



UNIVERSITÀ
di **VERONA**

Master's degree programme in

MATHEMATICS

LM-40

Classe delle lauree magistrali in Matematica

DEGREE PROGRAMME

DESCRIPTION AND REGULATIONS

(ANNUAL FACT SHEET - SUA-CdS, B1 section)

COHORT 2021/22

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1. GENERAL INFORMATION

1.	DEGREE PROGRAMME WEB PAGE	For further information on the learning objectives of the degree programme, career prospects for graduates, admissions, expected learning outcomes, study plan, university calendar, lecture timetable, and final examination, please see the degree programme web page or the Annual Fact Sheet (SUA-CdS), which can be found on the same web page.
2.	PROGRAMME DIRECTOR	Prof. Francesca Mantese
3.	ADMINISTRATION	Science and Engineering Teaching and Student Services Unit
4.	TEACHING STAFF, MODULES, AND OFFICE HOURS	Lecturers will normally publish information about their teaching and research activities on their individual web pages, which you can access from the degree programme web page. From there you will also be able to access and explore the module web pages, where you will find an overview of the contents of each module. Teaching staff will be available for office hours at least two hours per week for the entire academic year, excluding holidays. For office hours details and information, please check the individual web page of the relevant lecturer.
5.	DURATION	2 years
6.	LOCATION	Strada Le Grazie 15, 37134 Verona
7.	DEPARTMENT	Department of Computer Science. Learning activities are coordinated and managed by the Mathematics Teaching Committee, part of the School of Science and Engineering.
8.	CURRICULUM	This programme includes two curricula: <ul style="list-style-type: none"> • Applied Mathematics; • Mathematics for Education.
9.	LANGUAGE	English
10.	ADMISSION METHODS	No admission test required
11.	ENTRY REQUIREMENTS	A three-year Bachelor's degree (<i>Laurea</i>) or other qualification gained abroad and recognised as suitable.

12.	SUBJECT REQUIREMENTS AND PERSONAL PREPARATION	<p>Students applying for a Master's degree programme in Mathematics must have a Bachelor's degree, a three-year university qualification, or other qualification gained abroad and recognised as suitable according to the current legislation.</p> <p>Specifically, students must have acquired a certain number of CFU credits in the below subject areas (SSD - Scientific-disciplinary Sectors):</p> <p>35 CFU (total) in MAT/01, MAT/02, MAT/03, MAT/04, MAT/05;</p> <p>10 CFU (total) in MAT/06, MAT/07, MAT/08, MAT/09;</p> <p>15 CFU (total) in FIS/01, FIS/02, FIS/03, FIS/04, FIS/05, FIS/06, FIS/07, FIS/08; INF/01; ING-INF/05.</p> <p>The above CFU requirements are automatically met by applicants who have a qualification included in the L-35 (ex D.M. 270/04) or L-32 (ex D.M. 509/99) degree classes, or a Bachelor's degree in Mathematics (old university system).</p> <p>Students are required to have at least a B1 level of English.</p> <p>A specific committee appointed by the Mathematics Teaching Committee will check that applicants who hold a foreign qualification meet the entry requirements. In particular, applicants must hold a three-year university degree in Mathematics, Physics, Engineering, or other scientific areas for which a solid mathematical background is required.</p> <p>In any case, students intending to apply for the Master's degree in Mathematics, regardless of their previous academic experience, are expected to have knowledge and understanding of calculation in one and more variables, linear algebra and basic mathematics. They must also be able to read and understand mathematical texts, including advanced texts, and research articles in mathematics.</p> <p>Students with a Bachelor's graduation mark of less than 85/110 will need to demonstrate that they have adequate personal preparation: this will be assessed based on their curriculum vitae, and possibly on an interview, to be conducted by the Student Procedures Committee (<i>Commissione Pratiche Studenti</i>). Such interview shall focus on the topics dealt with in the modules attended by the applicant during their previous academic experience, and shall ensure that the applicant has the necessary knowledge to enable them to successfully embark on the Master's degree in Mathematics.</p> <p>If there is an overlapping of contents between the applicant's previous academic experience and the Master's degree in Mathematics they're applying for, the Student Procedures Committee shall provide the applicant with the opportunity to choose a different academic pathway which, while tailored to the applicant's needs, is in line with the main learning objectives of the programme.</p> <p>Specifically, students shall be offered customised modules subject to the indications of the relevant lecturers, and methods to be agreed with them.</p> <p>For further information, please see the relevant web page.</p>
13.	ENROLMENT	To find out more about enrolment procedures, please see: Enrolment web page .
14.	SUPPORT FOR STUDENTS WITH DISABILITIES AND SLD/LEARNING DISABILITIES	The University of Verona supports students with disabilities and Specific Learning Disorder (SLD)/learning disabilities from enrolment to graduation by providing them with the support they need to effectively participate in the educational activities of the University. For further information on these services, please go to the <i>Inclusion and Accessibility</i> service web page .

