UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2025/26
MASTER DEGREE
MATHEMATICS (Classe LM-40 R)
Enrolled from a.a.2025/2026

HEADING

Degree classification - Denomination and code:	LM-40 R
Degree title:	Dottore Magistrale
Curricula currently available:	GENERAL / APPLICATIONS / INDUSTRIAL
Length of course:	2 years
Credits required for admission:	180
Total number of credits required to complete programme:	120
Years of course currently available:	1st
Access procedures:	Open, subject to entry requirements
Course code:	FBQ

PERSONS/ROLES

Head of Study Programme

Prof. Ghilardi Silvio

Tutors - Faculty

Tutor per orientamento:
ALZATI Alberto, CALANCHI Marta, CAMPI Luciano, CAVATERRA Cecilia, CIRAOLO Giulio, FUHRMAN Marco, GARBAGNATI Alice, GORI Anna, LUPERI BAGLINI Lorenzo, MAGGIS Marco, MARI Luciano, MASTROLIA Paolo, MATESSI Diego, MESSINA Francesca, MOLTENI Giuseppe, MONTALTO Riccardo, MONTOLI Andrea, MORALE Daniela, PAYNE Kevin, PENATI Tiziano, PIZZOCCHERO Livio, SCACCHI Simone, STELLARI Paolo, SVALDI Roberto, TARSI Cristina, TASIN Luca, TERRANEO Elide, TORTORA Alfonso, TURRINI Cristina, UGOLINI Stefania, VESELY Libor, ZAMPIERI Elena, ZANOTTI Pietro.

Degree Course website

https://matematica-lm.cdl.unimi.it/it

ALGANT academic tutor

MAZZA Carlo

Disability academic tutor

SCACCHI Simone

ECMI academic tutor

CAUSIN Paola

Master's Degree Organization Board

VIGNATI Marco (Presidente), ALZATI Alberto, SCACCHI Simone, MAZZA Carlo

Master's Degree Organization Board

CALANCHI Marta (Presidente), PELOSO Marco, GHILARDI Silvio, VIGNATI Marco

Master's Degree Study Plan Board

COLOMBO Elisabetta (Presidente), PIZZOCCHERO Livio, PAYNE Kevin, UGOLINI Stefania

Mathematics education office

Milano-via C.Saldini 50 Phone 0250316107 - 0250316122 9.30-11.30 https://matematica-lm.cdl.unimi.it

Orientation and Internship Board

TORTORA Alfonso (Presidente), NALDI Giovanni, MICHELETTI Alessandra, MAGGIS Marco, COZZI Matteo, BRANCHETTI Laura

Other Activities and Credit Award Board

SCACCHI Simone (Presidente), MOLTENI Giuseppe, TORTORA Alfonso

Piano Lauree Scientifiche" academic tutor

CAUSIN Paola

Programme Transfer and International Qualifications Recognition Board

ZAMPIERI Elena, REGGIO Luca

Secondary school teacher training activities

BRANCHETTI Laura (Presidente), RIZZO Ottavio, TURRINI Cristina

Socrates-Erasmus Board

GAETA Giuseppe (Presidente), GORI Anna, MATESSI Diego, SCACCHI Simone, PAYNE Kevin

Student registrar

CONTATTI, SEDI E ORARI https://www.unimi.it/it/node/359 https://www.unimi.it/it/node/360

Timetables Board

ZAMPIERI Elena (Presidente), LOVADINA Carlo, ZANOTTI Pietro

Web pages and website academic tutors

PALEARI Simone, TURRINI Cristina

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

The University of Milan supports international mobility by providing its students with the opportunity to spend study and internship periods abroad. It is a unique chance to enrich your educational path in a new exciting environment.

The agreements entered into by the University with over 300 universities from the 27 EU member countries under the European Erasmus+ programme allow regularly enrolled students to carry out part of their studies at one of the partner universities or to undertake internships at companies, training and research centres and other organisations.

Similar international mobility opportunities are provided outside Europe, through agreements with a number of prestigious institutions.

The University of Milan is a member of the 4EU+ European University Alliance that brings together eight public multidisciplinary universities: University of Milan, Charles University of Prague, Heidelberg University, Paris-Panthéon-Assas University, Sorbonne University of Paris, University of Copenhagen, University of Geneva, and University of Warsaw. The 4EU+ Alliance offers integrated educational pathways and programmes to promote the international mobility of students (physical, blended and virtual).

Study and internships abroad

The Master of Science in Mathematics has long been committed to insert its educational activities in an international framework through integrated programs of study. We activated several international cooperation agreements with other universities in Europe and in the world (in Canada, South Africa and India).

