site web du cours:** <http://moodle.unil.ch/course/view.php?id=12119>

**Password :** welcome17

### Formation(s) concernée(s):

Maîtrise universitaire ès Sciences en management, Orientation stratégie, organisation et leadership

Maîtrise universitaire ès Sciences en management, Orientation marketing

Maîtrise universitaire ès Sciences en management, Orientation comportement, économie et évolution

Maîtrise universitaire ès Sciences en management, Orientation business analytics

### Objectif

*Quantitative Methods for Management* presents the application of quantitative methods as a helping decision tool in business management and social context (marketing, finance...). At the end of the course, various methods should ensure an improved understanding of more complex dataset: hidden relationship between variables, data clustering, summarizing large dataset...

### Contenu

#### Statistical modeling methods:

- Review on regressions: multiple regression, OLS, t-tests, CI, F-test.
- Exponential family and logistic regression: MLE, LRT

#### Multivariate Analysis:

- Factor analysis, Principal Component Analysis, Confirmatory FA
- Cluster Analysis

#### Causal Analysis:

- Structural Equation Models.
- Causal graphs and instrumental variables

#### Other topics depending on the agenda

**References** No mandatory reading. All relevant documents will be made available in class.

### Session ordinaire

**Examen:** Ecrit 2 heures

**Documentation:** Autorisée avec restrictions

**Calculatrice:** Autorisée avec restrictions

#### Evaluation:

- The course is evaluated based on one final written exam organized during the final exam session at the end of the semester.
- The final exam is 2 hours long.
- This is a closed book exam.
- The only authorized material consists of:
  - a personal summary of 3 A4 sheets (two-sided = 6 pages) and

- the calculator as defined by the HEC "decanat" rules. Other smartphones and calculators are forbidden.

## Session rattrapage

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