

**Public Competition for Admission to PhD Programme of National Interest in Systems
Medicine at the University of Milan
A.Y. 2023/2024.**

Public Competition for Admission to PhD Programme of National Interest in Systems Medicine at the University of Milan A.Y. 2023/2024.	2
Art. 1 - Activation of PhD programme	3
Art. 2 - Admission Criteria	5
Art. 3 - Application for admission	6
Art. 4 - Candidates with disabilities	6
Art. 5 - Candidates with SLD	6
Art. 6 - Pre-selection	7
Art. 7 - Entry examination	7
Art. 8 - Examining Board	8
Art. 9 - Admission to the programme	8
Art. 10 - Enrolment	8
Art. 11 - Fellowships	9
Art. 12 - Taxes and contributions.....	9
Art. 13 - Obligations of PhD Students.....	9
Art. 14 - Award of qualification.....	10
Art. 15 - Processing of personal data	10
Art. 16 - Relevant regulations.....	10
Art. 17 - Person in charge of the procedure.....	11

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THE RECTOR OF THE UNIVERSITY OF MILAN

- in accordance with the ministerial decree nr. 270 dated 22 October 2004, "Amendment to the Regulation covering rules relating to the right of universities to autonomously determine the educational contents of their degree courses; approved with the decree of the Ministry of Education, Universities and Research dated 3 November 1999, n. 509";
- in accordance with article 4 of Law nr. 210 dated 3 July 1998, and following modification in the art. 19, comma 1, of Law n. 240, dated 30 December 2010;
- in accordance with the Regional Law n. 33, dated 13 December 2004 "Rules governing activities of the Region for the right to study at university," which makes provisions for services to be furnished to facilitate students enrolled in PhD programmes;
- having regard to Italian Ministerial Decree No. 226 dated 14 December 2021, "Regulation containing the accreditation methods of the locations and doctoral programmes and the criteria for the institution of doctoral programmes by accredited bodies";
- having regard to the Ministerial decrees no. 917 of 15 October 2019, whereby the Ministry of Education, Universities and Research (MIUR), pursuant to Ministerial Decree 45/2013, grants five-year accreditation to the doctoral research programmes proposed by the University of Milan, subject to compliance with the prescribed requirements;
- in accordance with the cooperation agreements stipulated among the University of Milan, the University of Naples "Federico II", the University of Bari, the University of Turin, the University of Trento, the Catholic University of Sacred Heart, Hunimed of Milan and the Fondazione "Scuola Superiore Europea di Medicina Molecolare" (SEMM), that implements the doctorate research course of national interest called "PhD (Philosophiae Doctor) in Systems Medicine";
- having regard to the fact that for the 2023/2024 academic year the Universities intend to activate a new cycle of doctoral programmes;
- having regard to the note of MIUR dated 26 April 2022;
- having regard to the decisions of the Academic Senate and of the Board of Directors in the sessions of 16 and 30 May 2023, concerning institution of the 39th doctoral cycle;
- having regard to the Ministerial Decree no. 118 of 2 March 2023 containing provisions on the attribution, for the year 2023/2024, under the PNRR, Mission 4, component 1 "Enhancement of the offer of education services: from nursery schools to the University" - Investment 3.4 "Didactics and advanced university skills" and Investment 4.1 "Extension of the number of research doctorates and innovative doctorates for public administration and cultural heritage" of three-year doctoral scholarships for attending accredited doctoral courses pursuant to Ministerial Decree n. 226/2021;
- taking into account that the Ministry of University and Research (MUR) will verify the admissibility of the projects for the purpose of supporting the PNRR, the admission to the doctoral course of the winners of positions ex D.M. 118/2023 is therefore to be considered subject to the positive verification of consistency and admissibility and the assignment of the ministerial funding

HEREBY DECREES

Art. 1 - Activation of PhD programme

In compliance with the regulations currently in force, the University of Milan (administrative site), the Fondazione “Scuola Superiore Europea di Medicina Molecolare” (SEMM), the University of Naples “Federico II”, the University of Bari, the University of Turin, the University of Trento, the Catholic University of Sacred Heart, and Hunimed of Milan will institute for the academic year 2023/2024 (39th cycle), subject to accreditation by MUR, a research doctorate of national interest of a highly innovative nature, called “PhD (Philosophiae Doctor) in Systems Medicine”.

