

Valid for 2023.HS

Module Name: Quantitative Methods	
Module Code	w.MA.XX.QNM-PiE.19HS
Module Description	This module, which is part of the Master's program in Banking and Finance, focuses on key statistical analysis and empirical research topics. Students will develop a strong foundation in applying statistical techniques to practical issues and enhance their problem-solving abilities using scientific methods. The module covers various essential concepts and methods, including hypothesis and non-parametric tests, linear and logistic regression models, statistical inference, diagnostics, and time series analysis. By completing this module, students will acquire the necessary skills to interpret scientific findings, apply statistical methods to real-world problems, and approach practical challenges systematically and analytically. These skills will empower graduates to contribute effectively to applied research and confidently navigate decision-making processes in various professional settings.
Program and Specialization	Banking and Finance (PiE)
Legal Framework	Academic Regulations MSc in Banking and Finance dated 29.09.2011, Appendix to the Academic Regulations for the degree program in Banking and Finance, first adopted on 28.08.2012
Module Category	Module Type: Compulsory
ECTS	6
Organizational Unit	W Institut für Wealth & Asset Management
Module Coordinator	Marc Weibel (wmar)
Deputy Module Coordinator	Ruben Seiberlich (seib)
Prerequisite Knowledge	Students need a basic knowledge of mathematics and statistics at BSc level as well as knowledge and experience in researching and processing scientific literature and in writing a scientific paper.
Contribution to Program Learning Goals (Affected by Module)	<ul style="list-style-type: none"> § Professional Competence § Methodological Competence § Social Competence § Self-Competence
Contribution to Program Learning Objectives	Professional Competence <ul style="list-style-type: none"> § 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 <ul style="list-style-type: none"> § Problem-Solving & Critical Thinking § Scientific Methodology § Work Methods, Techniques, and Procedures § Information Literacy § Creativity & Innovation Social Competence <ul style="list-style-type: none"> § Written Communication § Oral Communication § Teamwork & Conflict Management § Intercultural Insight & Ability to Change Perspective Self-Competence <ul style="list-style-type: none"> § Self-Management & Self-Reflection § Ethical & Social Responsibility § Learning & Change
Module Learning Objectives	Students... <ul style="list-style-type: none"> § can plan and implement research on application-oriented topics using appropriate methods and common tools. § can, whenever required, familiarize themselves independently with special methods and resources they have not used before.
Module Content	<ul style="list-style-type: none"> § Statistics § Non-parametric tests § Linear regression analysis § Logistic regression § Diagnostics § Time-series analysis
Links to other modules	The content of this module is linked to the following modules: w.MA.XX.AQM-PiE.19HS

	w.MA.XX.OBFC-PiE.19HS		
Methods of Instruction	§ Lecture § Interactive Instruction § Application Tasks § Case Studies § Exercises § Problem-Oriented Teaching § Literature Review	Social Settings Used: Individual Work	
Digital Resources	§ Practice and Application Exercises (with Key) § Case Studies (with Key) § Multiple Choice Tests		
Type of Instruction	Classroom Instruction	Guided Self-Study	Autonomous Self-Study
Lecture	72 h	-	
Excercise	-	68 h	
Project Work	-	-	
Seminar	-	-	
Total	72 h	68 h	40 h
Performance Assessment			
End-of-module exam	Form	Length (min.)	Weighting
Written exam	Open book	60	100,00 %
Permitted Resources	Free choice of calculator	With dictionary	
Students are not allowed to revise and resubmit performance assessment tasks.			
Others	Assessment	Length (min.)	Weighting
Participation in Online Test	Pass/Fail	240	-
Classroom Attendance Requirement	Mandatory Attendance: None		
Language of Instruction/Examination	English		
Compulsory Reading	Newbold, P., Carlsen, W. & Thorne, B. (212). Statistics for Business and Economics (Global Edition). 8th edition. Prentice Hall. ISBN 978-0273767060.		
Recommended Reading	-		
Comments	Students can earn points throughout the semester which can be credited toward their end-of-module exam. Various tasks and projects are offered during the course of this module, enabling students to enhance their understanding and application of quantitative methods continuously. The accumulated points contribute to the overall module assessment, encouraging students to actively participate in their learning progress and track their performance throughout the semester.		