









Public Competition for Admission to Doctoral Research Programmes at the University of Milan - a. y. 2023/2024.

PUBLIC COMPETITION FOR ADMISSION TO DOCTORAL RESEARCH PROGRAMMES AT THE

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Dir. DF/FTLI

PUBLIC COMPETITION FOR ADMISSION TO DOCTORAL RESEARCH PROGRAMMES AT THE UNIVERSITY OF MILAN - A.Y. 2023/2024.

THE RECTOR

- Having regard to Italian Ministerial Decree no. 270, dated 22 October 2004, entitled "Amendments to Regulation no. 509 containing rules governing the educational autonomy of Universities, passed by a Decree of the Ministry for Universities and Scientific and Technological Research on 3 November 1999";
- Having regard to article 4 of Italian Law no. 210 dated 3 July 1998, as amended by art. 19, paragraph 1, of Italian Law no. 240 dated 30 December 2010;
- Having regard to Italian Regional Law no. 33, dated 13 December 2004, entitled "Rules governing regional measures to ensure the right to study at university," which makes provisions for services in favour of students enrolled in doctoral programmes;
- Having regard to Italian Ministerial Decree no. 226 dated 14 December 2021, entitled "Regulations concerning the accreditation methods of doctoral locations and programmes and the criteria for the institution of doctoral programmes by accredited bodies";
- Having regard to Italian Law no. 33 dated 12 April 2022, entitled "Provisions on simultaneous enrolment in two higher education programmes", and in particular article 4, paragraph 1;
- Having regard to Italian Ministerial Decree no. 930 dated 29 July 2022, according to which "starting from the academic year 2022/2023, Universities shall include in their academic regulations general provisions to facilitate the simultaneous enrolment of students";
- Having regard to the Statute of the University of Milan, issued by Rector's Decree of 15 March 2012, as subsequently amended;
- Having regard to the University Regulation for PhD Programmes and Students, issued by Rector's Decree of 5 June 2015, as subsequently amended;
- Having regard to the Ministerial Decrees protocol no. 808 of 28 November 2018, protocol no. 917 of 15 October 2019 and protocol no. 555 of 28 August 2020, whereby the Ministry of Education, University and Research (MUR), pursuant to Ministerial Decree 45/2013, granted five-year accreditation to the doctoral research programmes proposed by the University of Milan, subject to compliance with the prescribed requirements;
- Considering that the University intends to institute a new cycle of doctoral programmes for the academic year 2023/2024;











- Having regard to the note of Ministry of University and Research (MUR) of 2 March 2023;
- Having regard to the resolutions adopted by the Academic Senate and the Board of Directors in the sessions of 13 and 20 December 2022, concerning the institution of the 39th doctoral cycle;
- Having regard to the Public Competition for Admission to Doctoral Research Programmes at the University of Milan a. y. 2023/2024, issued by Rector's Decree no. 1941/2023 dated 5 April 2023;
- Having regard to Rector's Decree no. 3284/23 dated 23 June 2023, regarding authorisation to enter into agreements with institutions and companies that had declared their willingness to fund doctoral scholarships;
- Having regard to Italian Ministerial Decree no. 117 dated 2 March 2023, establishing provisions regarding the institution, for the academic year 2023/2024, of three-year doctoral scholarships to be funded under Italy's National Recovery and Resilience Plan (PNRR), Mission 4 "Education and research", Component 2 "From research to business" Investment 3.3 "Introduction of innovative doctorates responding to the innovation needs of companies and promotion of recruiting researchers from businesses", for students attending doctoral programmes accredited pursuant to Ministerial Decree no. 226/2021;
- Having regard to Italian Ministerial Decree no. 118 dated 2 March 2023, establishing provisions regarding the institution, for the academic year 2023/2024, of three-year doctoral scholarships to be funded under Italy's National Recovery and Resilience Plan (PNRR), Mission 4, Component 1 "Strengthening the provision of education services: from nurseries to universities" Investment 3.4 "Advanced university education and skills" and Investment 4.1. "Extension of the number of doctorates and innovative doctorates for Public Administration and cultural heritage", for students attending doctoral programmes accredited pursuant to Ministerial Decree no. 226/2021;
- Without prejudice to the fact that, pending checks by the Ministry of University and Research (MUR) to verify that research projects are admissible for PNRR funding, the admission of candidates selected as recipients of scholarships established under Ministerial Decrees 117/2023 and 118/2023 is subject to the successful outcome of such admissibility checks, and to the actual allocation of ministerial funds;