The recent progresses made in the fields of genetics and genomic sciences have triggered a big change, which is leading classical medicine to transform itself into the so-called Precision Medicine, based on the acquisition and integration of enormous quantities of quantitative molecular data and their exploitation for a personalized definition of the disease and of his targeted therapy. Precision Medicine has changed the way in which the cellular and molecular mechanisms of the disease are investigated. It uses technological platforms to produce a big amount of information, which allow to highlight and quantify the heterogeneous nature of diseases and the phenotypic variability associated with individuals. Precision Medicine will totally change the approach to treatment not only for therapy, but also for diagnosis and prevention. Therefore, the transition to Precision Medicine requires professionals with new skills and multi-disciplinary training.

The PhD in Systems Medicine aims to provide doctors and scientists with interdisciplinary theoretical and technological training in biomedical sciences to be applied to the problems of precision medicine, with the aim of training professionals capable of dealing with technological strategies and highly complex therapeutics with a multidisciplinary approach.

The official language of the “PhD in Systems Medicine” is English.

Scientific-disciplinary sectors covered by the course:

05/E (Biochimica e biologia molecolare sperimentali e cliniche)

05/F (Biologia applicata)

05/I (Genetica e microbiologia)

06/A (Patologia e Diagnostica di Laboratorio)

06/D (Clinica Medica Specialistica)

06/I (Clinica radiologica)

06/M (Sanità pubblica)

11/E (Psicologia)

13/D (Statistica e metodi matematici per le decisioni)

Length of the course: 4 years

Curricula:

- Molecular Oncology

- Computational Biology
- Medical Humanities
- Human Genetics

Research subjects

The research subjects proposed by the teaching body of the PhD programme, are reported on the University of Milan [website](#).

The proposed research subjects are coherent with the aim of the course and the related research and training programme and they will be proposed to the admitted candidates. How and when the candidate will be asked to choose a research subject are reported at the art. 21 of the University of Milan (administrative site) Regulations on the PhD courses.

Available positions: 64

Fellowships

- 7 fellowships funded by the University of Milan, 2 of which funded according to the DM 118/23 - PNRR
- 4 fellowships funded by the University of Naples “Federico II”, funded according to the DM 118/23: 1 for doctoral courses within the areas of interest of PNRR, 2 for Public Administration, 1 for digital transition;
- 1 fellowship funded by the University of Trento;
- 1 fellowship funded by the University of Bari;
- 1 fellowship funded by the University of Turin, funded according to the DM 118/23 for doctoral courses within the areas of interest of PNRR;
- 1 fellowship funded by the Catholic University of the Sacred Heart, funded according to the DM 118/23 for the Public Administration;
- 1 fellowship funded by the Hunimed of Milan, funded according to the DM 118/23 for doctoral courses within the areas of interest of PNRR;
- 47 fellowships funded by the European School of Molecular Medicine (SEMM);
- 1 fellowship funded by the Department of Biosciences of the University of Milan for the fulfilment of the project “Defining LINE1 dynamics in tumor-infiltrating lymphocytes to unveil novel immunotherapeutic candidates”.

Scholarships will be disbursed within this notice - pursuant to Ministerial Decree 118/2023, under the National Recovery and Resilience Program (PNRR), these scholarships are aimed at developing research on digital transition and environmental issues, on issues relating to the PNRR (digitalization, innovation, competitiveness, culture and tourism; green revolution and ecological transition; sustainable mobility; education and research; inclusion and cohesion; health), in the context of the Public Administration, on cultural heritage issues.

Candidates who will be awarded scholarships pursuant to Ministerial Decree 118/2023 are required to:

- spend periods of study and research in companies or research centers from a minimum of 6 months to a maximum of 12 months (with the exception of courses on PNRR topics, DM 118/23, art. 8);
- spend periods of study and research abroad from a minimum of 6 months to the maximum

limit established by art. 9, paragraph 3, of Ministerial Decree 226/21, over the three-year period;

- must undertake to produce the documentation necessary for the purposes of reporting on the activities carried out which demonstrate the progress of the implementation of the project, pursuant to the Ministerial Decree 118/2023 art.16 paragraph 2, 7

The fellowships may be increased if external funding becomes available before the start of doctoral programme.

Foreign candidates who are in receipt of fellowships issued by their country of origin may be admitted to the doctoral programmes over and above the prescribed number, provided that they have passed the admission exams set out in this decree.

Coordinator: prof. Saverio Minucci, full professor, scientific-disciplinary field MED/04 (phd@semm.it).