15.	CFU CREDITS	<p>As a general rule, one CFU credit equates to 25 hours of learning time. Depending on the type of teaching activity the CFU/hour ratio will be as follows:</p> <ul style="list-style-type: none"> • lectures: 8 hours = 1 CFU; • practicals/laboratory activities: 12 hours = 1 CFU; • internship/professional traineeship: 25 hours = 1 CFU. <p>‘Type C’ modules include experimental teaching activities based on the teaching scheme of the <i>Reading courses</i> (UK) or the <i>Seminare/Oberseminare</i> (Germany), widely recognised at the European level. These modules, also known as <i>seminar modules</i>, include 6 CFU each and may consist of lectures held by foreign guest professors invited as part of the <i>internationalisation project</i> of the LM-40 degree class. A lecturer from the University of Verona is usually appointed as Coordinator or Supervisor for these modules, with a teaching workload of 1 CFU.</p>
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2. STUDY PLAN		
16.	SCHEDULED LEARNING AND TEACHING ACTIVITIES	<p><i>Scheduled learning and teaching activities</i> include modules and other educational activities that are made available to students enrolled in the 2021/22 academic year throughout the two-year period.</p> <p>The 2021/22 cohort includes first-year Master’s degree students enrolled in the 2021/22 academic year. By the term ‘cohort’ we mean all students enrolled in a given academic year.</p> <p>For further information please see the degree programme web page.</p> <p style="text-align: right;">-</p>
17.	LEARNING AND TEACHING ACTIVITIES PROVIDED	<p>Unlike <i>Scheduled learning and teaching activities</i>, <i>Learning and teaching activities provided</i> include all modules made available to different cohorts of students in a given academic year.</p>

3. PROGRAMME REGULATIONS

18.	ASSESSMENT METHODS	<p>For each module, the learning objectives, a programme description, textbooks and teaching material required, and the relevant examination methods shall be determined in advance, and made available on the web page of each module.</p> <p>Three exam sessions and four exam rounds are held each academic year. Interim tests may also be held throughout the programme, aimed at testing the student's understanding of the module content.</p> <p>Examination dates are set in such a way as to avoid any overlapping of dates, especially when it comes to examinations for students in the same year of study.</p> <p>Assessment methods for this programme include written and/or oral exams. For each exam passed, students are awarded a fixed number of CFU and, if applicable, a mark on a 30-point scale (minimum mark: 18/30). Students who do not pass a module exam will have the opportunity to retake that exam in the following exam session/s.</p> <p>The outcome of internships and traineeships will be verified in terms of skills achieved, based on reports by the relevant Supervisor, and possibly an individual interview.</p> <p>Students who intend to take part in the international student mobility programmes of which the University of Verona is part, must submit an individual study plan which includes the training activities that they will carry out at the Host Organisation, in line with the guidelines issued by the School of Science and Engineering. The study plan, which will be assessed on the grounds of its coherence with the learning objectives of the degree programme, must be previously approved by the Student Procedures Committee (<i>Commissione Pratiche Studenti</i>) and by the relevant Host Organisation. Regarding activities for which a mark is awarded upon completion, marks will be converted on a 30-point scale, as set out in specific tables approved by the School of Science and Engineering.</p> <p>For further information on international mobility programmes, please see the relevant web page.</p>
19.	PRIORITY MODULES	<p>There are no priority modules (<i>'propedeuticità'</i> in Italian), i.e. there is no specific order in which modules should be taken.</p>
20.	REQUIREMENTS FOR ENROLMENT IN SUBSEQUENT YEARS	<p>There are no requirements for enrolment in subsequent years (<i>'sbarramento'</i> in Italian).</p>