HEREBY DECREES AS FOLLOWS:

Art. 1 - Institution of doctoral research programmes

The following doctoral research programmes, <u>subject to accreditation by MUR and checks to verify that accreditation requirements have been maintained</u>, are instituted at the University of Milan for academic year 2023/2024 (39th cycle - beginning 1 October 2023):

- Agricoltura, ambiente e bioenergia - Agriculture, environment and bioenergy











- Biologia molecolare e cellulare Molecular and cellular biology
- Chimica Chemistry
- Chimica industriale Industrial chemistry
- <u>Diritto comparato, privato, processuale civile e dell'impresa Comparative, private and civil</u> procedural law
- Diritto pubblico, internazionale ed europeo Public, international and european union law
- Fisica, astrofisica e fisica applicata Physics, Astrophysics and Applied Physics
- <u>Informatica Computer Science</u>
- International and Public Law, Ethics and Economics for Sustainable Development LEES
- Medicina sperimentale Experimental medicine
- Medicina traslazionale Translational medicine
- Ricerca clinica Clinical research
- Scienze ambientali Environmental sciences
- <u>Scienze del patrimonio letterario, artistico e ambientale Literature, arts and</u> environmental heritage
- Scienze dell'esercizio fisico e dello sport Exercise and Sport Sciences
- Scienze della nutrizione Nutritional sciences
- Scienze della Terra Earth sciences
- Scienze farmaceutiche Pharmaceutical sciences
- <u>Scienze farmacologiche biomolecolari, sperimentali e cliniche - Pharmacological biomolecular sciences, experimental and clinical</u>
- Scienze giuridiche "Cesare Beccaria" Legal studies "Cesare Beccaria"
- <u>Scienze matematiche Mathematical sciences</u>
- Scienze per i sistemi alimentari Food systems
- Scienze veterinarie e dell'allevamento Veterinary and animal science
- <u>Studi linguistici, letterari e interculturali in ambito europeo ed extra-europeo Linguistic,</u> literary and intercultural studies in european and extra-european perspectives
- Studi sulla criminalità organizzata Studies on Organized Crime

Public competitions for admission to the above doctoral research programmes, based on qualifications and exams, are hereby announced by the University of Milan; the tables annexed to this decree, which are an integral part of this document, contain a brief description of the programmes, the examination window and the links to the university website where the research











topics identified by the Faculty of Instructors of each programme, in line with the objectives of the programme, its research and educational focus, can be found. The selection of research topics is carried out in the times and manner specified in art. 25 of the University Regulation for PhD Programmes and Students.

The number of scholarships may be increased should external funding become available before the application deadline specified in this competition for admission.

Foreign candidates who are in receipt of scholarships issued by their country of origin may be admitted in excess of the enrolment quota if they pass the admission exams set out in this decree.

Art. 2 - Admission requirements

Candidates in possession of a second cycle degree (*Laurea magistrale*), an equivalent qualification or a qualification equivalent to the level of studies (Master's Degree) awarded by a foreign university, may apply for admission to the doctoral research programmes stated in the article above.

The suitability of the foreign academic qualifications in terms of content is evaluated by the Examining Committee of each doctoral programme, in compliance with the regulations in force in Italy and in the country in which the academic qualification was issued, and with the international treaties or agreements on the recognition of qualifications for the continuation of studies.

Candidates who have not yet obtained their second cycle degree (*Laurea magistrale*) may also apply, but admission to the doctoral research programme is subject to completing the second cycle degree by the programme starting date (1 October 2023), failing which they will be excluded from the programme.

