Subject-specific regulations for the Master course in Quantitative Economics of 15 February 2013 in conjunction with the amendment of 1 July 2015, 31 March 2023 and 16 November 2026
(study model 2011)

- Reading version -
The versions published in the Bielefeld University Gazette – Official Announcements – shall be binding.

Based on §§ 2 (4) and 64 (1) of the Higher Education Act of the State of North Rhine-Westphalia (Higher Education Act - HG of 31 October 2006 (GV. NRW. p. 474), last amended by the Act of 18 December 2012 (GV. NRW. p. 672), the Faculty of Business Administration and Economics, in conjunction with the Examination and Study Regulations for the Master course (MPO fw. – Study Model 2011) at Bielefeld University of 1 August 2012 (Bielefeld University Gazette – Official Announcements – yr. 41 no. 14 p. 325) enacted these subject-specific regulations (annex to § 1 (1) MPO fw.):

1. Master's degree (§ 3 MPO fw.)

The Faculty of Business Administration and Economics offers the Quantitative Economics degree programme with the degree "Master of Science" (M.Sc.).

2. Further access requirements (§ 4 (1) – 4 MPO fw.)

The subject-specific regulations govern further access requirements in addition to the requirements resulting from § 49 of the NRW Higher Education Act and § 4 MPO fw.
Applicants shall receive access if they meet all requirements; applicants shall not receive access if they do not meet all requirements.

(1) Further access requirements are proof of a previous qualified degree (§ 49 (6) sent. 2 HG NRW) in accordance with paragraph 2 and language skills in English at level B2 of the European Framework of Reference for Languages in accordance with the guidelines of Bielefeld University. German language skills are recommended for the general success of the study programme, but they are not mandatory.

(2) A degree shall be qualified if the following subject requirements from quantitative methods and mathematics are proven by academic achievements, i.e., at least one point is achieved in each case, at least 2 points are achieved in the criterion GRE/GMAT, and a total of 8 of the 12 points are achieved.
Notice: Any further knowledge and qualifications acquired outside of the curriculum of the qualified degree may be considered when awarding points if this compensates for missing competences within the meaning of the criteria listed below.

Knowledge of mathematics:

- 0 points: No required competences.
- 1 point: Competence in mathematics is present, in particular in at least one of the areas of linear algebra, analysis or differential equations.
- 2 points: Competence in mathematics is present, in particular in the areas of linear algebra, analysis and differential equations.

Knowledge of quantitative methods:

- 0 points: No required competences.
- 1 point: Competence in quantitative methods is present, in particular in at least one of the areas of econometrics, stochastics or statistics.
- 2 points: Competence in quantitative methods is present, in particular in the fields of econometrics, stochastics, and statistics.

GRE/GMAT criterion: GRE refers to the total of scores for the "Verbal Reasoning" and "Quantitative Reasoning" parts of the GRE test, GMAT refers to the "Total GMAT score":

- 0 points: No required competences.
- 2 points: GRE: at least 315 to 324 points or GMAT: at least 600 to 679 points.
- 4 points: GRE: from 325 points onwards or GMAT: from 680 points onwards.

Knowledge of microeconomics:

- 0 points: No required competences.
- 1 point: Competence in at least one of the areas of micro theory, game theory, or mechanism design is present.
- 2 points: Competence in micro theory, game theory, and mechanism design is present.

Knowledge of macroeconomics:

- 0 points: No required competences.
- 1 point: Competence in at least one of trade or international macroeconomics, public or development economics as well as labour economics is present.

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- 2 points: Competence in trade and international macroeconomics, public and development economics as well as labour economics is present.

The benchmark for the necessary knowledge and skills for the Master course are the competences taught in the 1-subject Bachelor course in Economics (Economics profile) at Bielefeld University, as the Master course concept is built on this.

