

Univerza v Ljubljani

Mathematics – curriculum (academic year 2019/20)

[« Academic year 2018/19](#)

[Academic year 2020/21 »](#)

Master's study programme

	Year 1		ECTS
	Autumn Semester	Spring Semester	
Electives	12/8		24
General electives	3/2		6
Electives		12/8	24
General electives		3/2	6
Year 2			
Electives	6/4		12
General electives	7/6		16
Mathematical seminar	1	1	3
General elective		2/1	4
Master's thesis and exam		<u>0*</u>	25

Electives by group

The following are all accredited courses. Not all of them are offered every year.

The list of courses for the academic year 2019/20 is listed below and might change slightly (click on the course name to view the syllabus).

All »

	Lectures/Tutorials	ECTS
Measure theory	3/2	6
M1 Introduction to functional analysis	3/2	6

	Functional analysis	3/2	6
	Introduction to C* algebras	3/2	6
	Operator theory	3/2	6
	Introduction to harmonic analysis	3/2	6
	Special functions	3/2	6
	Partial differential equations	3/2	6
	Complex analysis	3/2	6
	Analytical mechanics	3/2	6
	Continuum mechanics	3/2	6
	Fluid mechanics	3/2	6
	Mechanics of deformable bodies	3/2	6
	Dynamical systems	3/2	6
	Commutative algebra	3/2	6
	Noncommutative algebra	3/2	6
	Nonassociative algebra	3/2	6
	Ordered algebraic structures	3/2	6
	Theory of semigroups and groups	3/2	6
	Number theory	3/2	6
M2	Combinatorics	3/2	6
	Graph theory	3/2	6
	Cardinal arithmetic	3/2	6
	Topics in discrete mathematics 1	3/2	6
	Topics in discrete mathematics 2	3/2	6
	Applied discrete mathematics	3/2	6
	Logic	3/2	6
	Analysis on manifolds	3/2	6
	Introduction to algebraic geometry	3/2	6
	Convexity	3/2	6
M3	Algebraic topology 1	3/2	6
	Algebraic topology 2	3/2	6
	Differential geometry	3/2	6
	Lie groups	3/2	6
	Riemann surfaces	3/2	6
	Numerical integration and ordinary differential equations	3/2	6
M4	Numerical solving of partial differential equations	3/2	6

	Iterative numerical methods in linear algebra	3/2	6
	Computer aided (geometric) design	3/2	6
	Numerical approximation and interpolation	3/2	6
	Numerical methods for linear control systems	3/2	6
	Probability 2	3/2	6
	Statistics 2	3/2	6
	Bayesian statistics	3/2	6
	Financial mathematics 2	3/2	6
	Econometrics	3/2	6
	Stochastic processes 2	3/2	6
	Stochastic processes 3	3/2	6
	Actuarial mathematics	3/2	6
	Modelling with stochastic processes	3/2	6
M5	Topics in game theory	3/2	6
	Topics in financial mathematics 1	3/2	6
	Topics in financial mathematics 2	3/2	6
	Optimization in finance	3/2	6
	Time series	3/2	6
	Riesz spaces in mathematical economics	3/2	6
	Numerical methods for financial mathematics	3/2	6
	Financial mathematics 3	3/2	6
	Mathematics with computers	3/2	6
	Computability theory	3/2	6
	Computational complexity	3/2	6
R1	Topics in mathematical foundations of computer science	3/2	6
	Topics in optimization	3/2	6
	Optimization 2	3/2	6
	Data structures and algorithms 3	3/2	6
O	Astronomy	4/2	7

<u>Theoretical physics</u>	4/2	7
<u>Modern physics</u>	3/2	6
<u>Mathematical models in biology</u>	3/2	6
<u>Workplace experience 1</u>	<u>1*</u>	6
<u>Workplace experience 2</u>	<u>1*</u>	6
<u>Mathematics in industry</u>		