Minor Data Driven Decision Making in Business (MDD)

MDDS - Data Science Tools and Techniques.
Part of Minor Data Driven Decision Making in Business

1. ***General information***	
Name of study unit	*Data Science Tools and Techniques*
Code for study unit	DATDRD05 / DATDRD06
Degree programme and target group	*Third year HAN and/or external students.*
Teaching period	*P2*/P4
ECTS credits and Study load	**Study load:** *5.0* | ***Number of hours on the clock:*** *Scheduled contact time* | 37 *Time for self-study* | 103 ***Total study load (hours)*** | *140*
Entry requirements for study unit	Approval from bachelor programme the student is enrolled in.

2. ***Content and organisation***	
Professional task	A Portfolio showcasing Data Science Techniques in a business case using relevant tools and justifying the choices made.
Exit qualifications / Programme Learning 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. **Involved:** LW10: Formulate one's own position concerning ethical and social responsibility in a professional environment.
General description	The course will provide the student the tools, techniques, and trainings which they will use to showcase the skills they have mastered, as an individual using a business case where big data and the CRISP-DM is the basis of their final individual product. By doing so, they can individually integrate the knowledge and skills that they have learnt in a business case. The bootcamps are the basis of the portfolio made.

Cohesion	This module provides the student the possibility to individually apply the CRISP model to a data science business problem using the various tools and techniques. The CRISP model was discussed in period 1 and used throughout the minor. Includes its use in the project.
Mandatory participation	*NA*
Maximum number of participants	*30*
Compensation options	*NA*
Activities and/or instructional formats	Master classes, Workshops, Problem Based Learning, Group-learning, Self-study, Team and Individual Assignment(s).
Required literature / description of learning material	Professional training with certificates, other materials will be open source or freely available via the LMS (OnderwijsOnline)"
Required software / required materials	Python / Visual Studio Code / Disco / Celonis, and other relevant Data Science Analytics Tools.
Extra contributions (TER 2.7)	N/A

3. ***Examination***	
Name (modular) exam	*Data Science Tools and Techniques*
Code (modular) exam	DATDRD05 / DATDRD06 [TOETS-08]
Assessment Criteria	The student - can apply the Data Science CRISP model to a data science problem. - can justify the choices made per step of the Data Science CRISP model. - can use appropriate data science analysis tools and techniques to solve a data related business problem. - can perform in a complex and unpredictable situation under supervision. - can translate a business problem into an appropriate setup of the data mining process - can list commonly applied data mining methods. - can determine the drivers of success for creating a data driven business solution.
Exam and modular exam format(s) (type of exam)	Portfolio
Individual / group	Individual
Number of examiners	*2*
Exam period	*P2/P4*
Resit period	P2/P4.
Duration exam	*NA*
Permitted resources / aids	*NA*
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. Resit takes place in the same period and not carried over to the next semester or academic year.

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

Changes compared to last year	This is a new Study Unit.
Date from which the SU will no longer be offered	*NA*