

## Module Handbook

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# Course WIW-QMT-MAT-K-1

Mathematics in Economics (4V+2U, 8.0 LP)

## Course Type

SWS	Type	Course Form	CP (Effort)	Presence-Time / Self-Study	
-	K	Lecture with exercise classes and tutorials (V/U/T)	8.0 CP		
4	V	Lecture		60 h	90 h
2	U	Exercise class/tutorial (in small groups)		30 h	60 h
<b>(4V+2U)</b>			<b>8.0 CP</b>	<b>90 h</b>	<b>150 h</b>

## Basedata

SWS	4V+2U
CP, Effort	8.0 CP = 240 h
Position of the semester	1 Sem. in WiSe
Level	[1] Bachelor (General)
Language	[DE] German
Lecturers	Stockis, Jean-Pierre, Dr. (WMA   DEPT: MAT)
Area of study	[MAT-Service] Mathematics for other Departments
Lifecycle-State	[NORM] Active

### Notice

Size of exercise classes/tutorials:

- tutorials: max. 30 students
- exercise classes: max. 150 students

## Possible Study achievement

- Verification of study performance: **proof of successful participation in the exercise classes (ungraded)**
- Examination number (Study achievement): 80133 ("Mathematics (Vorleistung)")
- Details of the examination (type, duration, criteria) will be announced at the beginning of the course.

### Contents

- Linear algebra: vectors and matrices, systems of linear equations, eigenvalues and eigenvectors, planes and hyperplanes.
- Analysis: functions, differential calculus in one-dimensional and multi-dimensional space, Lagrange, applications of differential.

calculus, integral calculus in one-dimensional space, first-order differential equations.

- Linear optimization: graphical solution of linear programs.

### Requirements for attendance (informal)

None

### Requirements for attendance (formal)

None

### References to Course [WIW-QMT-MAT-K-1]

Module	Name	Context	
[WIW-QMT-MAT-M-1]	Mathematics in Economics	P: Obligatory	4V+2U, 8.0 LP