Art. 3 - Application for admission

Applications for admission must be submitted by no later than **2 pm on the 26**th **of July 2023**, following the procedures described below:

- Register on the University portal. This operation is not required of those already registered on the portal or in possession of university login details (upcoming graduates or those who graduated from the University of Milan less than a year ago);
- 2. Log in and submit an application for admission to the <u>Doctoral programme admission</u> services;
- 3. Pay a non-refundable fee of €50.00, by the deadline for admissions.

 During the procedure applicants are required to **upload** the following **documents** as .pdf, .rtf or .jpg files, all under 10 MB:
- A. Diploma Supplement **or** Bachelor's and 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.











This documentation is not required of graduates/upcoming graduates of the University of Milan, since it will be acquired internally;

- B. CV, describing any professional experience and other qualifications held by the applicant;
- C. Research project (using Form 1 attached hereto);
- D. Copy of passport (foreign applicants only);
- E. Publications (if any);
- F. Annex A;
- G. Online interview request (if desired; please use Form 3 attached).

In addition to the documents listed above, applicants wishing to submit an application for one of the reserved places under art. 11 must also fill out and upload the Annex B attached hereto.

Self-drafted affidavits are accepted as and where provided for by the laws in force.

Please note that the failure to provide even just one of the documents from A to C above will result in the candidate being excluded from the competition.

Qualifications and scientific publications may be submitted in Italian or English.

In addition to the above documentation, upon request by the Faculty of Instructors and as specified in the programme tables, applicants must provide one or more reference letters from qualified persons who have had a role in their education. Reference letters must be drafted according to Form 2 attached hereto and e-mailed directly by said persons, in .pdf format, to the email address indicated in the section regarding the relevant doctoral programme, by the competition deadline. In any case, applicants may include reference letters drafted as indicated above in their application. Reference letters are considered when assessing the applicant's curriculum and no extra point is awarded for them.

Non-EU candidates residing abroad are also required to submit an online application for preenrolment through Universitaly, in order to obtain a student visa.

The online application cannot be modified or supplemented with further documentation once it has been confirmed.

It is possible to apply for any number of doctoral programmes, provided that the applicant registers properly for each programme, as described above, including payment of the non-refundable fee of €50.00 for each application submitted.

Art. 4 - Candidates with disabilities

In order to ensure equal treatment of candidates, those holding a certificate of disability (invalidità civile) and/or handicap pursuant to Law 104/1992 may apply for accommodations to the COSP Disability Services (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 University.











Art. 5 - Candidates with SLD

In order to ensure equal treatment of candidates, those holding a Specific Learning Disorders (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 Services (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 University.

Art. 6 - Admission exam

Admission to the doctoral programmes is through a public selection procedure involving the evaluation of qualifications and tests for the comparative assessment of candidates. An Examining Committee set up and appointed in compliance with current regulations will carry out the procedure.

The selection procedure aims to ascertain the qualifications, capacity and aptitudes of candidates for scientific research and their personal motivations. It is based on the **assessment of the CV** and a **research project**, which may be inspired by the work of the second cycle degree thesis, as well as on an interview held either in person or online, as specified in the tables concerning each doctoral programme.

The research project, which must be drafted using a standard template (<u>attached hereto</u>), is only for selection purposes and does not limit the choice of the doctoral thesis in the case of admission.

The candidate's CV and research project are assessed before the interview. The outcome of the assessment is available on the University portal on the programme webpage.

The CV is evaluated on the basis of the candidate's university studies, publications, professional experience and other qualifications, if any. A maximum of 20 points can be assigned to the CV. In assigning the points, the Committees consider the statistical distribution of exam grades for the study programme courses, as well as the conditions and the period over which the applicant has obtained his/her qualifications.

A maximum of 10 points can be assigned to the research project.

Candidates who obtain a score of at least 50% of the maximum points obtainable for the CV and the research project, considered separately, can be called for interview.