21.	CHOOSING YOUR CURRICULUM	<p>The Master's degree in Mathematics includes two alternative curricula:</p> <ul style="list-style-type: none"> - Applied Mathematics - Mathematics for Education <p>At the time of enrolment, students will need to choose between the two <i>curricula</i> available. For each curriculum chosen, students will have to take both mandatory and elective modules.</p> <p>Students may change curriculum by the deadlines set out each year.</p>
22.	ELECTIVE MODULES AND ACTIVITIES (TYPE D)	<p>12 CFU are awarded upon completion of the activities chosen by the student ('Type D'). These activities are to be chosen among the training activities at Master's degree level provided by the University, or internships/professional traineeships.</p> <p>When choosing 'Type D' modules and activities, students should be aware that only activities that are in line with their study plan will be approved. The student's choice should also be supported by adequate personal motivation.</p> <p>A non-exhaustive list of elective modules and activities will be available here.</p>
23.	ADDITIONAL TRAINING ACTIVITIES (TYPE F), INTERNSHIPS, WORK PLACEMENT, ETC.	<p>4 CFU credits are awarded for additional 'Type F' activities, that may include internships/professional traineeships, activities aimed at improving further language skills (e.g. Italian language course for international students), seminars, or modules. Internships/professional traineeships must be agreed in advance and validated by the student's Tutor.</p> <p>As part of this Degree programme, students are encouraged to acquire soft skills aimed at enhancing their training experience, and skills useful for their entry into the world of work. Specifically, this will be done by awarding university credits to students who complete courses offered by the University or other institutions on these matters.</p>
24.	HOW TO SUBMIT YOUR INDIVIDUAL STUDY PLAN	<p>The individual Study Plan must be completed and submitted using the specific methods and by the specific deadlines made available on the web page of the Department of Computer Science.</p> <p>Customised study plans may also be approved, if necessary, by the methods and by the deadlines set out by the Science and Engineering Teaching and Student Services Unit.</p> <p>Specifically, students may wish to customise their Study Plan by adding modules taught at the University of Trento, as set out in the relevant Agreement between the two universities, in force for the academic years 2021/22, 2022/23, and 2023/24.</p>
25.	ATTENDANCE	<p>Except for specific practicals or lab activities, attendance is not mandatory. Regarding these activities, please see the web page of each module for information on the number of hours that must be attended on-site.</p>

26.	TUTORING FOR STUDENTS	<p>In order to guide and support students throughout their studies, tutoring activities for students are administered by some Programme lecturers.</p> <p>Specifically, the Mathematics Teaching Committee shall appoint a Tutoring Committee, which will be comprised of all the lecturers who perform tutoring duties.</p> <p>The tutoring activities provided are aimed at guiding students throughout their studies, orienting them in the choice of educational activities, enabling them to be actively involved in the educational process, and providing support for any difficulties the student may encounter while at the University.</p>
27.	TRANSFER FROM ANOTHER DEGREE PROGRAMME /FROM ANOTHER UNIVERSITY	<p>Students may transfer to this degree programme from another degree programme taught at the University of Verona (<i>passaggio</i>, in Italian) or from another university (<i>trasferimento</i>).</p> <p>The Student Procedures Committee (<i>Commissione Pratiche Studenti</i>) is the body which validates the credits and marks gained in other degree programmes, either in Italy or abroad.</p> <p>Students intending to transfer from another degree programme or university must submit an application in order to ensure that they meet the relevant entry requirements. Once such procedure has been completed, students will be able to request and obtain a transfer from another degree programme taught at the University of Verona, or from another university.</p> <p>If the student intends to transfer from another degree programme/university, their application can be approved only once the University of Verona has obtained from the student's current institution detailed documentation of the modules/exams taken and the corresponding marks and CFU obtained.</p> <p>The Student Procedures Committee will issue a decision within 45 days of receipt of the request, and shall carry out the validation procedures based on the following criteria:</p> <ul style="list-style-type: none"> • for activities included in a specific SSD (Scientific-disciplinary Sector), or area of interest, the acquired credits will be assessed on a case-by-case basis, taking into account the contents of each activity and the achievement of the learning objectives of the degree programme. If credits are missing, the Student Procedures Committee shall identify the most appropriate additional activities necessary to enable the student to achieve the credits required, in relation to one or more active modules that are part of the degree programme; • for activities not included in a specific SSD, the Student Procedures Committee will assess, on a case-by-case basis, the content of the training activities and consistency with the objectives of the degree programme. In this way, the Committee will be able to identify the credits that may be approved and validated as corresponding to the modules that are part of the degree programme; • if a particular activity/module includes several activities with different marks, the final evaluation will be based on the weighted average of the marks. <p>Based on the above criteria and procedures, the Student Procedures Committee will determine the student's year of enrolment. These procedures shall also apply to students wishing to change curriculum or type of degree programme.</p>

