

ECONOMICS WITH DATA SCIENCE

Master of Science



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GLOSSARY

Official notice (Amtliche Mitteilung)	AM
Computer-aided exam (Computergestützte Prüfung)	CP
Term paper (Hausarbeit)	HA
Written exam (Klausur)	K
Oral exam (Mündliche Leistung)	MDL
Mandatory (Pflicht)	Р
Examination (Prüfungsleistung)	PL
Oral presentation (Referat)	REF
Seminar (Seminar)	S
Coursework (Studienleistung)	SL
Contact hours per week (Semesterwochenstunden)	SWS
Exercise course (Übung)	Ü
Assessment for exercise course (Leistung in der Übung)	ÜL
Lecture (Vorlesung)	V
Lecture with seminar (Vorlesung mit Seminar)	VS
Lecture with exercise course (Vorlesung mit Übung)	VÜ
Elective (Wahl)	W
Semi-elective (Wahlpflicht)	WP

Note:

The information contained in this curriculum, in particular the information concerning admission regulations, examinations, and the structure of the individual subjects, may be subject to change. The information given here is therefore without guarantee; the regulations adopted by the official bodies are binding.

The basis of this curriculum is the <u>examination regulations</u> and, if applicable, amendment statutes.

You can also find this curriculum at the <u>website</u>. In the pdf version published there, you can follow the hyperlinks, which can be recognized in this print version from the underlining. You can also click on the page numbers in the table of contents.

GENERAL INFORMATION ABOUT THE MASTER'S PROGRAM IN ECONOMICS WITH DATA SCIENCE

Objective

The Master's program in Economics with Data Science at the University of Hohenheim is a comprehensive journey into the intricate dynamics of the economy, politics, and society. Building on foundational bachelor-level studies, this program immerses you in the latest theoretical and empirical approaches in Economics, fostering advanced knowledge and critical thinking skills.

The program's modules are designed with lectures and exercise classes all featuring elements of data science and/or AI. This blend ensures learning of economic methods and their practical application. It enables you to assess these concepts critically and lays a solid groundwork for your research projects. The final semester is predominantly dedicated to the Master's thesis, marking the pinnacle of your scholarly journey in economics.

Occupational fields

Graduating from our master's program in Economics with Data Science opens doors to diverse and prestigious career opportunities. Designed to prepare you for complex and high-ranking roles, this program equips you with a deep understanding of the interplay between economic, social, and political processes.

Your newfound expertise in economics and data science positions you as a strong candidate for roles in banking, international organisations, management positions across the private sector, prestigious research institutes, and the public sector. The versatility of this program ensures that you are well-prepared for various responsible and dynamic positions, tailoring your career path to your ambitions.

Additionally, for those aspiring to delve deeper into academia, pursuing a PhD is a highly encouraged option, allowing you to refine your expertise further and contribute to the field of economics

Requirements

Admission to the program is open to graduates of a Bachelor's degree program in business and economics of at least three years duration in Germany or abroad, or of a university level degree program in the field of business and economics of at least three years duration successfully completed in Germany. Further details are regulated by the admission regulations.

Information Options

Prospective students can obtain basic information about the curriculum, the structure of studies, the course of studies, examinations, and how to apply on the <u>website</u>. The <u>CareerCenter Hohenheim</u> provides information and advice on career opportunities and all

GENERAL INFORMATION ABOUT THE MASTER'S PROGRAM IN ECONOMICS WITH DATA SCIENCE

matters relating to entering the world of work. The <u>academic program advisors</u> at the institutes provide specialist advice, particularly with regard to the program curriculum and available options.

Study and Examination Plan

The curriculum explains the examination regulations. To complete the program successfully, familiarity and compliance with the examination regulations is mandatory! This curriculum is intended to help students plan their course of study on the basis of the examination regulations. It serves as the basis for the personal study and examination plan, which is created by the students themselves, taking into account the requirements and deadlines in the examination regulations.

Course Structure: Modules | Course Content | Courses

The Master's program is designed to normally be completed in four semesters and has a modular structure. In the ideal case, students will successfully complete five modules per semester. Detailed descriptions of the course content are available in HohCampus under Study Offerings and Module Descriptions. You can build the schedule for the upcoming semester using the names of the courses with the help of the course catalog provided at the beginning of each semester.

