

Course Title	Quantitative Business																																									
Course Code	EBC2025																																									
ECTS Credits	6,5																																									
Assessment	Whole/Half Grades																																									
Period	Period	Start	End	Mon	Tue	Wed	Thu	Fri																																		
	5	15-4-2024	7-6-2024		L	X		X																																		
Level	Intermediate																																									
Coordinator	Martin Schumann For more information:m.schumann@maastrichtuniversity.nl																																									
Language of instruction	English																																									
Goals	Learn to recognize the opportunities to apply basic tools from mathematics and inferential statistics in business. Learn to implement statistical tools using the statistical software package SPSS, and to correctly interpret the results.																																									
Description	This course is devoted to refreshing, extending and actively applying the mathematical and statistical tools introduced in the first year quantitative methods courses. In the mathematics part we pay attention to a number of applications of first-year mathematical tools to business economics, such as: investment under uncertainty, the CAPM-model, industrial organisation, Game Theory a.o. The purpose is twofold: to repeat and extend the first-year methods and show how they are applied on the one hand, and to get acquainted with some basic quantitative business models on the other hand. In the statistics part we repeat, apply and extend all the inferential tools discussed in the first year: a.o. the one-sample t-test, the independent-samples t-test, the paired sample t-test, one-way-ANOVA, the chi-square test and regression analysis. Some new techniques, e.g. non parametric tests, logistic regression and factor analysis will be introduced. Case studies using real-life datasets that reflect business problems from a.o. marketing and finance are examined extensively. The empirical analyses are performed with SPSS, a statistical software package widely used in professional practice.																																									
Literature	* Sharpe, Norean R., Richard D. De Veaux and Paul F. Velleman (2019), Business Statistics and Extra Texts, 4th ed., New York: Pearson Education International, Maastricht University Edition. * QM1 and QM2 mathematics readers, to be downloaded on the corresponding course pages																																									
Prerequisites	TRANSITIONAL REGULATIONS: This course is in transition within the pre-master Economics and Strategy in Emerging Markets The following rule applies to pre-master Economics and Strategy in Emerging Markets students who started the programme prior to academic year 2023-2024. TRANSITIONAL REGULATION (EBC2025): Repeat the course or replace it with Research Methods for Pre-master (EBC2170). See the Transitional Regulations section in the Bachelor Education and Examination Regulations for more information. PREREQUISITES: Intermediate knowledge of mathematics and statistics, comparable to the course Quantitative Methods II, code EBC1033/1034/1035.																																									
Teaching methods	PBL / Lecture / Assignment / Groupwork																																									
Assessment methods	Participation / Written Exam																																									
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM																																									
This course belongs to the following programme / specialisation	<table><tr><td>Bachelor Economics and Business Economics - Economics</td><td>Year 3 Quantitative Economics Elective(s)</td></tr><tr><td>Bachelor Economics and Business Economics - Emerging Markets</td><td>Year 2 Elective Course(s)</td></tr><tr><td>Bachelor Economics and Business Economics - Emerging Markets</td><td>Year 3 Elective Course(s)</td></tr><tr><td>Bachelor Economics and Business Economics - Economics and Management of Information</td><td>Year 2+3 Quantitative Economics Elective(s)</td></tr><tr><td>Bachelor Economics and Business Economics - International Business Economics</td><td>Year 2 Compulsory Course(s)</td></tr><tr><td>Bachelor International Business - Emerging Markets</td><td>Year 3 Elective Course(s)</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj Accounting</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj Finance</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj Inf Mgmt</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj Marketing</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj Org</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj SCM</td></tr><tr><td>Bachelor International Business</td><td>Year 3 QE Elec(s) - Maj Strategy</td></tr><tr><td>Transitional Regulations</td><td>See prerequisites</td></tr><tr><td>SBE Exchange Bachelor</td><td>Bachelor Exchange Courses</td></tr><tr><td>SBE Exchange Master</td><td>Bachelor Exchange Courses</td></tr><tr><td>SBE Non Degree Courses</td><td>Bachelor Courses</td></tr></table>								Bachelor Economics and Business Economics - Economics	Year 3 Quantitative Economics Elective(s)	Bachelor Economics and Business Economics - Emerging Markets	Year 2 Elective Course(s)	Bachelor Economics and Business Economics - Emerging Markets	Year 3 Elective Course(s)	Bachelor Economics and Business Economics - Economics and Management of Information	Year 2+3 Quantitative Economics Elective(s)	Bachelor Economics and Business Economics - International Business Economics	Year 2 Compulsory Course(s)	Bachelor International Business - Emerging Markets	Year 3 Elective Course(s)	Bachelor International Business	Year 3 QE Elec(s) - Maj Accounting	Bachelor International Business	Year 3 QE Elec(s) - Maj Finance	Bachelor International Business	Year 3 QE Elec(s) - Maj Inf Mgmt	Bachelor International Business	Year 3 QE Elec(s) - Maj Marketing	Bachelor International Business	Year 3 QE Elec(s) - Maj Org	Bachelor International Business	Year 3 QE Elec(s) - Maj SCM	Bachelor International Business	Year 3 QE Elec(s) - Maj Strategy	Transitional Regulations	See prerequisites	SBE Exchange Bachelor	Bachelor Exchange Courses	SBE Exchange Master	Bachelor Exchange Courses	SBE Non Degree Courses	Bachelor Courses
Bachelor Economics and Business Economics - Economics	Year 3 Quantitative Economics Elective(s)																																									
Bachelor Economics and Business Economics - Emerging Markets	Year 2 Elective Course(s)																																									
Bachelor Economics and Business Economics - Emerging Markets	Year 3 Elective Course(s)																																									
Bachelor Economics and Business Economics - Economics and Management of Information	Year 2+3 Quantitative Economics Elective(s)																																									
Bachelor Economics and Business Economics - International Business Economics	Year 2 Compulsory Course(s)																																									
Bachelor International Business - Emerging Markets	Year 3 Elective Course(s)																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj Accounting																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj Finance																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj Inf Mgmt																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj Marketing																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj Org																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj SCM																																									
Bachelor International Business	Year 3 QE Elec(s) - Maj Strategy																																									
Transitional Regulations	See prerequisites																																									
SBE Exchange Bachelor	Bachelor Exchange Courses																																									
SBE Exchange Master	Bachelor Exchange Courses																																									
SBE Non Degree Courses	Bachelor Courses																																									