

Valid for 2022.HS

<b>Module Name: Quantitative Analysis in Business</b>	
Module Code	w.BA.XX.1QAB-IM.XX
Module Description	The primary aims of this module are to ensure that students acquire a thorough introduction into the theory and practice of business mathematics and applied statistics as it is used in business decision-making. Students acquire an advanced understanding of the collection and summary of data and the presentation of information in a manner suited to a business environment. Students understand and apply quantitative techniques used in business decision-making.
Program and Specialization	International Management
Legal Framework	Academic Regulations BSc dated 29.01.2009, for the degree programs in Business Administration, International Management, Business Information Technology, Business Law, Business Law and Applied Law, first adopted on 12.05.2009
Module Category	<b>Module Type:</b> Compulsory
	<b>Program Phase:</b> First-Year Studies
ECTS	6
Organizational Unit	W Institut für Risk & Insurance
Module Coordinator	Jürg Portmann (port)
Deputy Module Coordinator	Johannes Gerd Becker (bece)
Prerequisite Knowledge	-
Contribution to Program Learning Goals (Affected by Module)	<ul style="list-style-type: none"> <li>§ Professional Competence</li> <li>§ Methodological Competence</li> <li>§ Social Competence</li> <li>§ Self-Competence</li> </ul>
Contribution to Program Learning Objectives	<ul style="list-style-type: none"> <li>Professional Competence <ul style="list-style-type: none"> <li>§ Knowing and Understanding Content of Theoretical and Practical Relevance</li> <li>§ Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance</li> <li>§ Evaluate Content of Theoretical and Practical Relevance</li> </ul> </li> <li>Methodological Competence <ul style="list-style-type: none"> <li>§ Problem-Solving &amp; Critical Thinking</li> <li>§ Scientific Methodology</li> <li>§ Work Methods, Techniques, and Procedures</li> <li>§ Information Literacy</li> <li>§ Creativity &amp; Innovation</li> </ul> </li> <li>Social Competence <ul style="list-style-type: none"> <li>§ Written Communication</li> <li>§ Oral Communication</li> <li>§ Teamwork &amp; Conflict Management</li> </ul> </li> <li>Self-Competence <ul style="list-style-type: none"> <li>§ Self-Management &amp; Self-Reflection</li> <li>§ Learning &amp; Change</li> </ul> </li> </ul>
Module Learning Objectives	<p>Students...</p> <ul style="list-style-type: none"> <li>§ explain why quantitative methods are useful for management</li> <li>§ understand the use of models</li> <li>§ name the most common quantitative methods used in business</li> <li>§ use appropriate methods in the quantitative analysis of business problems</li> <li>§ collect, summarize, and present data</li> <li>§ solve common quantitative business problems</li> <li>§ apply basic inferential statistics in a business context</li> <li>§ manage common quantitative business problems and make decisions in situations of uncertainty</li> <li>§ base their judgment on appropriate quantitative analysis</li> <li>§ apply quantitative reasoning competently</li> <li>§ use the relevant vocabulary appropriately</li> <li>§ appreciate the increasing importance of quantitative methods and develop the willingness to deepen their understanding of quantitative methods</li> </ul>

Module Content	§ Basic concepts and theories of algebra, differential calculus, and financial mathematics in a business context § Descriptive statistics (frequency distributions as well as measures of location and spread) § Visual modeling of business problems § Basic financial mathematical concepts (present value, future value, annuities, and perpetuities) § Simple regression and curve fitting - forecasting § Basic probability theory and probability distributions § Sampling distributions, confidence intervals and hypotheses testing § Solving business problems (e.g., a mathematical approach to the management of decisions, quality, inventory, projects, and queues, etc.)		
Links to other modules	-		
Methods of Instruction	§ Lecture § Interactive Instruction § Exercises	<b>Social Settings Used:</b> § Individual Work § Pair Work	
Digital Resources	§ Teaching Videos § Practice and Application Exercises (with Key) § Multiple Choice Tests		
Type of Instruction	<b>Classroom Instruction</b>	<b>Guided Self-Study</b>	<b>Autonomous Self-Study</b>
Large Class	56 h	44 h	
Small Class	-	-	
Group Instruction	-	-	
Practical Work	-	-	
Seminar	-	-	
<b>Total</b>	<b>56 h</b>	<b>44 h</b>	<b>80 h</b>
Performance Assessment			
<b>End-of-module exam</b>	<b>Form</b>	<b>Length (min.)</b>	<b>Weighting</b>
Written exam	Open book	120	90,00 %
<b>Permitted Resources</b>	Approved calculator according to "Guidelines on Supplementary Materials"	With dictionary	
<b>Others</b>	<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>
Online Performance Assessments	Grade	30	10,00 %
Classroom Attendance Requirement	Mandatory Attendance: None  There is no physical attendance requirement, but participation in synchronous online classes is strongly recommended.		
Language of Instruction/Examination	English		
Compulsory Reading	Waters, D. (2011). Quantitative Methods for Business. 5th edition. Financial Times Press. ISBN 9780273739470.		
Recommended Reading	-		
Comments	-		