Points are awarded for competences under consideration of the requirements for crediting (§ 21 of the examination regulations of Bielefeld University of 18 December 2020) and the associated applicable standards and guidelines, including those of the European Area of Recognition Project (http://ear.enic-naric.net/emanual/) in accordance with the following criteria:

- Quality of the university or the degree (accreditation)
- Level of competences acquired (qualifications framework)
- Workload
- Profile / alignment of the completed degree
- Specific learning outcomes under consideration of learning objective taxonomies

(3) Examination of the requirements and prerequisites for both the access and the admission procedure shall be performed based on the following documents, to be uploaded and entered into the corresponding application portal of Bielefeld University in time:

a) Final certificate of a previous qualified degree and the corresponding final documents (transcript, transcript of records, diploma supplement, or similar) or provisional final certificate showing a provisional final grade.
b) Module Guide or module descriptions for the completed modules

If no diploma supplement, transcript, or Module Guide or no module descriptions are available, corresponding descriptions that provide information on the completed degree programme, the competences acquired, the academic achievements and their evaluations, and on the individual subject profile of the completed degree programme are to be uploaded.

In addition, information on the criteria in accordance with paragraph 2 being met, the GRE/GMAT results, and on language skills shall be provided in the application portal.

Only pdf files will be accepted in the application portal. They should be searchable as far as possible.

Documents submitted following the deadline for applications or by any other means will not be considered.

(4) Access shall be evaluated from case to case by an authorised examiner. Applicants shall be informed about the result of the access procedure in an electronic notice. If the applicant raises an objection to the evaluation, including reasons, within one week, the decision shall be reviewed; another authorised examiner shall be involved for this. The evaluation shall be corrected if necessary. Irrespective of this, legal protection shall be available. It will be communicated in the instruction on the legal right to appeal the notice.

(5) The competent body in accordance with § 14 MPO fw. shall decide on whether the access requirements are met; it shall also stipulate any further details of the procedure, appoint the authorised examiners, set the deadlines for applications, and make all decisions in connection with the access procedure.

3. Admission procedure (§ 4 (4) MPO fw.)

(1) After determining whether the access requirements have been met, it will be determined whether the number of applicants who are granted access in accordance with item 2 exceeds the number of available places for Master courses with restricted admission. If this is not the case, all of these applicants will be admitted.

(2) If the number of applicants granted access in accordance with section 2 exceeds the number of available places, the study places shall be allocated in the order of the total number of points achieved in the procedure in accordance with item 2 paragraph 4. If there is a tie, the overall grade of the degree qualifying for the Master course shall be decisive. If there is no clear ranking, lots shall be cast.

(3) Admission shall be granted by the Studierendensekretariat [Student Office] based on the ranking in accordance with paragraph 2. Paragraphs 2 and 3 shall apply accordingly if there is any further follow-up procedure.

(4) Applicants shall be informed about the result of the admission procedure in an electronic notice from the Student Office.

4. Starting a study programme before acquiring the access requirements (§ 4 (5) MPO fw.)

- not applicable -

5. Course start (§ 5 (1) MPO fw.)

The study programme can be started in either the winter or summer semester. The course structure is designed for students starting in the winter semester. Starting in the summer semester may lead to delays in the course of study.

6. Curriculum (§ 7 MPO fw.)

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Students may choose the International Track profile. The following curriculum shall apply in the absence of the International Track profile:

The modules are usually held in the English language.

Abbreviation	Module title	Recommended academic semester, start	CP
24-M-Opt	Optimization for Quantitative Economics	1	7
24-M-Prob1	Probability Theory for Quantitative Economics	1	7
31-M-Macro1	Macroeconomics 1	1	7
31-M-Micro1	Microeconomics 1	1	7
24-M-OuD	Optimization and Dynamics for Quantitative Economics	2	7
31-M-Ectr1	Econometrics 1	2	7
31-M-Macro2	Macroeconomics 2	2	7
31-M-Micro2	Microeconomics 2	2	7
31-M-El1	Elective Courses 1	3	12
31-M-El2	Elective Courses 2	3	8
31-M-El3	Elective Courses 3	3	8
31-M-Master	Master Thesis	4	28
Individual subsidiary subjects (§ 7 sent. 3, § 12 MPO fw.)		1	8
Total			**120**

Further information on the modules can be found in the module structure table in 7. and in the Module Guide.

International Track profile

The modules are usually held in the English language.

