

- Faculté des sciences économiques
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Quantitative Methods for Managers (5MI2009)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master in General Management	Cours: 4 ph	Voir ci-dessous	6

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante

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Contenu

The course starts with an overview of the main concepts used in quantitative analysis (business analytics, models and the modelling process). The first part is related to the methods for data understanding, i.e. data exploration, data visualization, and extraction of relationships and patterns from data. The theoretical support for this part is based on probability theory (probability distribution, Bayes' rules, conditional probability and probabilistic independence). In the second part the accent is put on the topic of regression analysis, which is used to study relationships between variables, and the topic of time series analysis and forecasting methods.

Forme de l'évaluation

- Assignments : 40% of final grade.
- Final written exam (2 hours) during winter session: 60% of final grade.
- Allowed documents during exams: course slides with annotations.
- Connected devices are not permitted during the exams. In case of violation of this rule, the students are in a situation of fraud and the unauthorized items will be removed. The exam could be deemed as failed.

Modalités de rattrapage

- Resit: 2 hours written exam during autumn session: 100% of final grade.

Documentation

Quantitative Methods for Decision Makers, by Mik Wisniewski; Pearson, sixth edition, 2016
Quantitative Analysis for Management, by Barry Render, Ralph M. Stair, Michael E. Hanna, Trevor S. Hale; Pearson, thirteenth edition, 2018
Essential Quantitative Methods, by Les Oakshott; Palgrave MacMillan, sixth edition, 2016
Quantitative Methods for Business, Management & Finance, by Louise Swift, Sally Piff; Palgrave MacMillan, fourth edition, 2014
Business Analytics: Data Analysis and Decision Making, by S. Albright, W. Winston; Cengage Learning, seventh edition, 2020

Forme de l'enseignement

Cours ex-cathedra (2 hours) and practical exercises (individual or by groups) (2 hours). The time allowed to each teaching component may vary according to the lecture's topic.
The use of a personal computer for applied exercises is strongly recommended.

Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Explain the implications of data analysis for a business environment
- Analyse the consequences of a change in the assumptions of a probabilistic model
- Explain the quantitative models and methodologies applied in a real word case study
- Apply appropriate methods for data exploration and data visualization
- Evaluate a decision problem according to several dimensions
- Define the role and purpose of quantitative techniques in effective management
- Recognise the different types of relationships and patterns extracted from data

Compétences transférables

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- Develop hands-on, pro forma modelling skills using Excel
- Communicate results orally
- Discuss complex issues and interactions
- Apply knowledge to new situations
- Carry out critical and evidence-based analyses