The interview is public; the date will be posted on the University portal in the days following the assessment of qualifications. The aim is to verify the candidate's knowledge of topics germane to the educational and scientific contents of the doctoral programme. The interview includes a seminar-style presentation of the research project, followed by a general discussion to verify the candidate's expertise, scientific qualities and motivations. A maximum of 70 points may be assigned to the interview.

The interview is conducted in the language indicated in the doctoral programme table. In any case, applicants may ask to be interviewed in English.











To sit for the tests, candidates must present one of the following identity documents:

- Identity card;
- Passport;
- (Italian) driving licence.

The outcome of the interview process will be communicated by the Committee at the end of the interviews.

At the end of the tests, the Committee draws up a general ranking list according to the total score assigned to the candidates for their CV, research project and interview. Candidates must obtain a minimum score of 70/100 to pass the admission exam.

The general ranking is published on the <u>Postgraduate admission rankings page</u> in the days following the examinations.

The Committees must conclude their work by the 16th September 2023.

Art. 7 - Admission to the doctoral programmes

Applicants are admitted to the programmes according to their position in the ranking list until the number of places available for each doctoral programme has been filled. Where applicants achieve the same score, preference will be given to the younger applicant, with the exception of the right of priority criterion for doctoral scholarships set forth in art. 9 of this call for applications. The rankings of eligible applicants will be published in the days following the interviews on the University website at the Postgraduate admission rankings page.

Such ranking posted on the University website constitutes notification to the interested parties, who will not receive any written notice.

Applicants admitted to the programme lose their entitlement if they fail to enrol by the deadline. Their place is then given to the next applicant in the ranking list. This also applies if an admitted applicant withdraws from the programme during the first three months. If the withdrawing student has already received any monthly scholarship payments, he/she is required to return them. Takeover applicants will be contacted personally by email by the Doctoral Students Administration Office (Segreteria Dottorati), which will provide instructions and deadlines for enrolment.

Applicants who rank high enough for admission into multiple programmes may only matriculate into one.

Except for the cases governed by art. 12, contemporary enrolment in two academic programmes is allowed within the limitations provided for by current regulations, and subject to the assessment and prior approval by the competent bodies.











Art. 8 - Enrolment

Applicants admitted to doctoral programmes can enrol online from the 25th September 2023 till the 29th September 2023 at 2 pm using the <u>SIFA enrolment services</u> and following the instructions published on the <u>University website</u>.

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

Those enrolled in doctoral programmes must pay the annual regional tax for the Education Incentive Programme in the amount of ≤ 140.00 , plus a ≤ 16.00 stamp duty and a ≤ 15.50 insurance premium. These amounts are deducted from the scholarship amount.

Students with a disability percentage at or above 66% and/or a handicap recognised pursuant to Law no. 104/92 will have the regional tax and insurance premium waived, provided that they submit an application for exemption; these students are only required to pay the €16.00 stamp duty.

Enrolment fees are non-refundable, even if a student withdraws from the doctoral programme.

Candidates holding a foreign qualification are required to upload the following documents when completing the online enrolment process:

- Original diploma (Master of Science or equivalent) with a translation into Italian, French,
 English, German or Spanish;
- Declaration of Value (*Dichiarazione di Valore*) 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;
- Italian tax ID;
- Valid residence permit (only for non-EU citizens).

For the enrolment to be finalised, the following documents must be uploaded on the <u>Enrolment</u> documents integration service no later than the 28th November 2023:

- Universitaly pre-enrolment application receipt;
- Student visa (only for non-EU citizens residing abroad).

The validity of foreign qualifications is verified upon submission of the official documents. Until then, candidates are admitted to the programme conditionally, and may be excluded from the ranking if they are found not to meet the requirements.