Abbreviation	Module title	Recommended academic semester, start	CP
24-M-Opt	Optimization for Quantitative Economics	1	7
24-M-Prob1	Probability Theory for Quantitative Economics	1	7
31-M-Macro1	Macroeconomics 1	1	7
31-M-Micro1	Microeconomics 1	1	7
24-M-OuD	Optimization and Dynamics for Quantitative Economics	2	7
31-M-Ectr1	Econometrics 1	2	7
31-M-Macro2	Macroeconomics 2	2	7
31-M-Micro2	Microeconomics 2	2	7
31-M-El1	Elective Courses 1	3	12
31-M-El2	Elective Courses 2	3	8
31-M-El3	Elective Courses 3	3	8
31-M-Master-IT	Master Thesis – International Track	4	28
Individual subsidiary subjects (§ 7 sent. 3, § 12 MPO fw.)		1	8
Total			**120**

Further information on the modules can be found in the module structure table in 7. and in the Module Guide.

7. Module structure table

Abbreviation	Title	CP	Necessary prerequisites	Number of study requirements	Number of graded (partial) module	Weighting of partial module	Number of ungraded (partial) module
24-M-Opt	Optimization for Quantitative Economics	7		1	1		
24-M-OuD	Optimization and Dynamics for Quantitative Economics	7		1	1		

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24-M-Prob1	Probability Theory for Quantitative Economics	7		1	1		
31-M-Ectr1	Econometrics 1	7			1		
31-M-El1	Elective Courses 1	12		0-2	1		
31-M-El2	Elective Courses 2	8		0-1	1		
31-M-El3	Elective Courses 3	8		0-1	1		
31-M-Macro1	Macroeconomics 1	7			1		
31-M-Macro2	Macroeconomics 2	7			1		
31-M-Micro1	Microeconomics 1	7			1		
31-M-Micro2	Microeconomics 2	7			1		
31-M-Master	Master Thesis	28		1	1		
31-M-Master IT	Master Thesis – International Track	28		1	1		

8. Further information on module examinations, partial module examinations, and study requirements as well as the Master's thesis (§§ 10, 11, 13 MPO fw.)

(1) Module examinations or partial module examinations shall be taken in one of the following forms:
- Written exam at a scope of 90 to 180 minutes or oral exam of 15 to 30 minutes.
- Portfolio comprising two elements, one examining the contents of the course up to the 7th/8th week of lectures or the first half of the lecture, and the other one examining the contents from the 8th/9th week of the lecture onwards (each with a written exam of 90 minutes or an oral exam of 20 minutes). The lecturer of the lecture shall assign an overall grade.
- Elective courses: The module examination comprises a portfolio of examination results according to the courses chosen in accordance with the Module Guide. Several forms of delivery are conceivable (e.g., seminar presentations, written exams). Examiners shall be the lecturers of the courses that are the subject of the module examination. If the graded module examination is taken by several authorised examiners, the grade (numerical value) is formed from the arithmetic mean of the evaluations.

Other forms, in particular those for the demonstration of interdisciplinary competences including media competence, are possible. Both in this case and in the case of deviations of the scope of the examination from the rule ("usually"), the amount of work and the qualification requirements must be comparable. Further details can be found in the Module Guides.

(2) Study requirements in the Quantitative Economics degree programme serve to ensure the acquisition of competence and knowledge in the respective modules. The following may be considered as study requirements:
- Regular work on the exercises with a recognisable solution approach in each case. Contribution to the exercise groups (calculation of two exercises upon request. The organiser may replace part of the exercises with in-person exercises).
- Presentation of the Master's thesis.

Other forms are possible. When choosing other forms, the aim of the study requirements and the specified scope must be considered. Further details can be found in the Module Guides.

(3) The Master's thesis is a written paper, to be examined by two authorised examiners. If the International Track profile is studied, one authorised examiner must be a member of one of the partner universities. In this case, they shall be appointed as an authorised examiner by the competent body of the Faculty of Business Administration and Economics in accordance with § 22 MPO fw. The thesis shall be registered at the examination office of the Faculty of Business Administration and Economics – no matter if one of the authorised examiners is from one of the partner universities or not. The Master's thesis usually should not exceed 60 pages. The processing time for the Master's thesis shall be 6 months. The date of issue shall be recorded. Three copies of the thesis must be submitted to the examination office of the Faculty of Business Administration and Economics by the deadline.

9. Entering into effect and scope of application

These subject-specific regulations shall enter into effect on the day after they are published in the Bielefeld University Gazette – Official Announcements. The regulations for the access and admission procedures (items 2 and 3) shall apply to the application procedure for the winter semester 2012/13 already.

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