The PhD training activities will be carried out in the premises of the following Centres:

- IFOM ETS - The AIRC Institute of Molecular Oncology, Milan;
- European Institute of Oncology (IEO), Milan;
- Italian Institute of Technology at the “Center for genomic Sciences”, Milan;
- Human Technopole Foundation, Milan;
- Italian Institute of Medical Genetics (IIGM), Candiolo (TO);
- National Institute of Molecular Genetics (INGM), Milan;
- CEINGE - Advanced Biotechnologies, Naples;
- TELETHON Institute of Genetics and Medicine (TIGEM), Naples.

The PhD training activities will also be carried out at the following partner Universities:

- the University of Naples “Federico II”;
- the University of Trento;
- the University of Bari;
- the University of Turin;
- the Catholic University of the Sacred Heart;
- the Hunimed of Milan.

In order to be admitted to the PhD programme, candidates have to sit an examination in which they will be evaluated according to their university titles and qualifications; this examination complies with the provisions outlined in the following articles.

Art. 2 - Admission Criteria

Candidates who wish to apply to the PhD programme have to possess a second level degree, called *Laurea Specialistica* in Italian, or a comparable university degree obtained in foreign universities (Master’s degrees).

The suitability of the foreign academic qualifications in terms of content is appraised by the Examining Board constituted for admission to each PhD programme, in compliance with the regulations in force in Italy and in the country in which the academic qualification was issued, and the international treaties or agreements pertaining to the conferment of qualifications for the continuation of studies.

Verification of the validity of foreign qualifications is made on submission of the official documents.

Candidates without a second level degree may also apply, but admission to the PhD programme is subject to achieving a second level degree by the programme starting date (1st October 2023), on pain of exclusion. The applicant must self-certify that he/she will physically possess the Laurea Magistrale within five days from the date of actually being awarded it. This self-certificate, along with a copy of an identity document, should be emailed to the SEMM Graduate Office: phd@semm.it.

Art. 3 - Application for admission

Applications must be submitted electronically by **24 July 2023 at 2.00 PM** Italian time, by accessing the web site <http://www.semm.it>. The application form consists in the filling of an electronic CV, to be submitted through the web site.

Every application form will be automatically assigned an ID number, which will be communicated to the applicant via e-mail as confirmation of the application being received. This number will be used as identification of the candidate for any further communication (admission to examination, final ranking, etc.) through the web site.

The CV must include the following information:

- key personal data;
- the key elements of the candidate's educational track;
- the exams passed with scores and credits;
- a research project;
- publications and work experiences, if any;
- the curriculum of interest;
- a description of the reasons why the applicant wishes to attend the course;
- names of the two referees who will support the candidate.

Applicants must upload the Diploma Supplement or Bachelor's/Master's diploma (or equivalent qualification obtained in Italy or abroad), with transcript of records. Upcoming graduates are required to submit a certificate of enrolment in lieu of the diploma. The documents must be in Italian, English, French, German or Spanish

Non-EU candidates residing abroad are also required to submit an online application for pre-enrolment through [Universitaly](#), in order to obtain a student visa.

Furthermore, the Academic Board requires two reference letters to support the application. In an appropriate section of the application form, the candidate is asked to indicate the names, affiliations and email addresses of the two chosen referees. The referees will receive an automatic email with a link, through which they reach a reference form to fill. The referees will take care to submit their letters through the online system within the deadline. The referees should hold an academic or project leader position.

Art. 4 - Candidates with disabilities

In order to ensure equal treatment of candidates, those holding a certificate of invalidity and/or of disability pursuant to Law 104/1992 may apply for accommodations to the COSP Disability Office (ausili.ammissioni@unimi.it) attaching the certificate issued by the competent public health office. Candidates holding outdated certificates are required to apply for an updated certificate, to be submitted after enrolment for the purposes of using disability accommodations as offered by the study programme.

Art. 5 - Candidates with SLD

In order to ensure equal treatment of candidates, those holding a Specific Learning Disorder

(SLD) certificate issued by the National Health Service, a private affiliated centre, or a private specialist (with a compliance certificate from the competent health authority), pursuant to Law 170/2010, may apply for accommodations to the COSP SLD Office (ausili.ammissioni@unimi.it) attaching the certificate. If the SLD was diagnosed in childhood, and the certificate is over three years old, students should apply for an updated certificate, to be submitted after enrolment for the purposes of using SLD accommodations as offered by the study programme.

Art. 6 - Pre-selection

Once the applications have been received, the Examining Board will pre-select the candidates.

