

Curriculum for the Master's Programme in Economics

At its meeting on 20 June 2013 the Senate approved the version of the Curriculum for the master's programme in Economics, which was resolved on 27 May 2013 by the Curriculum Committee, a body holding decision-making power and established in accordance with section 25, para. 8, item 3 and section 25, para. 10 of the *2002 Universities Act (Universitätsgesetz)*.

The legal basis is the *2002 Universities Act* and the section of the Statutes of the University of Vienna governing university studies as amended from time to time.

§ 1 Objectives and qualification profile

(1) The master's programme in Economics at the University of Vienna has two special focuses: special focus A (academically oriented) and special focus B (profession-oriented).

(2) The objective of the master's programme in Economics is to deepen and supplement academic preparation for employment for economists, building on bachelor's programmes. Accordingly, the degree programme comprises advanced education in the core subjects as well as a wider education in the application areas of economics. In addition, it aims to introduce students to ongoing research in economics.

Special focus A aims to qualify students for a doctoral programme in Economics and a subsequent professional career in the academic sphere or research institutions.

Special focus B aims to qualify students for a subject-related professional activity as qualified economists in the economy and administration.

(3) Beyond a bachelor's qualification, graduates of the master's programme in Economics at the University of Vienna are qualified to understand the analysis of economic questions using the methods and instruments of theory and empirical research in economics. They acquire the knowledge required for obtaining research findings to be presented in high-quality specialist journals and are able to examine projections of theory based on data. Graduates of the master's programme in Economics are additionally able to read and understand academic literature independently, question it critically and apply it to specific economic issues. Graduates have knowledge enabling them to take up a PhD programme in Economics with independent academic research (special focus A) or to assume leading positions in the economy, administration or politics (special focus B).

§ 2 Duration and scope

(1) The workload for the master's programme comprises 120 ECTS credits. This is equivalent to a period of four semesters.

(2) The programme is deemed completed if 56 ECTS credits as defined in the provisions on compulsory modules, 44 ECTS credits as defined in the provisions on alternative groups of compulsory modules (special focuses A and B), 16 ECTS credits as defined in the provisions on the master's thesis and 4 ECTS credits as defined in the provisions on the master's examination have been earned.

§ 3 Entry requirements

(1) To be admitted to the master's programme in Economics students must have completed an eligible bachelor's programme or an eligible bachelor's programme at a university of applied

sciences or an equivalent degree programme at a recognised Austrian or foreign post-secondary educational institution.

(2) The bachelor's programme in Economics and the baccalaureate programme in Economics at the University of Vienna are certainly eligible.

(3) The bachelor's programme in Economics and the baccalaureate programme in Economics qualify a candidate for admission to the master's programme in Economics, without any other requirements. Graduates of other subject-related or equivalent programmes comprising at least 180 ECTS credits from the University of Vienna or another recognised Austrian and foreign post-secondary educational institution must in any case demonstrate:

- sufficient command of English by
 - a) completing an English-language degree programme or
 - b) by means of a language certificate (TOEFL, IELTS Academic or Cambridge Certificate in Advanced English) that is no more than three years old, at Level C1 of the European Framework of Reference with the following minimum requirements:
TOEFL: minimum number of points 110 internet-based (IBT), 637 points paper-based (PBT), and 270 points computer-based;
IELTS Academic: minimum result 7.5;
Cambridge Certificate in Advanced English (CAE) with at least grade B
- achievement of at least 150 points in the GRE revised General Test's assessment section on Quantitative Reasoning within the previous two years.

The GRE revised General Test is a standardised test that is composed of three assessment sections:

Verbal reasoning
Quantitative reasoning
and
Analytical writing

The Quantitative Reasoning section, in which mathematical knowledge is examined and a total maximum of 170 points can be acquired, is decisive.

(4) If the qualification is basically equivalent to the bachelor's programme in Economics at the University of Vienna, but individual additional requirements are necessary to obtain recognition, the successful completion of further courses and examinations amounting to a maximum of 30 ECTS credits can be required during the course of the master's programme.

(5) The language of instruction of the master's programme in Economics is English only.

§ 4 Academic degree

Graduates of the master's programme in Economics will be awarded the academic degree of "*Master of Science*", abbreviated *MSc*. Where the academic degree is stated this must be after the name.

§ 5 Structure - Modules with allocated ECTS credits

(1) Overview

The master's programme in Economics consists of a common core and two different special focuses A (academically oriented) and B (profession-oriented) that are specified as two alternative groups of compulsory modules.

