

# Course Descriptions None 2026-2027

Course Title Quantitative Business  
 Course Code EBC2025  
 ECTS Credits 6,5  
 Assessment Whole/Half Grades

Period	Start	End	Mon	Tue	Wed	Thu	Fri
5	12-4-2027	4-6-2027		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 study three applications of mathematical tools to business economics: decision theory, portfolio theory, and game theory. Each application consists of two case studies. The purpose is to get acquainted with basic quantitative business models.

In the statistics part, we review and extend first-year inferential tools, including t-tests (one-sample, independent, and paired), one-way ANOVA, chi-square tests, and regression analysis. We also introduce new techniques, such as non-parametric tests, logistic regression, and factor analysis. Students apply these methods to real-world business problems in marketing and finance through case studies. All empirical analyses are conducted using R Markdown in RStudio.

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 Intermediate knowledge of mathematics and statistics, comparable to the course Quantitative Methods II, code EBC1033/1034/1035.

Transitional Regulations <div class="trreg"><ul class="trcohorts"><li>Bachelor Economics and Business Economics - Economics and Management of Information [2024-2025 or earlier]</li></ul><ol><li>From 2025-2026 onwards, education and exam/resit opportunities are offered.<br />Alternative options may be available. See the Bachelor EER 2025-2026 Appendix I Article 16 for more information.</li></ol><table><col style="width: 200px;"><col style="width: 120px;"><col style="width: 120px;"><thead><tr><th>Academic Year</th><th>Education</th><th>Exam/Resit</th><th>Replacement(s)</th></tr></thead><tbody><tr><td>2025-2026 onwards</td><td>X</td><td>X</td><td>See the Bachelor EER 2025-2026 Appendix I Article 16 for more information</td></tr></tbody></table></div><div class="trreg"><ul class="trcohorts"><li>Pre-master Economics and Strategy in Emerging Markets [2022-2023 and earlier]</li></ul><ol><li>In 2023-2024 education and exam/resit opportunities are offered.<br />Alternatively, students can take EBC2170 Research Methods for Pre-master.</li><li>From 2024-2025 onwards, the course is cancelled.</li></ol><table><col style="width: 200px;"><col style="width: 120px;"><col style="width: 120px;"><col style="width: 120px;"><thead><tr><th>Academic Year</th><th>Education</th><th>Exam/Resit</th><th>Replacement(s)</th></tr></thead><tbody><tr><td>2023-2024 onwards</td><td>X</td><td>X</td><td>EBC2170 Research Methods for Pre-master</td></tr><tr><td>2024-2025 onwards</td><td>&nbsp;</td><td>&nbsp;</td><td>&nbsp;</td></tr></tbody></table></div>

Teaching methods Assignment / Papers / Groupwork

Assessment methods Participation / Computer test

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	Bachelor Economics and Business Economics - Economics	Year 3 Quantitative Economics Electives
	Bachelor Economics and Business Economics - Emerging Markets	Year 2 Disciplinary Courses
	Bachelor Economics and Business Economics - Emerging Markets	Year 3 Elective Courses
	Bachelor Economics and Business Economics - Economics and Management of Information	In transition - Year 2+3 QE Electives
	Bachelor Economics and Business Economics - Economics and Management of Information	Year 3 Quantitative Economics Elective
	Bachelor Economics and Business Economics - International Business Economics	Year 2 Compulsory Courses
	Bachelor International Business - Emerging Markets	Year 3 Elective Courses
	Bachelor International Business	Year 3 QE Elecs - Maj Accounting
	Bachelor International Business	Year 3 QE Elecs - Maj Finance
	Bachelor International Business	Year 3 QE Elecs - Maj Inf Mgmt
	Bachelor International Business	Year 3 QE Elecs - Maj Marketing
	Bachelor International Business	Year 3 QE Elecs - Maj Org
	Bachelor International Business	Year 3 QE Elecs - Maj SCM
	Bachelor International Business	Year 3 QE Elecs - Maj Strategy
	SBE Exchange Bachelor	Bachelor Exchange Courses
	SBE Exchange Master	Bachelor Exchange Courses
	SBE Non Degree Courses	Bachelor Courses
	Pre-master Economics and Strategy in Emerging Markets	Cancelled - Disciplinary Courses