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Original version published in the University of Innsbruck Bulletin of 24 June 2021, Issue 84, No. 884

Complete version as of 1 October 2021

Curriculum for the joint

PhD Programme Economics and Statistics (Doctoral Programme)

at the Faculty of Economics and Statistics at the University of Innsbruck

and

the Faculty of Social and Economic Sciences at the Johannes Kepler University Linz

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§ 1 Allocation of the study programme

According to §54 par. 1 Universities Act 2002, the joint PhD Programme in Economics and Statistics (Doctoral Programme) at the Faculty of Economics and Statistics of the University of Innsbruck (hereinafter referred to LFUI) and the Faculty of Social and Economic Sciences at the Johannes Kepler University Linz (hereinafter: JKU) is allocated to the group of social and economic study programmes.

§ 2 Qualification profile

- (1) The work for graduates of the PhD Programme in Economics and Statistics (Doctoral Programme) mainly includes:
 1. conducting theoretical and empirical research in economics or statistics and publishing it internationally
 2. teaching economic sciences or statistics
 3. applying theoretical and empirical research methods to solve (economic) problems and to develop them further for new problems.
- (2) Graduates of the PhD Programme in Economics and Statistics (Doctoral Programme) find professional fields of activity among others:
 1. at universities
 2. in research institutions and other post-secondary educational institutions
 3. in research departments of the European Central Bank, the Austrian National Bank, other banks, rating agencies, regional development companies, market research institutions and other companies and commercial organisations
 4. in research departments of international organisations such as the OECD (Organisation for Economic Development and Cooperation), EU (European Union), IMF (International Monetary Fund) or the World Bank
 5. in research departments of public institutions, interest groups and NGOs (non-governmental organisations)
 6. in politics and the media
 7. in the national statistical institutes, in particular Statistics Austria and the regional statistical offices
- (3) Educational goals: Graduates of the PhD programme in Economics and Statistics (Doctoral Programme) acquire the ability
 1. to write scientific papers that meet the international standards of peer-reviewed publications.
 2. to contribute to the international research network; to develop independent research programmes with scientific integrity and to successfully introduce and implement these at national and international research funding agencies.
 3. to communicate with their professional environment, the scientific community and society in general about their specialist field.

These abilities are imparted within the scope of the study programme

1. by imparting relevant research methods at the highest level;
2. by the critical introduction to the international scientific discussion;
3. by imparting additional qualifications (e.g. project management, scientific theory, communication skills)
4. by using new media for scientific communication, knowledge transfer and academic teaching;
5. by writing publications, particular within the scope of small research groups.

§ 3 Duration and scope

- (1) The PhD Programme in Economics and Statistics (Doctoral Programme) has a duration of three years (six semesters). This corresponds to 180 ECTS-Credits that are divided into the following study achievements:

1. For students writing their dissertation at the LFUI:

Designation	ECTS-Credits
Compulsory Modules	46
Dissertation	134
Total	180

2. For students writing their dissertation at the JKU:

Designation	ECTS-Credits
Compulsory Modules	44
Dissertation (incl. Defence)	136
Total	180

§ 4 Admission

- (1) In any case, completion of a subject-specific diploma or master's programme, a subject-specific diploma or master's programme at a university of applied sciences acc. to §6 par. 4 of the Universities of Applied Sciences Act or another equal study programme at an approved post-secondary educational institution home or abroad, is deemed to be proof of the general university qualification for admission to doctoral programmes. If equivalence has been established in principle but with certain qualifications missing for full equivalence, the Rectorate may require that supplemental examinations be completed during the course of the doctoral programme. The Rectorate can determine which of these examinations are prerequisites for passing exams specified in the curriculum for the doctoral programme.
- (2) Subject-specific study programme are in any case the completion of
1. the Diploma Programme in International Economic and Business Studies at the LFUI,
 2. the Diploma Programme in Economic Studies at the JKU,
 3. the Master's Programme in Applied Economics at the LFUI,
 4. the Master's Programme in Banking and Finance at the LFUI,
 5. the Master's Programme in Economics at the JKU
 6. the Master's Programme in Economics and Business Analytics at the JKU,
 7. the Master's Programme in Statistics at the JKU.
- (3) Admission takes place at the choice of the student at one of the two universities at which the programme is set up. According to § 54e par. 4 Universities Act, the student also becomes a member of the other university upon admission.