The programs ALGANT, Master in Algebra, Geometry and Number Theory, and ECMI, Master in Industrial Mathematics, programs are unique in Europe for pure and industrial mathematics.
These programs are supported by international university consortia and are targeted to the conferment of academic value recognized abroad (that is double degrees) and to the promotion of European higher education. For more information see the institutional web pages

http://www.algant.eu/

http://www.ecmi-indmath.org/

Moreover, in the Erasmus program, we have exchange agreements with universities Austria, Czech Republic, Denmark, Finland, France, Germany, Holland, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden.
See the website http://users.unimi.it/erasmusmat/ for information collected on the various programs of internationalization and the activities carried out abroad.

How to participate in Erasmus mobility programs

How to participate in Erasmus+ mobility programmes

The students of the University of Milan can participate in mobility programmes, through a public selection procedure.
Ad hoc commissions will evaluate:
• Academic career
• the candidate's proposed study programme abroad
• his/her foreign language proficiency
• the reasons behind his/her application

Call for applications and informative meetings
The public selection for Erasmus+ mobility for study generally begins around February each year with the publication of a call for applications specifying destinations and requirements. Regarding the Erasmus+ Mobility for Traineeship, the University of Milan usually publishes two calls a year enabling students to choose a destination defined by an inter-institutional agreement or to find a traineeship position on their own.

The University organises informative meetings to illustrate mobility opportunities and rules for participation.

Erasmus+ scholarship
The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which may be supplemented by the University funding for disadvantaged students.

Language courses
Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each year by the University Language Centre (SLAM).
https://www.unimi.it/en/node/8/

Learn more at https://www.unimi.it/en/node/274/

For assistance, please contact:
International Mobility Office
Via Santa Sofia 9 (second floor)
Tel. 02 503 13501-12589-13495-13502
Contacts: InformaStudenti;
Student Desk booking through InformaStudenti

COURSE YEAR UNDEFINED Core/compulsory courses/activities common to all curricula

Learning activity		Ects	Sector
English proficiency B2 (3 ECTS)		3	ND
Final Exam		27	NA
	Total compulsory credits	30	

ACTIVE CURRICULA LIST

GENERAL Course years currently available: 1st
APPLICATIONS Course years currently available: 1st
INDUSTRIAL Course years currently available: 1st

CURRICULUM: [FBQ-A] GENERAL

Further elective courses Curriculum-specific features GENERAL

Advanced Probability	9	MAT/06
Algebraic Number Theory	6	MAT/02
Algebraic TopologY (first part)	6	MAT/03
Commutative Algebra	6	MAT/02
Complex Analysis	9	MAT/05
Complex Geometry (first part)	6	MAT/06
Complex manifolds	9	MAT/03
Didactics of Geometry (first part)	6	MAT/04
Didactics of Infinitesimal Calculus (first part)	6	MAT/04
Differential geometry (first part)	6	MAT/03
Dynamical Systems 1	6	MAT/07
Functional Analysis	6	MAT/05
Hamiltonian System 1	9	MAT/07
Mathematical Logic 1	9	MAT/01

Mathematical Logic 2	6	MAT/01
Numerical Methods for Partial Differential Equations 1	9	MAT/08
Numerical Methods for Partial Differential Equations 2	9	MAT/08
Partial Differential Equations	6	MAT/05
Real Analysis	9	MAT/05
Relativity 1	9	MAT/07
Representation theory	6	MAT/02
Stochastic Calculus and Applications	9	MAT/06
	6	MAT/01
	9	MAT/03
Advanced Mathematical Statistics	9	MAT/06
Advanced Partial Differential Equations	6	MAT/05
Advanced Topics in Real Analysis	6	MAT/05
Algebra 4	9	MAT/02
Algebraic and Categorical Logic	6	MAT/01
Algebraic Combinatorics	6	MAT/02
Algebraic Surfaces	6	MAT/03
Analytic Number Theory	6	MAT/05
Automated Reasoning	6	MAT/01
Biomathematics 1	6	MAT/07
Calculus of Variations	6	MAT/05
Category Theory	9	MAT/02
Computability and computational complexity	6	INF/01
Didactics of Geometry	9	MAT/04
Differential Topology	6	MAT/03
Dynamical System 2	6	MAT/07
Elementary Mathematics from an Advanced Standpoint 1	6	MAT/04
Foundations of mathematics I	6	MAT/04
Fourier Analysis	6	MAT/05
Geometry 5	9	MAT/03
HIGHER GEOMETRY 1	6	MAT/03
HIGHER GEOMETRY 2	6	MAT/03
History of Mathematics 1	6	MAT/04
Homological Algebra	6	MAT/02
Homotopical Algebra	6	MAT/02
Lie Groups	6	MAT/03
Mathematical Fluid-Mechanics	6	MAT/07
Non Linear Partial Differential Equations	6	MAT/05
Numerical Linear Algebra	6	MAT/08
Numerical Methods for Partial Differential Equations 3	9	MAT/08
Numerical Optimization	6	MAT/08
Operating systems and computer networks	6	INF/01
Optimal Transport and Applications.	6	MAT/05
Point Processes and Random Sets	6	MAT/06
Preparation of didactical experiences 1	6	FIS/08
Preparation of future teachers 2	6	FIS/08
Projective Algebraic Geometry	6	MAT/03
Riemannian Geometry	6	MAT/03
Scientific Computing	6	MAT/08
Stochastic Control Optimization	6	MAT/06