Credit Points

Six ECTS credits (shortened to 'credits' from now on for better readability) are awarded for the workload associated with each module. 24 credits are awarded for the Master's thesis. The Master's program comprises a total of 120 credits. In each module, students must complete graded work. This work is set out in the module catalog (see above). Work assessed with a grade of at least 4.0 is considered a pass.

Examinations

Examinations take place after the end of the current lecture period and before the start of the following lecture period. The lecture period in the winter semester usually starts in mid-October and ends at the end of January/beginning of February. The lecture period in the summer semester usually starts mid-April and ends in the second half of July. Students register for examinations with the Examinations Office during the registration period (as set by the Examinations Office). The dates are available at uni-hohenheim.de/en/examination or via HohCampus. Registration and cancellation of registration is detailed in the examination regulations.

STRUCTURE AND COURSE OF THE MASTER'S PROGRAM IN ECONOMICS WITH DATA SCIENCE

The Master's program in Economics with Data Science is divided into three areas: The compulsory area comprises 30 credits, the free elective area 66 credits, and the Master's thesis 24 credits.

The recommended module selection in the free elective area consists of a seminar module, the Project-Seminar Empirical Research in Economics, the Master's Portfolio module Economics, and seven modules from the list of economics modules.

The "Master's thesis" module totals 24 credits and comprises the written Master's thesis and an oral presentation (defense) of the Master's thesis. The weighting of the oral defense of the Master's thesis within the overall grade of the Master's thesis is 20 per cent.

The free elective area comprises 66 credits.

The free electives allow you to claim credit for studies completed abroad. Credits obtained from a foreign university may be transferable if they are equivalent to credits at the University of Hohenheim in terms of type, scope, and requirements. Further information can be found under Transferring credits from abroad.

The Master's portfolio module Economics can consist of one or several partial credits (more information can also be found in the module catalog). These partial credits must total at least 6 credits in order to be recognized. However, no more than 6 credits can be recognized. Graded and ungraded courses can be included in the Master's portfolio module. The module is ungraded in all cases.

STRUCTURE AND COURSE OF THE MASTER'S PROGRAM IN ECONOMICS WITH DATA SCIENCE

MASTER'S THESIS (24 credits)

ELECTIVE AREA (66 credits)

Recommended modules:

Free elective area (42 credits)

Seminar module (6 credits)

Project-Seminar Empirical Research in Economics (12 credits)

Master's Portfolio module Economics (6 credits)

COMPULSORY AREA (30 credits)

Principles of Data Science (6 credits)

Econometrics (6 credits)

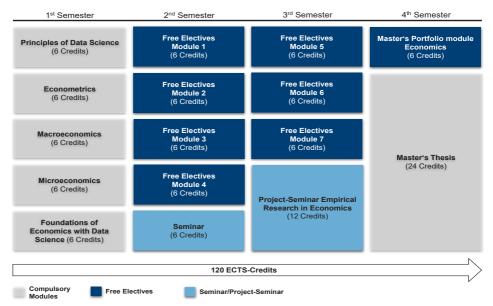
Macroeconomics (6 credits)

Microeconomics (6 credits)

Foundations of Economics with Data Science (6 credits)

STRUCTURE AND COURSE OF THE MASTER'S PROGRAM IN ECONOMICS WITH DATA SCIENCE

Curriculum Economics with Data Science M.Sc.



COMPULSORY/ELECTIVE COURSES

The required courses in the compulsory area are marked in the overview in the column (abbreviated with "Comp.") with a P.

In the overview of the structure of the electives, the modules that students must select from a list are identified by WP.

The elective modules of the free elective area are added in each case based on course availability and are identified by a W in the overviews.

If a course is listed for more than one semester, this should be understood as an alternative offering. In other words, the course does not have to be attended more than once, nor does it extend over multiple semesters. (The first time it is listed is considered the recommended semester (rec. sem).)