§ 5 Place of study

The course takes place at the two universities participating in this PhD programme. The allocation of the individual modules or courses to the respective university results from § 9 and the recommended course of studies given in the appendix. Deviations from the specified study location are possible for organisational reasons.

§ 6 Language

The study programme is offered in English.

§ 7 Types of courses and maximum number of participants per course

- (1) For course offered at the LFUI applies: Courses with continuous performance assessment are:
 1. Lectures with integrated practical parts (VU) focus on the practical treatment of concrete scientific tasks that are discussed during the lecture parts of the course. Maximum number of participants: 20
 2. Seminars (SE) provide in-depth treatment of scientific topics through students' presentations and discussion thereof. Maximum number of participants: 20
- (2) The definitions of the types of courses used at the JKU can be found in the JKU's study law section. In particular, the following applies:
 1. Combined courses (KV) combine elements of lectures and practical elements in an inseparable way.
 2. Seminars (SE) serve the in-depth discussion and study of practical and technical problems with scientific methods. The students are instructed to work on the problems largely independently and to present them in written and oral form.

The maximum number of students per course are to be taken from the study guide of the JKU (studienhandbuch.jku.at).

§ 8 Allocation of places in courses with a limited number of participants

- (1) At the LFUI places for courses with a limited number of participants are allocated as follows:
 1. Students for whom the study duration would be extended due to the postponement are to be given priority.
 2. If criterion no. 1 does not suffice for regulating the admission, then first, students for whom the course is part of a compulsory module are to be given priority, and second, students for whom the course is part of an elective module.
 3. If the criteria in no. 1 and 2 do not suffice for regulating the admission, then the available places are raffled.
- (2) At the JKU, the allocation to courses with a limited number of participants is based on the "allocation according to priority number" procedure in accordance with the registration regulations by the Vice-Rector for Student Affairs and Teaching.

§ 9 Compulsory module

- (1) The units named "modules" in the curriculum are acc. to the statute parts of the study law of the JKU "study subjects". "Fields of study" in which the dissertation can be written are "subjects" in terms of §19, par .1, no. 2 of the study law part of the statutes of the JKU.
- (2) In accordance with par. 3, compulsory modules 1 to 7 covering altogether 44 ECTS-Credits must be passed. Students who write their dissertation at the LFUI also have to complete compulsory module 8 covering 2 ECTS-Credits.
- (3) The compulsory module "Economics" must be passed, if the topic of the dissertation is taken from the field of economics. The compulsory module "Statistics" must be passed, if the topic of the dissertation is taken from the field of statistics.

1.	Compulsory Module: Economics	h	ECTS-Credits	Univ.
a.	VU Microeconomics Imparting of microeconomic core concepts in a rigorous, emphatically formal manner, including the associated evidence. The course teaches the construction of formal models and the proof of prepositions. The course represents a profound engagement with the selected topics and covers a broad field.	3	6	LFUI
b.	VU Macroeconomics Imparting of the core models and techniques of theoretical macroeconomics as well as their empirical application. The focus is on the application of recursive methods and dynamic programming to the construction and solution of macroeconomic models.	3	6	LFUI
c.	VU Econometrics Imparting of advanced methods in econometrics. The application of existing procedures on economic issues, the critical evaluation of the procedures as well as the combination or adaptation of individual procedures for dealing with actual problems will be taught.	3	6	LFUI/ JKU
	Total	9	18	
Learning Outcomes: The students are familiar with the most common microeconomic, macroeconomic and econometric models and methods and can read and critically reflect on scientific publications that use these models and techniques. They have sufficient confidence in handling these techniques and can apply them independently to their own scientific questions.				
Prerequisites: none				

2.	Compulsory Module: Statistics	h	ECTS-Credits	Univ.
a.	VU Statistics Presentation and introduction to modern statistical methods, presentation of current scientific developments in statistics and demonstration of the possible uses of these new methods.	3	6	LFUI
b.	KV Statistical Principles of Data Science Presentation of and introduction to modern methods of data science, presentation of current scientific developments and demonstration of the possible uses of these new methods.	3	6	JKU
c.	VU Econometrics Imparting of advanced methods in econometrics. The application of existing procedures on economic issues, the critical evaluation of the procedures as well as the combination or adaptation of individual procedures for dealing with actual problems will be taught	3	6	LFUI/ JKU
	Total	9	18	
Learning Outcomes: The students are familiar with current statistical and econometric methods as well as with selected theoretical, empirical and behavioural approaches to advanced concepts in data science and can read and critically reflect on scientific publications that use these methods. They have sufficient confidence in handling these methods and can apply them independently to their own scientific questions.				
Prerequisites: none				