Art. 9 - Scholarships

Scholarships are awarded in accordance with and by the methods established by existing regulations, based on the student's ranking. The gross amount of the scholarship is €16,350.00 per year. The scholarship is not subject to IRPEF (personal income tax) in accordance with art. 4 of Law no. 476 of 13 August 1984, and is subject to the social security provisions set forth in art. 2, paragraph 26 et seq., of Law no. 335 of 8 August 1995, as subsequently amended. Working students falling into the categories appearing in art. 26 of the University Regulation for PhD Programmes











and Students will be eligible to apply, provided their working income does not exceed the scholarship amount. Income under the limitation is defined as gross earnings during the year to which the scholarship is principally allocated.

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

The regional tax for the Education Incentive Programme, the stamp duty and the insurance premium are automatically deducted from the scholarship amount, for a total of €171.50.

Scholarships have a yearly duration and are renewed if the Faculty of Instructors promotes the doctoral student to the following year, after ascertaining that he/she has correctly and successfully completed the programme of activities in the previous year.

Starting from the first year, in addition to the scholarship and depending on the University's financial resources, each doctoral student is given a budget for research activity in Italy and abroad suited for the type of programme, and in any case amounting to no less than 10% of the amount of the scholarship itself.

Art. 10 - Scholarships established by Ministerial Decree 117/2023

This call for applications provides for the allocation of scholarships established by Ministerial Decree 117/2023, to be funded under Italy's National Recovery and Resilience Plan (PNRR). These scholarships are instituted to facilitate the advancement of research on topics covered by innovative doctorates responding to the innovation needs of companies and promoting the recruitment of researchers by businesses.

Applicants selected as recipients of scholarships established by Ministerial Decree 117/2023 are required to:

- Spend a training and research period at a company or research centre, for a minimum of 6 months and up to 18 months;
- Spend a training and research period abroad for a minimum of 6 months and up to the maximum duration specified in article 9, paragraph 3, of Ministerial Decree 226/21, during the three years of the programme;
- Produce the documents required for the purposes of reporting on the activities carried out, to demonstrate advancement in the implementation of the project, pursuant to Ministerial Decree 117/2023 (article 12, paragraph 7).

Art. 11 - Scholarships established by Ministerial Decree 118/2023

This call for applications provides for the allocation of scholarships established by Ministerial Decree 118/2023, to be funded under Italy's National Recovery and Resilience Plan (PNRR). Such scholarships are instituted to facilitate the advancement of research on the following subjects: digital and environmental transition; PNRR topics (digitalisation, innovation, competitiveness, culture and tourism; green revolution and ecological transition; sustainable mobility; education and research; inclusion and cohesion; health), Public Administration; cultural heritage.

Applicants selected as recipients of scholarships established by Ministerial Decree 118/2023 are required to:











- Spend a training and research period at a company or research centre or public administration office, for a minimum of 6 months and up to 12 months (with the exception of doctoral programmes on PNRR topics, as per article 8 of Ministerial Decree 118/23);
- Spend a training and research period abroad for a minimum of 6 months and up to the maximum duration specified in article 9, paragraph 3, of Ministerial Decree 226/21, during the three years of the programme;
- Produce the documents required for the purposes of reporting on the activities carried out, to demonstrate advancement in the implementation of the project, pursuant to Ministerial Decree 118/2023 (article 16, paragraphs 2 and 7).

Art. 12 - Reserved places

In the frame of doctoral programmes, a number of places may be reserved for:

- employees of public research centres and institutions engaged in highly qualified operations (students will continue to earn their salary);
- students enrolled in a medical postgraduate school, in accordance with the provisions of art. 7 of Ministerial Decree no. 226/2021. These positions are governed by art. 28 of the Regulation for PhD Programmes and Students of the University of Milan.

Details on the reserved places are outlined in the sections regarding each doctoral programme.

Candidates who are interested in one of the reserved places must specify this in their application for admission and fill out, sign, and upload Annex B along with their application.

Should more than one student apply for the same reserved place, the place will be allocated to the higher-ranked applicant.

Candidates applying for a reserved place may matriculate only if they are selected and found to meet the eligibility requirements. For places reserved for students of medical postgraduate schools, the competent bodies must vet and approve compatibility.

If one of these candidates is selected for one of the ordinary places, and not for a place reserved for students of a medical postgraduate school, he/she must opt for one of the two programmes.

