

## Course Descriptions Master 2019-2020

Course Title Data Visualization  
 Course Code EBC4225  
 ECTS Credits 5,0  
 Assessment None

Period	Period	Start	End	Mon	Tue	Wed	Thu	Fri
5	5	14-4-2020	5-6-2020		X		X	

Level Advanced  
 Coordinator Lars Rieser For more information: [l.rieser@maastrichtuniversity.nl](mailto:l.rieser@maastrichtuniversity.nl)

Language of instruction English

Goals This course is an introduction to the field of Data Visualization. Students will learn the fundamentals of data visualization. We will study different visualization methods and discuss how they can be used to visualize and explore quantitative datasets effectively. We will evaluate several approaches and learn how human perception interprets visualized data in various different ways.

Description In the last decade, big data became an integral part of our economic and social life. This trend was heavily influenced by the technological capabilities to store and collect data (Computing power, IoT, Cloud Computing, broadband expansion) and the increasing digitization of social interactions (e.g. Facebook, Twitter, Instagram). Improved technologies are making it possible to process the resulting data sets efficiently and effectively as the potential revenues are in many cases higher than the costs (Olshannikova et al, 2015). This leads to an exponentially growth of the total amount of available data that can be used within industry and business, while the ability to analyze these data increase at much lower rate (Keim et al 2008). The result is that the (proper) use and the ability to correctly interpret data is playing an increasingly important role (Russom, 2013). The improvement of the human ability to manage data, extract information and gain knowledge from it is of vital importance in this context (Olshannikova, 2015). Visualization is an effective way to enhance the human capabilities to extract and interpret information as also to support human decision making. In this course students will learn the fundamentals of data visualization. We will study different visualization methods and discuss how they can be used to visualize and explore quantitative datasets effectively. We will evaluate several approaches and learn how human perception interprets visualized data in various different ways.

Literature \* Course book  
 \* Lecture slides  
 \* Academic papers and readings

Prerequisites There are no formal prerequisites.

Keywords

Teaching methods PBL / Lecture

Assessment methods Final Paper / Participation / Assignment

Evaluation in previous academic year For the complete evaluation of this course please click <http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM>

This course belongs to the following programme / specialisation

Master Business Intelligence and Smart Services Core Course(s)