- (4) The following compulsory modules are to be passed, irrespective of the field in which the dissertation is written:

3.	Compulsory Module: Dissertation Colloquium	h	ECTS-Credits	Univ.
	<p>SE Dissertation Colloquium</p> <p>a) The dissertation colloquium is a seminar in which the students have to present their dissertation project. In this presentation, the objective of the project, the current state of science in the context of the project, the planned methodology to be used and the financial or material resources required to work on the topic of the dissertation as well as a schedule must be presented.</p> <p>b) The aim of this event is to accompany the dissertation projects from the project idea through the analysis of the status quo of the scientific discussion to the selection of suitable methods by the students. The result of the seminar is an elaborated research project and the dissertation agreement. However, successful completion of the dissertation colloquium is not a prerequisite for concluding the dissertation agreement.</p>	2	2	JKU
	Total	2	2	
	<p>Learning Outcomes: The students can structure their research project clearly, present it convincingly and take up the impulses of their colleagues constructively.</p>			
	<p>Prerequisites: none</p>			

4.	Compulsory Module: Advanced Study	h	ECTS-Credits	Univ.
	<ul style="list-style-type: none"> – If the dissertation is written in the field of economics, the VU Game Theory must be passed. – If the dissertation is written in the field of finance, the VU Financial Economics must be passed. – If the dissertation is written in the field of statistics, one of the two courses must be selected. 			
a.	<p>VU Game Theory Advanced concepts of non-cooperative game theory are taught.</p>	3	6	LFUI
b.	<p>VU Financial Economics Advanced concepts of financial economics are taught.</p>	3	6	LFUI
	Total	3	6	
	<p>Learning Outcomes: The students are familiar with the most common advanced concepts of non-cooperative game theory or with selected theoretical, empirical and behavioural approaches to advanced concepts of modern financial economics and can understand and critically reflect on scientific publications that use these concepts. They have sufficient confidence in handling these methods and can apply them independently to their own scientific questions.</p>			
	<p>Prerequisites: none</p>			

5.	Compulsory Module: Generic Skills	h	ECTS-Credits	Univ.
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	As specified in the dissertation agreement, courses covering altogether 4 ECTS-Credits must be passed. It is recommended to select a course from the field of “Equality and Gender”.		4	LFUI/ JKU
	Total		4	
	Learning Outcomes: The students have practical and theoretical knowledge that will help them to efficiently organise their independent scientific work and to present their results to the public.			
	Prerequisites: none			

6.	Compulsory Module: Core Competences for the Dissertation Topic	h	ECTS-Credits	Univ.
	As specified in the dissertation agreement, courses covering 12 ECTS-Credits are to be passed.		12	LFUI/ JKU
	Total		12	
	Learning Outcomes: The students can embed their research work in the recent theoretical and methodological discussion of their dissertation area and discuss their results in this context.			
	Prerequisites: The registration for the individual courses specified in the dissertation agreement requires successful completion of compulsory module 3 (Dissertation Colloquium).			

7.	Compulsory Module: PhD Seminar	h	ECTS-Credits	Univ.
	SE PhD Seminar It is the aim of this course to professionally prepare, present and discuss the results of one’s own research.	2	2	LFUI
	Total	2	2	
	Learning Outcomes: The students can convincingly present the research idea, the theoretical and methodological principles and the results of their research to an audience of experts.			
	Prerequisites: The registration for the course of this module requires the positive completion of compulsory module 1 or compulsory module 2.			

- (5) Students who write their dissertation at the LFUI have to complete compulsory module 8 following the positive assessment of all compulsory modules and the dissertation. If the dissertation is written at the JKU, it will be defended prior to the assessment of the dissertation in accordance with the regulations of § 37b of the JKU's study law part of the statutes.

8.	Compulsory Module: Doctoral Thesis Defence	h	ECTS-Credits	Univ.
	Final public defence of the dissertation in the form of an oral exam before an examination board, consisting of three examiners		2	LFUI
	Total		2	
	Learning Outcomes: The students can present the results of their research competently. The focus is on the summary and communication of the results of the research work, the presentation of the increase in knowledge for the discipline, its benefits for society, the assessment and methodological skills as well as the presentation.			

§ 10 Dissertation

- (1) A dissertation must be written in the PhD Programme in Economics and Statistics (Doctoral Programme).

