



## PHD PROGRAMME TABLE

### Call for applications for the admission to the PhD programmes (42<sup>nd</sup> cycle) - A.Y. 2026/2027 First round

PROGRAMME'S NAME	<b>MATHEMATICS</b>
DURATION	3 years
PROGRAMME START DATE	01/11/2026 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Giovanni Mongardi ( <a href="mailto:mat.dottorato@unibo.it">mat.dottorato@unibo.it</a> )
PhD POSITIONS	10
ADMISSION PROCEDURE	Qualifications evaluation Oral examination

### Available Positions and Scholarships

Pos. n.	Financial Support	Description	Specific Research Topic
1	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget	
2	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget	
3	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget	
4	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget	
5	<b>PhD Scholarship</b>	Funded by the University of Bologna general budget and by the Department of Mathematics	
6	<b>PhD Scholarship</b>	Funded by the Department of Mathematics	
7	<b>PhD Scholarship</b>	Funded by the Department of Mathematics with funds made available by MUR - Fondo Italiano per la Scienza (FIS) – Call FIS 2 (DD n. 1236 of 01/08/2023), project "Chow Ring of Toric Arrangements - CRoTA", Codice FIS-2023-00808, CUP J53C25001900001, PI Prof. Roberto Pagaria       	Chow Ring of Toric Arrangements
8	<b>PhD Scholarship</b>	Funded by the Department of Mathematics with funds made available by MUR - Fondo Italiano per la Scienza (FIS) – Call FIS 2 (DD n. 1236 of 01/08/2023), project "Chow Ring of Toric Arrangements - CRoTA", Codice FIS-2023-00808, CUP J53C25001900001, PI Prof. Roberto Pagaria       	Chow Ring of Toric Arrangements

9	<b>PhD Scholarship</b>	Funded by the Department of Mathematics with funds made available by MUR - Fondo Italiano per la Scienza (FIS) – Call FIS 2 (DD n. 1236 of 01/08/2023), project "Chow Ring of Toric Arrangements - CRoTA", Codice FIS-2023-00808, CUP J53C25001900001, PI Prof. Roberto Pagaria   	Chow Ring of Toric Arrangements
10	<b>PhD Scholarship</b>	Funded by TGen - The Translational Genomics Research Institute, in memory of Renzo Tomasetti. The position requires research activities to be carried out at least in part at the funding body's headquarters in the USA - Phoenix (AZ)	Mathematical modeling applied to medicine

The yearly gross amount of the scholarships awarded for the PhD Programme in “Mathematics” is €16,982.64.

All winners of PhD positions must fulfil the study and research obligations decided by the Academic Board, as well as the obligations set out in the relevant regulations, in the call for applications, in the funding schemes and in any agreements relating to specific positions.

## Admission Exams

	DATE AND TIME	RESULTS
<b>Qualifications evaluation</b>	Applicants’ participation is not required	Available from <b>21/04/2026</b>
<b>Oral examination</b>	<b>Date:</b> starting from <b>28/04/2026 – 9.00 a.m. CEST</b> <b>Place:</b> In presence, Aula Seminario I, Department of Mathematics, Piazza di Porta San Donato 5, Bologna. Remotely, using Microsoft Teams	Available from <b>04/05/2026</b>

The results of the qualifications evaluation, as well as the oral examination detailed schedule, shall be available on the webpage [Studenti Online](#) (select “requests in progress” > “see detail” and open the .pdf file at the bottom of the page). **No personal written communication will be sent to applicants concerning the examinations results.**

**During the oral examination, applicants will express their interest in one or more PhD positions linked to specific research topics.**

## Required and Supporting Documents to be attached to the application

Only documents **in Italian or English** will be considered valid and will be assessed by the Admission Board. Identity documents and diplomas/degree certificates issued in a language other than Italian or English must be accompanied by an official translation. The translation must be carried out by an authorized body or by the awarding university. Only qualifications obtained in the last 5 years will be taken into account, with the exception of university degrees. The Admission Board will assess the relevance of the supporting documents to the PhD programme.

REQUIRED DOCUMENTS	
<b>Identity document</b>	Valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae</b>	The Curriculum Vitae <b>must be prepared using the <a href="#">Curriculum Vitae form</a></b> which can be downloaded in .docx format from the <a href="#">University website</a> (select the PhD Programme → “More information”, then check “Notices” at the bottom of the page) – <b>3 pages max</b> . The Curriculum Vitae must contain all the experience that the candidate wishes to submit for evaluation. Any experience that can be assessed but is not included in the Curriculum Vitae will not be considered.
<b>Degrees</b>	Documents attesting the awarding of the first and second cycle degrees, the exams taken and the marks obtained (see Art. 3.2 of the Call for Applications)
SUPPORTING DOCUMENTS	
<b>Thesis abstract</b>	<b>Extended abstract of the second cycle degree thesis (2 to 5 pages, in Italian or in English).</b> Graduands applicants may submit an extended abstract of the draft of their thesis.

<b>Reference letter/s</b>	<b>No more than 2 reference letters</b> signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest in the scientific research. Letters shall be uploaded following the procedure on <a href="#">Studenti Online</a> , detailed in the Call for Applications (Art. 3.2).
<b>Personal Statement</b>	The statement should include <b>the reasons why the applicant wishes to join the PhD programme and the relevant experience and research interests</b> that make the applicant suitable for the specific PhD programme making explicit reference to Professors of the Department with whom the candidate intends to collaborate, and reference to corresponding scientific fields (max. 1 page).
<b>Other documents</b>	<b>The following items will only be assessed if they are included in the Curriculum Vitae, which must be submitted in the format described above:</b> <ul style="list-style-type: none"> <li>- Postgraduate vocational programmes and/or specialisation programmes relevant to the PhD Programme</li> <li>- Research activity of any kind - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research projects</li> <li>- Periods of study abroad, completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc.)</li> </ul>

## Evaluation criteria\*

Scores will be expressed in points out of 100, as follows.

### 1. Qualifications evaluation

Minimum score for admission to the oral examination: 30 points, Maximum score: 50 points

Final marks of both the first and second cycle (Bachelor's and Master's) degrees and Weighted Average Marks	10 points max
Curriculum Vitae, overall training and learning activities and other evaluable documents	10 points max
Extended thesis abstract	13 points max
Reference letter/s	10 points max
Personal statement	7 points max

### 2. Oral examination

Minimum score for eligibility: 30 points, Maximum score 50 points

English language proficiency	2 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	48 points max

Oral examination aims to assess the suitability of the applicant for scientific research as well as the general knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions. **During the oral examination, the applicant's English proficiency shall be assessed, as at least part of the interview will be carried out in English.**

The oral examination is carried out in Italian or English.

\* Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme > "More information".

## Research Fields

**Poss. 7, 8 and 9 with scholarship funded by the Department of Mathematics with funds made available by MUR - Fondo Italiano per la Scienza (FIS) – Call FIS 2 (DD n. 1236 of 01/08/2023), project "Chow Ring of Toric Arrangements - CRoTA", Codice FIS-2023-00808, CUP J53C25001900001, PI Prof. Roberto Pagaria**

The research topic concerns toric arrangements and arithmetic matroids, a subject between topology, combinatorics, algebra, and algebraic geometry. The project aims to generalize the techniques introduced by June Huh to the toric setting, focusing in particular on toric wonderful models (toric varieties), Chow rings and pseudo-arrangements, as described in the project "Chow Ring of Toric Arrangements - CRoTA".