- Compulsory module 1: Growth and Business Cycles12 ECTS (6 SSt)
- Compulsory module 2: Microeconometrics8 ECTS (4 SSt)
- Compulsory module 3: Macroeconometrics8 ECTS (4 SSt)
- Compulsory module 4: Game Theory and Information Economics 12 ECTS (6 SSt)
- Compulsory module 5: General Electives.....12 ECTS (6 SSt)
- Alternative group of compulsory modules 6A: Special focus A 44 ECTS (22 SSt) consisting of
 - i. Compulsory module 6 A1: Advanced Microeconomics A (16 ECTS, 8 SSt)
 - ii. Compulsory module 6 A2: Dynamic Macroeconomics with Numerics (12 ECTS, 6 SSt)
 - iii. Compulsory module 6 A3: Specialisation in Economics (16 ECTS, 8 SSt)
- Alternative group of compulsory modules 6 B: Special focus B 44 ECTS (22 SSt) consisting of
 - i. Compulsory module 6 B1: Consumption, Production and Welfare B (12 ECTS, 6 SSt)
 - ii. Compulsory module 6 B2: Applied Economics (16 ECTS, 8 SSt)
 - iii. Compulsory module 6 B3: Specialisation (16 ECTS, 8 SSt)
- Compulsory module 7: Master's Thesis..... 20 ECTS (2 SSt) consisting of conversatorium (4 ECTS, 2 SSt) and master's thesis (16 ECTS)

(2) Module descriptions

1	Compulsory module: Growth and Business Cycles	12 ECTS credits
Prerequisite for participation	None	
Module outcomes	Students are familiar with advanced theories about exogenous and endogenous economic growth and with real-economy and monetary economic models, know the formal models and methods necessary to understand these theories, and are able to apply the latter to analyse macroeconomic questions. Teaching is based on the use of a textbook with contents comparable to Romer, <i>Advanced Macroeconomics</i> .	
Module structure	UK 12 ECTS 6 SSt (pi)	
Proof of performance	Successful completion of the course (12 ECTS credits)	

SSt (Semesterstunde): hour per week per semester.

pi (prüfungsimmanent): continuous assessment.

npi (nicht prüfungsimmanent): non-continuous assessment.

Course types and their abbreviations: see § 8.

2	Compulsory module: Microeconometrics	8 ECTS credits
Prerequisite for participation	None	
Module outcomes	Students are familiar with the standard methods of econometrics, specifically with the maximum likelihood estimation, instrumental variables, generalised method of moments, panel data, models with discrete variables and selection models. Teaching is based on the use of a textbook with contents comparable to Verbeek, <i>A Guide to Modern Econometrics</i> , and Cameron and Trivedi, <i>Microeconometrics</i> . Application of this knowledge is based on example exercises and on the analysis of datasets using statistical software (STATA).	
Module structure	UK 8 ECTS, 4 SSt (pi)	
Proof of performance	Successful completion of the course (8 ECTS credits)	

3	Compulsory module: Macroeconometrics	8 ECTS credits
Prerequisite for participation	None	
Recommended prerequisite for participation	Compulsory module: Microeconometrics	
Module outcomes	Students are familiar with the standard methods of time series econometrics, specifically with the analysis of univariate and multivariate time series as well as cointegration and its application to economic questions. Teaching is based on the use of a textbook with contents comparable to Davidson and MacKinnon, <i>Econometric Theory and Methods</i> , and Verbeek, <i>A Guide to Modern Econometrics</i> . Application of this knowledge is based on example exercises and on the analysis of datasets using statistical software (STATA).	
Module structure	UK 8 ECTS, 4 SSt (pi)	
Proof of performance	Successful completion of the course (8 ECTS credits)	

4	Compulsory module: Game Theory and Information Economics	12 ECTS credits
Prerequisite for participation	None	
Module outcomes	Students are familiar with advanced methods of the game theory, specifically with those which are relevant for games of incomplete information, and with advanced theories concerning the role of information in economic decision-making and are able to apply these methods independently to the analysis of economic questions. Teaching is based on the use of a textbook with contents comparable to Fudenberg and Tirole, <i>Game Theory</i> .	
Module structure	UK 12 ECTS, 6 SSt (pi)	
Proof of performance	Successful completion of the course (12 ECTS credits)	

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Course types and their abbreviations: see § 8.

