

Valid for 2022.HS

Module Name: Data Analytics, AI and Storytelling	
Module Code	w.MA.XX.DAAS.21HS
Module Description	Building on the compulsory modules "Controlling" and "Advanced Enterprise Systems", the module covers various aspects of business intelligence, data analytics, and storytelling. Students acquire advanced data modelling competencies as well as the ability to perform specific data analytics analysis, communicate data and analyses, and structure data analytics and business intelligence platforms.
Program and Specialization	Accounting and Controlling
Legal Framework	Academic Regulations MSc in Accounting and Controlling dated 10.12.2015, Appendix to the Academic Regulations for the degree program in Accounting and Controlling, first adopted on 26.01.2016
Module Category	Module Type: Compulsory Elective
ECTS	3
Organizational Unit	W Institut für Financial Management (IFI)
Module Coordinator	Ursina Hüppin (huep)
Deputy Module Coordinator	Gabriela Nagel (nail)
Prerequisite Knowledge	The compulsory modules "Controlling" and "Advanced Enterprise Systems" are prerequisites.
Contribution to Program Learning Goals (Affected by Module)	§ Professional Competence § Methodological Competence § Social Competence § Self-Competence
Contribution to Program Learning Objectives	Professional Competence § Knowing and Understanding Content of Theoretical and Practical Relevance § Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance § Evaluate Content of Theoretical and Practical Relevance Methodological Competence § Problem-Solving & Critical Thinking § Scientific Methodology § Work Methods, Techniques, and Procedures § Information Literacy § Creativity & Innovation Social Competence § Written Communication § Oral Communication § Teamwork & Conflict Management § Intercultural Insight & Ability to Change Perspective Self-Competence § Self-Management & Self-Reflection § Ethical & Social Responsibility § Learning & Change
Module Learning Objectives	Students... § are able to perform advanced data transformation operations using Power Query (low code). § know about advanced data modelling issues (star models). § acquire a basic knowledge of Data Analysis Expressions (DAX). § understand the basics of project organization and of the operation of BI systems. § are able to apply advanced methods and tools of analysis. § deepen their knowledge of storytelling. § work effectively in groups. § assume various perspectives in evaluating solution approaches and problem situations.

Module Content	§ ADVANCED BUSINESS INTELLIGENCE: § The business intelligence framework (revisited) § Consolidating exercises on ETL (extract, transform, and load) in an accounting and controlling context § Consolidating exercises on data modelling (star model) in an accounting and controlling context § Introduction to Data Analysis Expressions (DAX) § Exercises using DAX: defining and visualizing measures § Advanced data modelling techniques § The arrival of AI in business intelligence § Project organization: How to structure a BI project § Business organization: How to operate a BI platform § ADVANCED DATA ANALYSIS AND STORYTELLING: § Master data management and data quality as a basis for data analytics § Advanced Analysis I - Designing a forecasting model for binary questions of accounting and controlling (e.g., purchasing probability, failure-to-pay probability) using binary logistic regression (RapidMiner) § Advanced Analysis II - Deviation and outlier analysis in accounting and controlling using process control chartes (EXCEL) § Advanced Analysis III - Communicating data using storytelling and data storytelling. Practical exercises and games		
Links to other modules	The content of this module is linked to the following modules: w.MA.XX.AES-M8.16HS w.MA.XX.CO-M3.16HS		
Methods of Instruction	§ Lecture § Application Tasks § Case Studies § Exercises § Project Work	Social Settings Used: § Individual Work § Group Work	
Digital Resources	§ Reader § Practice and Application Exercises (with Key)		
Type of Instruction	Classroom Instruction	Guided Self-Study	Autonomous Self-Study
Lecture	32 h	28 h	
Excercise	-	-	
Project Work	-	-	
Seminar	-	-	
Total	32 h	28 h	30 h
Performance Assessment			
End-of-module exam	Form	Length (min.)	Weighting
-	-	-	-
Permitted Resources	-		
Others	Assessment	Length (min.)	Weighting
Documentation of the solution for the case study	Grade	-	50,00 %
Talk/oral presentation	Grade	30	50,00 %
Students are not allowed to revise and resubmit performance assessment tasks.			
Classroom Attendance Requirement	Mandatory Attendance: None		
Language of Instruction/Examination	German		
Compulsory Reading	§ Heath, C. & Starr, K. (2022). Making Numbers Count: The Art and Science of Communicating Numbers. 11th edition. New York: Avid Reader Press. ISBN 978-1-9821-6544-4. § Graban, M. (2019). Measures of Success – React Less, Lead Better, Improve More. Colleyville. ISBN 978-1-7335194-1-0. Chapter 2.		
Recommended Reading	-		
Comments	-		