28.	RECOGNITION OF PRIOR LEARNING	<p>Recognition of prior learning is the evaluation of a degree, or previous university experience, through the partial or total recognition of credits, depending on the degree of consistency between the applicant's past experience and the programme they are applying for.</p> <p>Rules for transfer from another degree programme/university also apply to students applying for recognition of prior learning. Based on the above criteria and procedures, the Student Procedures Committee will determine the student's year of enrolment.</p>
29.	PART-TIME STUDY	<p>Students who, due to work, family or health reasons, feel that they can devote only part of their time to study, may study on a part-time basis.</p> <p>Specifically, they will have the opportunity to earn their degree over a period of time that is twice the normal duration of the programme, without being considered 'fuori corso' (i.e. attending beyond the normal duration of the programme).</p> <p>Please note: part-time students are not allowed to gain more than 60 CFU credits per each two-year period.</p>
30.	FINAL EXAMINATION	<p>Upon completion of the Master's degree dissertation, students are awarded 32 CFU. The final examination consists in a written dissertation on a specific topic agreed with a lecturer and presented in front of a Dissertation Committee.</p> <p>The dissertation can be high-level theoretical or experimental (in the latter case, it may focus on either basic or applied research), it can deal with a theoretical topic or propose the resolution of a specific problem, or can be a description of a work project, and may be carried out at universities, research institutions, schools, laboratories and companies as part of internships, traineeships, periods of study in Italy and abroad. The dissertation must be original and written by the student under the guidance of a Supervisor. At the request of the student, the dissertation may be written and presented in Italian.</p> <p>Lecturers and professors belonging to the Mathematics Teaching Committee, the Department of Computer Science, and any associated departments may be appointed as supervisors, as well as any lecturers from the University of Verona whose area of interest (SSD - Scientific-disciplinary Sector) is set out in the teaching regulations of the degree programme.</p> <p>Students can take the final examination by the methods and deadlines established by the School of Science and Engineering. The Master's degree in Mathematics is obtained by successfully passing the final examination and thus earning the 120 CFU credits included in the study plan.</p> <p>The thesis/dissertation will be assessed by the Dissertation Committee, which is composed of three lecturers possibly including the Supervisor, and appointed by the Chair of the Teaching Committee, based on the following criteria: the student's performance throughout the programme, the knowledge acquired during their dissertation work, their understanding of the topic and autonomy of judgment, their ability to apply such knowledge, and communicate effectively and fully all the outcomes of the work and the main results obtained.</p>

		<p>The graduation exam and ceremony will be carried out by the Graduation Committee appointed by the Chair of the Teaching Committee and composed of a President and at least four other members chosen among the University's lecturers, in one of the four graduation sessions during the academic year.</p> <p>For further information, please see the relevant Regulations.</p>
31.	FURTHER INFORMATION	<p>Teaching Committee and internal committees The degree programme is managed by the Mathematics Teaching Committee (Collegio Didattico di Matematica – CD), which is part of the School of Science and Engineering. The Teaching Committee shall plan and coordinate the teaching activities of all its degree programmes, and shall issue proposals and opinions on any relevant changes. The Teaching Committee shall establish an internal Student Procedures Committee (<i>Commissione Pratiche Studenti</i>), which will deal with the administrative procedures relating to any matters within the remit of the Teaching Committee. The Teaching Committee shall appoint the Director of the degree programme (Programme Director) and the Quality Assurance Board, that will be responsible for preparing the Degree Programme Annual Fact Sheet (SUA-CdS), the annual monitoring sheets, and the Cyclical Review.</p> <p>Academic Calendar Teaching activities are organised into semesters: lectures usually take place from October to January, and from March to June. Before the beginning of each academic year, the Teaching Committee shall allocate modules in the semesters. For each academic year, the University calendar, proposed by the Teaching Committee, is approved and then made available on the degree programme web page.</p> <p>These regulations shall prevail in the event of any discrepancies with information made available on the degree programme web pages.</p>
32.	POSTGRADUATE TRAINING	<p>Mathematics postgraduates may apply for 2nd-level Professional Master's programmes, and national and international PhD programmes.</p> <p>Graduates may also apply for a PhD in Mathematics (currently available), established through a joint agreement between the University of Verona and the University of Trento.</p> <p>For further information, please see the relevant web page.</p>
33.	'PERCORSO 24 CFU' (D.M. 616/2017)	<p>Graduates who intend to apply for open national competitions for prospective secondary school teachers, pursuant to Ministerial Decree no. 616/2017, must have 24 CFU credits in areas related to anthropology, psychology and pedagogy, as well as teaching methodologies and technologies. At the University of Verona students are allowed to gain such credits during their degree programme by taking 'Type D' or 'Type F' modules/activities, or elective activities. Alternatively, students may wish to gain such CFU credits after their graduation, by enrolling in specific advanced courses held at the University of Verona or at other universities. The CFU credits will be automatically recognised when applying for open competitions for prospective secondary school teachers. A list of these modules and further information can be found here.</p>