5	Compulsory module: General Electives	12 ECTS credits
Prerequisite for participation	None	
Module outcomes	Acquisition of knowledge in business, economics and related areas	
Module structure	<p>Attendance of courses from at least two of the following subjects</p> <ol style="list-style-type: none"> 1. Economics 2. Business administration (including finance) 3. Econometrics and statistics 4. Sociology 5. Political science 6. International development 7. Philosophy 8. History and economic history 9. History of economic theory and history of ideas 10. Mathematics including operations research 11. Law 12. Geography 13. Psychology <p>comprising 12 ECTS credits (6 SSt).</p> <p>The selection needs to be approved by the directorate of studies in advance. The directorate of studies shall approve completion of courses if they complement the study of economics usefully, taking the students' special interests into account. The directorate of studies shall publish a list of those courses belonging to the module in the course directory of the University of Vienna, the completion of which is generally deemed as approved.</p>	
Proof of performance	Successful completion of the course (12 ECTS credits)	

6 A1	Compulsory module: Advanced Microeconomics A	16 ECTS credits
Prerequisite for participation	None	
Module outcomes	<p>Students are knowledgeable about advanced theories about decision-making by consumers and companies under different competitive conditions. They understand the resulting market equilibria and welfare. Specifically, students understand the theoretical basis of these models and methods. Teaching is based on the use of a textbook with contents comparable to Mas-Colell, Whinston and Green, <i>Microeconomic Theory</i>. Application of this knowledge is based on example exercises.</p> <p>In addition, students are familiar with the main mathematical methods for solving static optimisation problems on finite dimensional Euclidean spaces (i.e.</p>	

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Course types and their abbreviations: see § 8.

	necessary and sufficient optimality conditions, Lagrange method, Karush-Kuhn-Tucker theorem, etc.) and can apply these methods independently to economic problems. Teaching is based on the use of a textbook with contents comparable to Simon and Blume, <i>Mathematics for Economists</i> .
Module structure	UK Consumption, Production and Welfare A 12 ECTS , 6 SSt, (pi) UK Mathematics for Economists 4 ECTS, 2 SSt (pi)
Proof of performance	Successful completion of the course (16 ECTS credits)

6 A2	Compulsory module: Dynamic Macroeconomics with Numerics	12 ECTS credits
Prerequisite for participation	None	
Recommended prerequisite for participation	Compulsory module: Growth and Business Cycles, UK Mathematics for Economists	
Module outcomes	Students are made familiar with the theoretical concepts and methods of contemporary dynamic macroeconomics, specifically with various equilibrium concepts, dynamic optimisation methods, as well as fundamental numeric methods for solving recursive dynamic models. Teaching is based on the use of a textbook with contents comparable to Ljungqvist and Sargent, <i>Recursive Macroeconomic Theory</i> , and Miranda and Fackler, <i>Applied Computational Economics and Finance</i> . Knowledge shall be practised using example exercises and by programming using statistical software (MATLAB).	
Module structure	UK 12 ECTS, 6 SSt (pi)	
Proof of performance	Successful completion of the course (12 ECTS credits)	

6 A3	Compulsory module: Specialisation in Economics	16 ECTS credits
Prerequisite for participation	None	
Module outcomes	Deepening of knowledge in the field of economics	
Module structure	Attendance of courses from at least two of the following subjects <ol style="list-style-type: none"> 1. Microeconomics 2. Macroeconomics 3. Econometrics comprising 16 ECTS credits (8 SSt). The selection needs to be approved by the directorate of studies in advance. The directorate of studies shall approve completion of courses if they complement the study of economics usefully, taking the students' special interests and the module outcomes into account. The directorate of studies shall publish a list of those courses belonging to the module in the course	

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Course types and their abbreviations: see § 8.

	directory of the University of Vienna, the completion of which is generally deemed as approved.
Proof of performance	Successful completion of the course (16 ECTS credits)

6 B1	Compulsory module: Consumption, Production and Welfare B	12 ECTS credits
Prerequisite for participation	None	
Module outcomes	Students are familiar with advanced theories about decision-making by consumers and companies under different competitive conditions and the resulting market equilibria and welfare. They have knowledge about the formal models and methods necessary to understand these theories and are able to apply it to specific microeconomic questions. Teaching is based on the use of a textbook with contents comparable to Varian, <i>Microeconomic Analysis</i> . Application of this knowledge is based on example exercises.	
Module structure	UK 12 ECTS, 6 SSt (pi)	
Proof of performance	Successful completion of the course (12 ECTS credits)	

6 B2	Compulsory module: Applied Economics	16 ECTS credits
Prerequisite for participation	None	
Module outcomes	Deepening of knowledge in the field of applied economics	
Module structure	Attendance of courses from the subject of applied economics comprising 16 ECTS credits (8 SSt). The selection needs to be approved by the directorate of studies in advance. The directorate of studies shall approve completion of courses if they complement the study of economics usefully, taking the students' special interests and the module outcomes into account. The directorate of studies shall publish a list of those courses belonging to the module in the course directory of the University of Vienna, the completion of which is generally deemed as approved.	
Proof of performance	Successful completion of the course (16 ECTS credits)	

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Course types and their abbreviations: see § 8.