COMPULSORY AREA

COMPULSORY AREA (responsibility: Prof. Dr. Robert Jung)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment ¹	Course	Туре	sws	Credits				
	Principles of Data Science	Р	1	K	Principles of Data Science	V	2	G (DL)				
	Principles of Data Science		'	HA	Principles of Data Science	Ü	2	6 (PL)				
	Econometrics	Р		К	Econometrics	V	2	6 (PL)				
	Econometrics		'	r.	Econometrics	Ü	2	U (PL)				
	Macroeconomics	Р	1	4	1	1		K	Macroeconomics	V	2	6 (PL)
	Wacroeconomics			ÜL	Macroeconomics	Ü	2	6 (PL)				
	Microeconomics	Р	1	REF	Microeconomics	٧	2	0 (DL)				
	Microeconomics		1	'	'	ļ.	'	MDL	Microeconomics	Ü	2	6 (PL)
	Foundations of Economics with Data Science	Р	1	unbenot.	Foundations of Economics with Data Science	٧	2	e (DL)				
	Foundations of Economics with Data Science	٢	1	CP	Foundations of Economics with Data Science	Ü	2	6 (PL)				
TOTAL								30				

¹ See Glossary on Page 3. K = Written exam; Ü = Exercise course; ÜL = Assessment for exercise course; HA = Term paper; unbenot. = ungraded; CP = Computer-aided exam; REF = Oral presentation; V = Lecture; S = Seminar; MDL = Oral exam

FREE ELECTIVE AREA - STRUCTURE

FREE ELECTIVE AREA (responsibility: Academic program director)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment	Course	Туре	sws	Credits
	Master Seminar Economics with Data Science	WP	2 - 4	HA Präs.	Master Seminar Economics with Data Science I	s	2	6
	Master Seminar Economics with Data Science II	W	2 - 4	HA Präs.	Master Seminar Economics with Data Science II	s	2	6
TOTAL								6

PROJECT SEMINAR (responsibility: Academic program director)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment	Course	Туре	sws	Credits
	Empirical Research in Economics	w	3/4	Exposé oder Proj.bericht, wiss. Poster, Präs.	Empirical Research in Economics	Proj.	4	12 (SL)
TOTAL								

FREE ELECTIVE AREA – ECONOMICS MODULES

MASTER'S PORTFOLIO MODULE (responsibility: Academic program director)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment	Course	Туре	sws	Credits
	Ungraded Master's Portfolio Module Economics	w	2 - 4	-	-			6 (SL)
TOTAL								6

LIST OF MODULES IN FREE ELECTIVE AREA (responsibility: Academic program director)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment	Course	Туре	sws	Credits		
5211-	Applied Time Series Analysis: Econometrics	w	2	CP Zwischen- und	Applied Time Series Analysis: Econometrics and Statistical Learning	V	2	6 (51)		
3211-	and Statistical Learning	W	2	- 1	- 1	Abschlusspr üfung	Applied Time Series Analysis: Econometrics and Statistical Learning	Ü	2	6 (SL)
5213-520	Development Economics	w	2	к	Development Economics	VÜ	4	6 (PL)		
5204	5204- Empirical and Experimental Public Economics	w	2	Assignment	Empirical and Experimental Public Economics	V	2	6 (81.)		
3204-				K	Empirical and Experimental Public Economics	Ü	2	6 (SL)		
4407-480	Introduction to Machine Learning in Python	w	2	Quizzes Progr. Assignment CP Exam	Introduction to Machine Learning in Python	E- Learn.	5	7,5 (PL)		
5201-530	Monetary Economics	w	2	Term Paper mit Modellimpl.	Monetary Economics	V	2	6 (SL)		
3201-330				Crit. Review Essay	Monetary Economics	Ü	1	U (SL)		