The following are the pre-selection criteria used by the Examining Board:

- 1) Consistency between the qualifications possessed by the students and the aim of the PhD programme: max 10 points;
- 2) The candidates' previous educational track (exams taken): max 10 points;
- 3) Publications and other titles: max 10 points.

Evaluation of the CV will take into account the candidate's entire university career, any publications, any professional experience and other qualifications held. In scoring the CV, the Examining Committee should take into consideration the conditions and the amount of time taken by the candidate to obtain their qualifications.

The minimum score needed to pass the pre-selection is 18/30.

Pre-selected candidates will be invited for the entry examination.

The list of pre-selected candidates will be published on the website <http://www.semm.it> on **31 July 2023** and represents a valid means of notification, in every respect.

Art. 7 - Entry examination

The timetable of the examination, including date, time and modality for each candidate, will be published on the web site <http://www.semm.it>.

This publication will represent a valid means of notification, in every respect.

The entrance examination will take place in English and will include:

- a multiple-choice test, to be conducted on an appropriate digital platform, aiming at evaluating the knowledge on the subjects of the programme and the logical reasoning skills of the candidates;
- a telematic oral examination based on the discussion of the applicant's proposed research project, which does not represent any obligation in the choice of the future PhD thesis.

To sit for the tests, candidates must show one of the following identity documents: identity card; passport; driving licence (Italian).

The Commission will assign a score to each candidate based on:

- 1) the candidate's previous educational track (University career, publications, other relevant activities consistent with the aims of the PhD programme): max 10 points;
- 2) multiple-choice test: max 30 points;
- 3) oral examination: max 60 points.

The evaluation of qualifications and titles will be communicated to each applicant before he/she carries out the examination.

The overall ranking will be calculated on the basis of the total number of points obtained by the applicants in the evaluation of their qualifications and in their examination, in compliance with the above-mentioned criteria.

The examination is passed if the candidates score 70/100 or more.

Personal interviews with faculty members will follow the oral examination. These interviews aim at presenting the research centers and their research projects and are not scored for the admission exam's purposes.

Art. 8 - Examining Board

The Examining Board for the entry examination to the PhD course is appointed, upon proposal of the teaching body, by the Vice-Chancellors of the University of Milan, with the issued decree, under the existing legal framework.

The Examining Board must conclude its work no later than 16 September 2023.

Art. 9 - Admission to the programme

After the examination, the Examining Board will prepare the ranking list according to the scores obtained by each candidate. The ranking list is published on the web site <http://www.semm.it>.

Candidates are admitted to the PhD course according to the position in the ranking list and the number of available places. Should the score be equal, preference will be given to younger candidates, with the exception of the criteria used for the fellowship awarding, as reported in the art. 11 of this call. The fellowship is granted in accordance with the ranking order.

In case any admitted candidate withdraws, even within three months of the start of the programme, it is possible to call candidates evaluated as eligible in the same ranking list, but not admitted in a first instance. If the withdrawing student has already received any monthly fellowship payments, he/she is required to return them.

Art. 10 - Enrolment

The registration to the PhD programme must be made within 5 days of the publication of the ranking list by filling out the appropriate forms prepared by the University of Milan.

In addition, candidates holding a foreign degree must attach:

- Original diploma (Master of Science or equivalent) with a translation in Italian, French, English, German or Spanish;
- Italian tax code (codice fiscale)

To complete enrolment, the following documents must be sent through the Service [Servizio Integrazione documenti di immatricolazione](#) by 28 November 2023:

- Statement of Validity (*Dichiarazione di Valore in Loco*) issued by the Italian Embassy, or Diploma Supplement, or certificate of comparability issued by CIMEA, or other declaration of validity issued by ENIC_NARIC centres;

- Pre-enrolment application receipt from University;
- Student visa (only for non-EU citizens).

Verification of the validity of foreign qualifications is made on submission of the official documents.

Candidates are admitted conditionally and may be excluded from the programme if they do not meet the requirements.

Art. 11 - Fellowships

The fellowship is granted, pursuant to and in accordance with the procedures laid down in the current regulations, in accordance with the ranking order and consists of an annual gross amount of € **20.266,50** gross per year. The amount is not subject to IRPEF taxation, as per the art. 4, Law n. 476 dated 13/8/1984, and subject to the regulations of the art. 2, subs. 26, Law n. 335, dated 8 August 1995, as far as the pension contributions are concerned.

In the event of candidates ranked equally, fellowships are awarded by assessing the candidates' economic situation according to the ISEE (Equivalent Economic Situation Indicator).