CURRICULUM: [FBQ-B] APPLICATIONS

Further elective courses Curriculum-specific features APPLICATIONS		
Advanced Mathematical Statistics	9	MAT/06
Advanced Probability	9	MAT/06
Complex Analysis	9	MAT/05
Didactics of Geometry (first part)	6	MAT/04
Didactics of Infinitesimal Calculus (first part)	6	MAT/04
Dynamical Systems 1	6	MAT/07
Functional Analysis	6	MAT/05
Hamiltonian System 1	9	MAT/07
Mathematical Finance 1	9	SECS-S/06
Numerical Methods for Partial Differential Equations 1	9	MAT/08
Numerical Methods for Partial Differential Equations 2	9	MAT/08
Partial Differential Equations	6	MAT/05
Real Analysis	9	MAT/05
Relativity 1	9	MAT/07
Stochastic Calculus and Applications	9	MAT/06
	9	BIO/07
	6	MAT/09
	6	MAT/09
	6	MAT/09
	6	MAT/09
	6	MAT/09
	9	BIO/09
	12	BIO/11
	9	BIO/18
	9	BIO/06
Advanced Partial Differential Equations	6	MAT/05
Advanced Topics in Financial Mathematics	6	SECS-S/06
Advanced Topics in Real Analysis	6	MAT/05
Algebra 4	9	MAT/02

Biomathematics 1	6	MAT/07
Calculus of Variations	6	MAT/05
Computability and computational complexity	6	INF/01
Didactics of Geometry	9	MAT/04
Dynamical System 2	6	MAT/07
Elementary Mathematics from an Advanced Standpoint 1	6	MAT/04
Foundations of mathematics I	6	MAT/04
Fourier Analysis	6	MAT/05
Geometry 5	9	MAT/03
History of Mathematics 1	6	MAT/04
Lie Groups	6	MAT/03
Mathematical Finance 2	6	SECS-S/06
Mathematical Fluid-Mechanics	6	MAT/07
Mathematical Modelling Laboratory	6	(2) MAT/06, (2) MAT/07, (2) MAT/08
Non Linear Partial Differential Equations	6	MAT/05
Numerical Linear Algebra	6	MAT/08
Numerical Methods for Partial Differential Equations 3	9	MAT/08
Numerical Optimization	6	MAT/08
Operating systems and computer networks	6	INF/01
Optimal Transport and Applications.	6	MAT/05
Point Processes and Random Sets	6	MAT/06
Scientific Computing	6	MAT/08
Stochastic Control Optimization	6	MAT/06

CURRICULUM: [FBQ-C] INDUSTRIAL

Further elective courses Curriculum-specific features INDUSTRIAL		
Advanced Mathematical Statistics	9	MAT/06
Dynamical Systems 1	6	MAT/07
Functional Analysis	6	MAT/05
Hamiltonian System 1	9	MAT/07
Numerical Methods for Partial Differential Equations 1	9	MAT/08
Numerical Methods for Partial Differential Equations 2	9	MAT/08
Partial Differential Equations	6	MAT/05
Real Analysis	9	MAT/05
Stochastic Calculus and Applications	9	MAT/06
	6	MAT/09
	6	MAT/09
	6	MAT/09
	6	MAT/09
	6	MAT/09
Advanced Partial Differential Equations	6	MAT/05
Advanced Probability	9	MAT/06
Advanced Topics in Financial Mathematics	6	SECS-S/06
Advanced Topics in Real Analysis	6	MAT/05
Biomathematics 1	6	MAT/07
Calculus of Variations	6	MAT/05
Complex Analysis	9	MAT/05
Dynamical System 2	6	MAT/07
Fourier Analysis	6	MAT/05
Geometry 5	9	MAT/03
Mathematical Finance 1	9	SECS-S/06
Mathematical Finance 2	6	SECS-S/06
Mathematical Fluid-Mechanics	6	MAT/07
Non Linear Partial Differential Equations	6	MAT/05
Numerical Linear Algebra	6	MAT/08
Numerical Methods for Partial Differential Equations 3	9	MAT/08
Numerical Optimization	6	MAT/08
Operating systems and computer networks	6	INF/01
Point Processes and Random Sets	6	MAT/06
Relativity 1	9	MAT/07
Scientific Computing	6	MAT/08
Stochastic Control Optimization	6	MAT/06