6 B3	Compulsory module: Specialisation	16 ECTS credits
Prerequisite for participation	None	
Module outcomes	Deepening of knowledge in the field of business and economics	
Module structure	<p>Attendance of courses from at least two of the following subjects</p> <ol style="list-style-type: none"> 1. Business administration 2. Finance 3. Operations research 4. Econometrics and statistics 5. Economic sociology 6. Commercial and business law <p>comprising 16 ECTS credits (8 SSt).</p> <p>The selection needs to be approved by the directorate of studies in advance. The directorate of studies shall approve completion of courses if they complement the study of economics usefully, taking the students' special interests and the module outcomes into account. The directorate of studies shall publish a list of those courses belonging to the module in the course directory of the University of Vienna, the completion of which is generally deemed as approved.</p>	
Proof of performance	Successful completion of the course (16 ECTS credits)	

7	Compulsory module: Master's Thesis	20 ECTS credits
Prerequisite for participation	None	
Module outcomes	Students are able to summarise academic literature about a specific economic question in writing, discuss it critically, and present it in front of an audience as part of a specialised lecture. Shortly before they are completed, master's theses shall be presented by their authors in the presence of the respective supervisor.	
Module structure	KO 4 ECTS, 2 SSt (pi) Master's thesis (16 ECTS)	
Proof of performance	Successful completion of the course (4 ECTS credits) and positive assessment of the master's thesis (16 ECTS).	

§ 6 Master's thesis

(1) The master's thesis serves to demonstrate the student's ability to achieve adequate standards of content and methodology when independently addressing academic topics. The assignment for the master's thesis must be so chosen that the student can reasonably be expected to complete it within six months.

(2) The topic of the master's thesis must be taken from one of the compulsory modules in the field of economics. If a different topic is selected or if there is uncertainty regarding allocation

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of the selected topic, the competent body responsible for study matters should decide on whether or not it is admissible.

(3) The master's thesis comprises 16 ECTS credits.

§ 7 Master's examination - requirements

(1) To be admitted to a master's examination the student must have successfully passed all required modules and examinations and the master's thesis must have been positively assessed.

(2) The master's examination is an overall examination in front of an examination committee in the form of a public defence.

The public defence consists of the defence and questions about the master's thesis and about topics from the academic disciplines related to the master's thesis. The examination committee awards a numerical final grade.

(3) The master's examination comprises 4 ECTS credits.

§ 8 Course classification

(1) As part of the compulsory modules which can be selected freely by students, the following courses without continuous assessment (npi) can be held:

Lecture (*Vorlesung, VO*), npi: Lectures aim to present topics, subjects and methods of the degree programme in Economics with critical consideration of different academic doctrines. The lecture is completed with an oral or written examination.

(2) The following courses with continuous assessment (pi) are offered in both compulsory and elective modules:

University course (*Universitätskurs, UK*), pi: University courses combine elements of the three traditional types of courses: lecture, exercise and seminar. The lecturer presents the prepared teaching material, example exercises are worked on, and contemporary research findings are analysed and discussed orally or in writing. Assessment comprises at least three independent partial assessments. Typically there is at least one written examination, which is complemented by additional written examinations and/or active contribution and/or a presentation and/or preparation of at least one written paper.

Exercise (*Übung, UE*), pi: Exercises aim to solve specific tasks constructively and achieve the degree programme's practical, profession-oriented objectives. Assessment is based on active contributions and – if required – a presentation and/or preparation of one or more written papers.

Conversatorium (*Konversatorium, KO*), pi: Conversatoriums are courses with continuous assessment which are characterised by students' active participation. Within the framework of the conversatorium, students must present their master's thesis and defend their findings as well as the methods and procedures applied in a discussion. Assessment also covers active contribution and/or a co-presentation (*Ko-Referat*) and/or additional short written papers.

Seminar (*Seminar, SE*), pi: Seminars aim at the development of theoretical and methodological skills in an advanced phase of studies. The focus is on independent academic work and the successful (written and oral) presentation of results.

Practical course (*Praktikum, PR*), pi: Practical courses are courses which primarily aim to teach applications of study contents and in which students need to work on relevant problems independently.

