Mathematics 1

Department code:	Module name in German:			
IBM1.1	Mathematik 1			

Workload:	ECTS credits:	Semester:	Frequency of module:	Duration:
150 hours, made up of: 72 contact hours 78 self-study hours	5 ECTS	1st semester	Winter semester	1 semester

Module type:	Academic level:	Suitability of module:
Compulsory module	Bachelor's degree	Recommended pre-requisite for Mathematics 2, Statistics, Microeconomics, Cost Accounting, Macroeconomics, Corporate Finance, Bachelor's Thesis; study programmes in the fields of business and economics

1	**Learning outcomes:** Students can articulate the elementary mathematical principles and important methods and procedures of business mathematics and of financial mathematics. They are able to use basic mathematical methods for practically relevant business administration and financial tasks.
2	**Module content:** – Arithmetic and algebra in terms of real numbers – Linear and non-linear equations and inequations – Functions of an independent variable and its properties – Differential calculus for functions with an independent variable and its application in cost theory, univariate optimization – Financial mathematics: linear, discrete and constant interest rates; equivalence principle; pension, repayment and investment calculation with actual present value, annuity and effective interest rate
3	**Teaching and learning methods:** 3 SWS seminar-type tuition 1 SWS practical tutorial
4	**Module language:** English
5	**Pre-requisites for studying this module:** required: none recommended: none
6	**Type of examination:** Written examination
7	**Assessment methods:** Graded
8	**Requirements for awarding ECTS credits:** Student must pass module examination
9	**Other remarks:** None