UCLouvain

mlsmm2116

2026

Data Analytics

The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

5.00 credits	30.0 h + 15.0 h	Q1

Teacher(s)	Fouss François ;
Language :	French
Place of the course	Mons
Prerequisites	/
Main themes	Nowadays, data is everywhere. For most organisations, potentially every area of their business, as well as every relationship related to their business, can now be quantified and recorded. Such a large amount of data has led to the emergence of powerful methods for storing, processing, querying, and extracting useful information/knowledge from this data. This course will focus on methods for understanding, designing, managing, preparing, modelling, querying, and visualising data, as a global means for the organisation to make better decisions. As a central element in data analytics, methodology, modelling and reporting will play an important role in this course. The main topics of this course are : • Main tasks in data analytics (descriptive, predictive, prescriptive); • Methodology for data analysis; • Applications and use cases of data analytics; • Reporting.
Learning outcomes	**At the end of this learning unit, the student is able to :** **Learning Outcomes (LO) at the end of the learning unit** At the end of this learning unit, the student is able to : 1 • Understand the key issues in data analysis; • Apply a robust methodology in data analytics projects; • Propose quality reporting for decision-making purposes.
Bibliography	**Sources potentielles :** Provost & Fawcett (2013) 'Data science for business'. O'Reilly. Sherman (2014) 'Business intelligence guidebook: from data integration to analytics'. Morgan Kaufmann. Efraim, Sharda & Delen (2010) 'Decision support and business intelligence Systems'. Pearson. Leskovec, Rajaraman & Ullman (2014) 'Mining of massive datasets, 2nd ed'. Cambridge University Press. Kelleher, Mac Namee & D'Arcy (2015) 'Fundamentals of machine learning for predictive data analytics. MIT Press. Hastie, Tibshirani & Friedman (2009), "The elements of statistical learning, 2nd ed". Springer-Verlag. Izenman (2008), 'Modern multivariate statistical techniques: regression, classification, and manifold learning. Springer. Bellanger & Tomassone (2014), "Exploration de données et méthodes statistiques : data analysis & data mining avec le Logiciel R". Ellipses.
Faculty or entity in charge	CLSM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] : Business Engineering	INGM2M	5		🔍