§ 9 Courses with a limited number of participants

- (1) The following general limit on the number of students applies to the stated courses:
- University courses: 200 participants (university courses with a focus on exercises: 50)
 - Exercises: 30 participants.
 - Seminars: 25 participants.
 - Practical courses: 30 participants.
 - Conversatoriums: 30 participants.

The actual number of participants can be adjusted, if necessary, based on available resources.

(2) If, for courses with a limited number of participants, the number of registrations exceeds the number of available places, students will be admitted in accordance with the registration procedure specified by the competent body responsible for study matters. The competent body responsible for study matters must give notice of the procedure in the University Gazette of the University of Vienna well in advance.

(3) The lecturers are entitled to grant exceptions for certain courses in agreement with the competent body responsible for study matters. The competent body responsible for study matters may also grant exceptions after hearing from the teaching staff.

§ 10 Examination regulations

(1) Proof of performance in courses

The lecturer must give notice of the objectives, contents and the type of course assessment in accordance with the Statutes of the University of Vienna.

(2) Content of examinations

The examination content relevant to preparing and holding examinations must be in line with the required number of ECTS credits. This also applies to module examinations.

(3) No double recognition

Courses taken and examinations passed in the three-year bachelor's programme, which constitute entry requirements for the master's programme, cannot be recognised again in the master's programme.

(4) Examination results must be allocated to the relevant module by the stated ECTS figure and must not be allocated to different proofs of performance.

§ 11 Entry into force

This Curriculum will enter into force upon announcement in the University Gazette of the University of Vienna as of 1 October 2013.

§ 12 Transitional arrangements

- (1) This Curriculum is applicable to all new students starting degrees from the winter semester of the academic year 2013/14 onwards.
- (2) If, in the course of study, courses which were originally required in the degree programme are no longer offered, the competent body specified in the organisational regulations of the University of Vienna must decide *ex officio* (equivalence regulation) or at the request of the student which courses and examinations have to be completed and recognised instead.
- (3) Students enrolled in the master's programme in Economics prior to the entry into force of this Curriculum can voluntarily and at any time accept the provisions of this Curriculum by means of a simple statement.
- (4) Students who pursue the master's programme in Economics (University Gazette as of 06 June 2006, 33rd edition, number 210) which entered into force prior to this Curriculum are entitled to complete their degree programme by 30 November 2015.
- (5) The competent body responsible for study matters will be entitled to determine in general or on a case-by-case basis which of the courses taken and examinations passed will be recognised for this Curriculum.

On behalf of the Senate:
The Chair of the Curriculum Committee:
N e w e r k l a

Appendix:

Recommended path through the master's programme in Economics, special focus A:

	Recommended path in special focus A		
1st year	Module (special focus A)	SSt	ECTS credits
Winter semester	Growth and Business Cycles	6	12
	Microeconometrics	4	8
	UK Consumption, Production and Welfare A	6	12
	Mathematics for Economists	2	4
Total		18	36
Summer semester	Macroeconometrics	4	8
	Game Theory and Information Economics	6	12
	Dynamic Macroeconomics with Numerics	6	12
Total		16	32
2nd year			
Winter semester	Courses in "Specialisation in Economics" and/or "General Electives"	12	24
Total		12	24
Summer Semester	Courses in "Specialisation in Economics" and/or "General Electives"	2	4
	Conversatorium	2	4
	Master's thesis		16
	Master's examination		4
Total		4	28
Total		50	120

SSt (Semesterstunde): hour per week per semester.

pi (prüfungsimmanent): continuous assessment.

npi (nicht prüfungsimmanent): non-continuous assessment.

Course types and their abbreviations: see § 8.

Recommended path through the master's programme in Economics, special focus B:

	Recommended path in special focus B		
1st year	Module	SSt	ECTS credits
Winter semester	Growth and Business Cycles	6	12
	Microeconometrics	4	8
	UK Consumption, Production and Welfare B	6	12
Total		16	32
Summer semester	Macroeconometrics	4	8
	Game Theory and Information Economics	6	12
	Courses in "Applied Economics"	6	12
Total		16	32
2nd year			
Winter semester	Courses in "Applied Economics" and/or "Specialisation" and/or "General Electives"	14	28
Total		14	28
Summer semester	Courses in "Specialisation" and/or "General Electives"	2	4
	Conversatorium	2	4
	Master's thesis		16
	Master's examination		4
Total		4	28
Total		50	120

SSt (Semesterstunde): hour per week per semester.

pi (prüfungsimmanent): continuous assessment.

npi (nicht prüfungsimmanent): non-continuous assessment.

Course types and their abbreviations: see § 8.