The dissertation is a scientific paper that serves to prove the ability to independently cope with scientific questions. The dissertation can be written in one of the following fields:

- Economics
- Statistics

The area of economics includes finance as a topic for the dissertation.

- (2) Interdisciplinary dissertations are permitted. In this case, the team of supervisors must be selected in acc. with par. 5 to ensure that its members cover the various specialist aspects of the dissertation project.
- (3) The dissertation can be written as monography or as a selection of several articles that are related in terms of methodology or content. An article thesis must consist of a minimum of three articles, at least two of which must have been accepted for presentation at acknowledged international conferences. This requirement can be waived if at least one specialist article has been published or accepted for publication in an internationally recognised, peer-reviewed journal. The articles must be preceded by an introduction that explains the context in terms of content or method. If the specialist articles were written by several authors, the doctoral candidate's own contribution must be pointed out in the introduction. In addition to evaluating the contents of the articles, the evaluators have to check compliance with the requirements for a dissertation consisting of several specialist articles and determine this in their review.
- (4) The notification of the dissertation (LFUI) or the approval of the dissertation agreement (JKU) must be made at the admitting university. The respective statutes apply to the assignment of the topic, the dissertation agreement, the supervision and the evaluation of the dissertation.
- (5) The dissertation is supervised by a team of supervisors. At the LFUI students have to suggest a team of supervisors that consists of a minimum of two supervisors (dissertation committee) and to nominate one of them as main supervisor (holder of a *venia docendi*). It is permissible to propose supervisors (with the exception of the main supervisor) from subject-related fields. In justifiable exceptional cases it is possible for students to propose only one supervisor. At the JKU, the team of supervisors is formed acc. to §37 of the study law part of the statutes.
- (6) If the dissertation is written at the LFUI, it is defended as part of the Doctoral Thesis Defence (compulsory module 8).
- (7) If the dissertation is written at the JKU, it is evaluated according to §37b of the study law part of the statutes of the JKU, immediately after the Defence by an examination board consisting of three persons, the members of which have to be from the circle of persons mentioned in §37 par. 2 study law part of the statutes of the JKU. One member of the examination board must be from the team of supervisors that evaluates the dissertation, the two other members must not be part of the team.
- (8) The examination board acc. to par. 7 consists of:
1. The main supervisor of the dissertation or, if he or she is prevented from doing so, the second supervisor of the dissertation, who – provided the §32 par. 4 and 5 of the JKU's study law section of the statutes does not require anything to the contrary – is to be appointed as head of the examination board by the Vice Rector for Student Affairs and Teaching,
 2. another representative of the dissertation subject as well as
 3. another representative of the dissertation subject who does not belong to the JKU, or a representative of the subject most closely related to the dissertation subject.
- (9) Subject representatives in terms of par. 8 no. 2 and 3 are those persons who are entitled to supervise dissertations from the respective subject in accordance of §37 par. 2 study part of the statutes of the JKU.

§ 11 Examination regulations

- (1) At the LFUI, modules consisting of a course with continuous performance assessment, are evaluated by the assessment of the course with continuous performance assessment.
- (2) For courses with continuous performance assessment, the course instructor has to specify the examination method (oral exam/written exam/papers) before the start of the course.
- (3) The examination regulations for exams of the individual modules as well as the examination criteria for the courses examinations at the JKU Linz are to be taken from the JKU study guide.
- (4) The dissertation colloquium (compulsory module 3) is headed by three persons who acc. to §37 par. 2 of the JKU's study law part of the statutes are entitled to supervise dissertations. These persons form the examination board acc. to §19a par. 1 no. 5 leg. cit.
- (5) The dissertation colloquium is generally open to the public. However, the public can be excluded in favour of a mere university public if there are economic or legal interests of the students or the supervisors of the dissertation project that are particularly worthy of protection.
- (6) At the LFUI, the performance of the final defence of the dissertation (compulsory module 8) is evaluated by an oral examination in front of a board consisting of three examiners. It is open to the public and includes a short lecture by the candidate about the content of the dissertation. 2 ECTS-Credits are allocated to the defence.
- (7) The admission to the Dissertation Defence (compulsory module 8) requires the positive evaluation of all compulsory modules as well as the dissertation.
- (8) If the courses to be completed within the framework of compulsory modules 5 and 6 are taken from other curricula (as specified in the dissertation agreement), the examination regulations of the curriculum they are taken from apply.
- (9) For all aspects of the examination regulations that are not explicitly regulated, the statutes of the university at which the examination is taken apply.