FREE ELECTIVE AREA - ECONOMICS MODULES

LIST OF MODULES IN FREE ELECTIVE AREA (responsibility: Academic program director)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment	Course	Туре	sws	Credits
5209-520	Recent Developments in Advanced Innovation	w	2	к	Recent Developments in Advanced Innovation Economics	V	2	6 (CL)
5209-520	5209-520 Economics	l vv	2	, N	Recent Developments in Advanced Innovation Economics	Ü	2	6 (SL)
5200-510	Statistical Learning	w	2	к	Statistical Learning	V	2	6 (SL)
3200-310	Statistical Learning	**		_ ^	Statistical Learning	Ü	2	0 (SL)
5207-	5007 7	w	2	К	Topics in Advanced Labor Economics	V	2	C (CI.)
3207-	Topics in Advanced Labor Economics			K	Topics in Advanced Labor Economics	Ü	2	6 (SL)
	0 1 17	w	3	Kurzvortrag	Contract Theory	V	2	6 (SL)
	Contract Theory			MDL	Contract Theory	Ü	2	0 (SL)
5210-440	Globalization and History	w	/ 3	к	Globalization and History	V	2	6 (SL)
3210-440	Globalization and history	vv	3	, r	Globalization and History	Ü	2	0 (SL)
5209-420	Innovation Economics	w	3	к	Innovation Economics: Theory & Empirics	V	2	0 (DL)
5209-420	Innovation Economics	l vv	3	_ ^	Innovation Economics: Theory & Empirics	Ü	2	6 (PL)
5201-690	International Macroeconomics	w	3	Term Paper mit	International Macroeconomics	V	2	- 6 (SL)
5201-690		, vv		Modellimpl Crit. Review Essay	International Macroeconomics	Ü	1	

FREE ELECTIVE AREA – ECONOMICS MODULES

LIST OF MODULES IN FREE ELECTIVE AREA (responsibility: Academic program director)

Module Code	Module	Comp.	Rec. Sem.	Assess- ment	Course	Туре	sws	Credits																
5207-630	Labor Markets and the Macroeconomy	w	3	к	Macroeconomics of Unemployment	V	2	6 (SL)																
5207-630	Labor Markets and the Macroeconomy	VV	3	, r	Macroeconomics of Unemployment	Ü	2	0 (SL)																
	Mathematical Statistics for Data Science	W	3	K Assign- ments Präs	Mathematical Statistics for Data Science	VÜ	4	6 (SL)																
5202-530	5000 500	١٨/	3	K, Assigments	Microeconometrics	V	2	6 (91)																
3202-330	Microeconometrics	W		und Präs.	Microeconometrics	Ü	2	6 (SL)																
5205-	Quantitative International Trade	w	3	Term Paper mit	Quantitative International Trade	V	2	6 (81.)																
3203-	Quantitative international frade	"		3	3	3	J	3	3	5	3	3	3	3	3	3	3	3	3	3	Modellimpl. K	Quantitative International Trade	Ü	2
5204-	State Capacitiy, Corruption, and Public	w	3	E-Portfolio	State Capacitiy, Corruption, and Public Administration	V	2	- 6 (SL)																
3204-	Administration	"			State Capacitiy, Corruption, and Public Administration	Ü	2																	
5202-630	Topics in Microeconometrics	W	3	К	Topics in Microeconometrics	VÜ	4	6 (SL)																

PERSONAL NOTES

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IMPORTANT DATES

Lecture period winter semester: 13 Oct 2025 - 31 Jan 2026

Lecture period summer semester: 1 Apr 2026 - 18 Jul 2026

Lecture-free days: All Saints' Day, 1 Nov 2025

Christmas vacation, 22 Dec 2025 -6 Jan 2026

Epiphany, 6 Jan 2026

Easter, 03 Apr 2026 - 06 Apr 2026

Labor Day, 1 May 2026

Ascension Day, 14 May 2026

Pentecost break, 26 May 2026 - 30 May 2026

Feast of Corpus Christi, 04 June 2026

Faculty Examinations: Registration procedure (online/form)

Exam registration

Deadlines

1st examination period

2nd examination period

(all dates will be announced by the Examinations office)

STUDY ADVISING

University of Hohenheim

Student Counselling Center (Zentrale Studienberatung - ZSB)

Emil-Wolff-Str. 14, Raum 23 (1st floor)

70599 Stuttgart | Germany

Phone +49 (0)711 459 22064 Fax +49 (0)711 459 23723

Email zsb@uni-hohenheim.de | Email hme@uni-hohenheim.de

> General inquiries | > Specific issues

IMPRINT

University of Hohenheim

Dean's Office of the Faculty of Business, Economics and Social Sciences

Schloss Hohenheim 1B

Speisemeistereiflügel – 120

70599 Stuttgart | Germany

Phone +49 (0)711 459 22488

Fax +49 (0)711 459 22785

Email wiso@uni-hohenheim.de

Web wiso.uni-hohenheim.de



