## Minor Data Driven Decision Making in Business (MDD) MDDF - Storytelling with Data

1.	General information				
Name of study unit	Storytelling with Data.				
Code for study unit	DATDRD05 / DATDRD06				
Degree programme and arget group	Third year students HAN and External Students.				
Teaching period	P1/P3				
ECTS credits and Study load	Study load: 2.5 EC				
		Number of hours on the clock:			
	Scheduled contact time (3 hrs per week)	15.75			
	Time for self-study	54.25			
	Total study load (hours)	70			
Entry requirements for study unit	Approval from bachelor programme the student is enrolled in.				

2. Content and organisation			
Professional task	Report transforming data sets into visual.		
Outcomes (PLO)	TWM24 Analyse a complex business problem in an international business setting with use of adequate research design, resulting in an evidence-based, feasible solution.  WW7 Produce management information from various data sources in an international business environment.  WW4 Communicate (business) messages effectively and persuasively using advanced English to an (un)informed audience.  WT2 Create innovative ideas in a changing business environment in a systematic fashion.		
	This course is for students who are interested to extend their data analytics skills through visualization and compelling storytelling. The focus of this course is not on hard-core analytics but on the translation of the analytical results in a simple and meaningful visual for storytelling in a business setting.		
General description	Data visualization is a storytelling of data using graphical forms. In this course, the student will be exposed to data analysis and basic visualization techniques (e.g., principal component analysis and other clustering techniques) and to choosing the right graphical forms for data story telling. Workshops will also be given to level up the data storytelling skills of students.		
Cohesion	This module provides relevant knowledge and skills in Data Science. The knowledge and skills are necessary for the execution of the project in this minor.		

Mandatory participation	80% of the class must be attended by the students. In-class workshops will be given (e.g., visualization, story-telling techniques) to prepare students to deliver the final output (oral presentation). Active participation in classes and delivery of assignments are required.  Presence during the oral presentation is mandatory. An absence means a grade of 1.0 for this part of the course.
Maximum number of participants	30
Compensation options	N/A
Activities and/or instructional formats	<ul> <li>Case study analysis</li> <li>Lectures</li> <li>Class workshops (Data visualization, story-telling techniques)</li> <li>Oral presentations (Storytelling to stakeholder groups)</li> </ul>
Required literature / description of learning material	Book: Cole Nussbaumer Knaflic. 2015. Storytelling with data: A data visualization guide for Business Professionals. All other materials will be open source or freely available via the LMS (OnderwijsOnline).
Required software /	Excel, Python, or other relevant software.
Extra contributions (TER 2.7)	N/A

3.	Examination		
Name (modular) exam	Storytelling with Data (The Art of Data Visualization)		
Code (modular) exam	DATDRD05 / DATDRD06 [TOETS-04]		
Assessment Criteria	<ul> <li>Students should be able to: justify the methodology (and/or used data analytics techniques) and analyse large data set based on the chosen methodology.</li> <li>Clearly explain the outcome of the visuals based on large data set and derive meaningful conclusions.</li> <li>transform and present large data sets in simple and effective visuals.</li> <li>communicate visuals based on large data in an effective and convincing ways using storytelling.</li> <li>defend the outcome of his presentation during oral examination.</li> </ul>		
Exam and modular exam format(s) (type of exam)	Presentation		
Individual / group	Pair of students		
Number of examiners	1		
Exam period	P1/P3.		
Resit period	P1/P3		
Duration exam	N/A		
Permitted resources / aids	N/A		
Minimum result	5.5		
Weight factor of modular exam	100%		
Method of enrolment for exam / enrolment period	Participation is equal to enrolment.		
Discussion and review	Yes. Contact the responsible lecturers once the grades are communicated.		

Lecture/ contact hours										
		Period 1 or 3								
Lecture week	1	2	3	4	5	6	7	8	9	10
		3	3	3	3	3	3	3		

Changes compared to last year	Several changes in the whole Study Unit.
Date from which the SU will no longer be offered	None