§ 12 Academic degree

- (1) The graduates of the PhD Programme in Economics and Statistics (Doctoral Programme) receive the academic title "Doctor of Philosophy", abbreviated "PhD", by the responsible body for study law matters of the admitting university, whereby the other university involved in the study programme is to be identified.
- (2) If the compulsory module Economics has been completed and the topic of the dissertation is to be assigned to the area of Economics, the specialisation in "Economics" is documented on the diploma. If the compulsory module Statistics has been completed and the topic of the dissertation is to be assigned to the Statistics area, the specialisation "Statistics" is documented on the diploma.

§ 13 Coming into force

This curriculum comes into force as of 1 October 2021 and applies to all students beginning the Doctoral Programme PhD in Economics and Statistics as of the winter semester of 2021/22.

§ 14 Transitional regulations

- (1) Regular degree students who have started the PhD Programme in Economics (Doctoral Programme) acc. to the curriculum for the PhD Programme in Economics (Doctoral Programme) 2015, University of Innsbruck Bulletin of 24 June 2015, Issue 74, No. 504, and the JKU University Bulletin of 24 June 2015, Issue 28, No. 242 before 1 October 2021, are entitled to finish this programme acc. to the previous regulations until 30 September 2025. The right to take the Dissertation Defence at the JKU is regulated based on §31 JKU study law part of the statutes in the version of the JKU University Bulletin of 7 October 2020, Issue 49, No. 581.
- (2) If the PhD Programme in Economics (Doctoral Programme) acc. to the curriculum of 2015 is not completed in time, the students are subject to the curriculum for the PhD Programme in

Economics and Statistics (Doctoral Programme), University of Innsbruck Bulletin of 24 June 2021, Issue 84, No. 884 (curriculum 2021). In addition, students are entitled to subject to the curriculum of 2021 on a voluntary basis.

- (3) Positively evaluated examinations acc. to the curriculum of the PhD Programme in Economics (Doctoral Programme) 2015 correspond to the examinations acc. to the curriculum 2021 as follows:

Curriculum 2015	h/ ECTS- Credits	Curriculum 2021	h/ ECTS- Credits
Microeconomics	VU 3/6	Microeconomics	VU 3/6
Macroeconomics	VU 3/6	Macroeconomics	VU 3/6
Econometry	VU 3/6	Econometry	VU 3/6
Game Theory	VU 3/6	Game Theory	VU 3/6
Statistics	VU 3/6	Statistics	VU 3/6
Dissertation Seminar I	SE 2/2	Dissertation Colloquium	SE 2/2
Dissertation Seminar II	SE 2/2	PhD Seminar	SE 2/2
Generic Skills	VU 2/4	Generic Skills	-/4
Financial Economics	VU 3/6	Financial Economics	VU 3/6
Core Skills of the Thesis Topic	VU 2/4	Core Competences for the Dissertation Topic	VU 2/4

Appendix: Recommended Course Sequence

Area Economics

Semester		ECTS-Credits	University
1	Microeconomics	6	LFUI
	Macroeconomics	6	LFUI
	Econometrics	6	LFUI
	Generic Skills	4	flexible
	Working on the Dissertation		Respective University
2	Advanced Study § 9 (4)	6	LFUI
	Dissertation Colloquium	2	JKU
	Working on the Dissertation		Respective University
3	Core Competences	12	flexible
	Working on the Dissertation		Respective University
4	PhD Seminar	2	LFUI
	Working on the Dissertation		Respective University
5	Working on the Dissertation		Respective University
6	Working on the Dissertation		Respective University
	Doctoral Thesis Defence	2(0)	LFUI (JKU)
	Total	46(44)	LFUI (JKU)

Area Statistics

Semester		ECTS-Credits	University
1	Statistics	6	LFUI
	Statistical Principles of Data Science	6	JKU
	Econometrics	6	LFUI
	Generic Skills	4	flexible
	Working on the Dissertation		Respective University
2	Advanced Study § 9 (4)	6	LFUI
	Dissertation Colloquium	2	JKU
	Working on the Dissertation		Respective University
3	Core Competences	12	flexible
	Working on the Dissertation		Respective University
4	PhD Seminar	2	LFUI
	Working on the Dissertation		Respective University
5	Working on the Dissertation		Respective University
6	Working on the Dissertation		Respective University
	Doctoral Thesis Defence	2(0)	LFUI (JKU)
	Total	46(44)	LFUI (JKU)