The regional tax for university education and stamp duty will be deducted from the fellowship.

Fellowships have a yearly duration and can be renewed if the doctorate candidate has completed the programme of activities of the previous year with a positive evaluation.

Starting from the first year, in addition to the scholarship and depending on the University's budgeted financial resources, each doctoral student is given an amount for research in Italy and abroad suited to the type of programme and in any case not less than 20% of the amount of the scholarship itself.

Art. 12 - Taxes and contributions

Graduate students must pay an annual contribution for the regional tax for university education, the stamp duty (€ 16) and the insurance fee (€ 15,50). These contributions will be deducted from the fellowship.

Graduate students awarded with a University fellowship country and those awarded a Marie Curie fellowship who renounce to the fellowship, and foreign students with a fellowship awarded by their home country, are required to pay an annual course admission and attendance fee of 980 euro, including regional tax and stamp duty.

Applicants with an invalidity equal to or greater than 66%, and/or with a disability pursuant to Law 104/92, may apply for a tuition and regional tax waiver. These students are only required to pay a €16.00 stamp duty.

Students who withdraw from the doctoral programme are not entitled to reimbursement of enrolment fees already paid.

Art. 13 - Obligations of PhD Students

Research doctoral programmes include 1500 hours per year of tuition/teaching and research. The duties and rights of students are set out in art. 22 of the University of Milan PhD Regulations (administrative site).

In order to obtain their PhD, doctoral students are required to demonstrate English proficiency at level B2 under the Common European Framework of Reference for Languages (CEFR) by the end of the first year of the doctoral programme. To meet this requirement, doctoral students must submit an English certificate from one of the recognised certifying bodies, at the required level or above, in accordance with the rules established by the University (<https://www.unimi.it/en/study/language-proficiency/placement-tests-and-englishcourses/accepted-language-certificates>).

An exemption from submission of a language certificate is granted only to:

- those who, by the date of their enrolment, have earned a Master's degree featuring an English-language specialisation in one of the following Master's degree classes: LM-37 Modern American and European languages and literature, LM-38 Modern languages for communication and international cooperation, LM-39 Linguistics, LM-94 Interpreting and specialised translating, or equivalent Master's degree;
- those who, by the date of their enrolment, have earned a Master's degree in a programme taught entirely in English;
- those who, during their prior study programme, have earned a B2 English language statement issued by SLAM - University of Milan Language Centre.

No other exemptions will be granted.

Graduate students are required to regularly follow the activities foreseen by their training plan and to devote themselves with great commitment. They are also required to comply with the requests by the Teaching Body in terms of individual and guided study programmes and to carry out the research activities assigned to them.

The nature and duration of the course programmes for each curriculum can be found on the web site <http://www.semm.it>.

In order to organize annual assessments, doctorate students are requested to deliver to the Faculty Committee, within its deadlines, a written report about their research activity and its results.

Art. 14 - Award of qualification

The qualification of Doctor of Philosophy, abbreviated "PhD", is awarded jointly by the Rectors of the University of Milan, the University of Naples "Federico II", the University of Bari, the University of Turin, the University of Trento, the Catholic University of the Sacred Heart, and Hunimed of Milan in compliance with the Ministerial decree dated 14 December 2021, n. 226; in the title and the certificate the institutional/scientific role of the Fondazione SEMM as well as the curriculum attended are expressly mentioned.

Art. 15 - Processing of personal data

Pursuant to Legislative Decree no.196 of 30 June 2003, as amended by Legislative Decree no. 101 of 10 August 2018, as well as EU Regulation no. 676/2016 (General Data Protection Regulation, GDPR), the University undertakes to safeguard the confidential nature of the information provided by applicants; all data provided is processed solely for purposes related to the competition and possibly for managing the applicant's relationship with the University, in compliance with current legislation. SEMM Foundation will undertake the same prescriptions.

Art. 16 - Relevant regulations

For everything not foreseen by this official call the legislative and regulatory provisions on the subject of research doctorates are valid.

Art. 17 - Person in charge of the procedure

Pursuant to Law no. 241 of 7 August 1990, the person in charge of the present competition is Dr. Monica Delù (Head of the Postgraduate Admissions and Student Public Relations Office).

For further information and clarifications, please use the [Informastudenti](#) service (selecting the category: Postgraduates/Doctoral research students).

Milan, 21 June 2023

THE RECTOR
UNIVERSITY OF MILAN
(Signed Prof. Elio Franzini)

Filed as record no. 3264/2023 of 22 June 2023