A fee of €171.50 (regional tax for the Education Incentive Programme, stamp duty and insurance premium) will be due at the time of enrolment.

Art. 13 - Obligations of doctoral students

Doctoral research programmes entail 1,500 hours of training-education and research activities per year. The rights and obligations of doctoral students are regulated by articles 26 and 27 of the University Regulation for PhD Programmes and Students.

Please note that, 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-english-courses/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.

Art. 14 - Awarding of qualification

The qualification of Doctor of Philosophy, abbreviated as "Dott. Ric." or "Ph.D.", is awarded in accordance with the provisions of art. 27 of the University Regulation for PhD Programmes and Students.

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 Regulation (EU) 2016/679 (General Data Protection Regulation, GDPR), the University undertakes to respect the confidential nature of the information provided by applicants. All data provided will be processed solely for purposes related and instrumental to the competition and to manage the applicant's relationship with the University, where necessary, in compliance with current laws.

Art. 16 - Relevant regulations

Any items for which no specific provision has been made in this call for applications shall be regulated in accordance with the Italian laws and regulations governing doctoral programmes.

Art. 17 - Person in charge of the procedure and contacts

Pursuant to Law no. 241 of 7 August 1990, the person in charge of the procedure set forth in this call for applications is Ms Monica Delù (Head of the Post-Graduate Programme Admissions and Communications Sector).

For further information or clarifications please use the <u>InformaStudenti</u> service, selecting the category: Postgraduate/Doctoral research (PhD).

Milan, 23 June 2023

Filed as record no. 3288/2023 of 23 June 2023

THE RECTOR

(signed Elio Franzini)











Doctoral programme in Agriculture, environment and bioenergy

Learning objectives

Our planet is experiencing a decline in its non-renewable resources and is exposed to risks deriving from climate change. The agricultural sector must supply food, non-food products, ecosystemic services and energy, whilst guaranteeing safety and food sovereignty. It is therefore essential to develop advanced training courses in order to achieve efficiency and sustainability in the agricultural sector and its various territorial contexts, taking into account the various elements of the production system and their organisation in agro-ecosystems. Reference will be made to:

- a) Phenotypic and genotypic features and the valorisation of genetic resources;
- b) Containment of biotic and abiotic adversities;
- c) Implementation of predictive IT models;
- d) Bioenergy production, use of residual substances, soil and water resource conservation;
- e) Analysis and management of technical means, agricultural processes, multi-functionality of rural areas and of agrobiodiversity.

The programme will enable researchers to:

- a) Develop autonomous research;
- b) Prepare and propose public and private research projects on a local, national and international level;
- c) Identify research needs and their scientific, social and economic relevance;
- d) Transfer knowledge through teaching activities and the presentation of data and results;
- e) Deploy research results in the public and private sectors.

The doctoral programme is entirely in English.

Academic disciplines

05/A (Plant biology)

07/A (Agricultural economics and appraisal)

07/B (Agricultural and forest systems)

07/C (Agricultural, forest and biosystems engineering)

07/D (Plant pathology and entomology)

07/E (Agricultural chemistry, agricultural genetics and pedology)

07/G (Animal science and technology)

10/A (Archaeological sciences)

Research topics











Research topics are available on the **University portal**.

Duration

3 years

Places available

17, of which 1 without scholarship for the research project: "Development of new models of genomic selection and biodiversity conservation in Italian small ruminant populations"

Scholarships

7 University of Milan

1 scholarship funded by the Department of Agricultural and Environmental Sciences - Production, Landscape, Agroenergy, for the research project: "Nutrient and carbon recovery from biomasses: environmental impact measurement by life Cycle Assessment"

1 scholarship co-funded by Apsovsementi Spa under Ministerial Decree 117/2023, for the research project "Wheat breeding assisted by biomolecular tools". Lead instructor: Prof. Vittoria Brambilla. (CUP G43C23001190006)

1 scholarship co-funded by the Biorepack Consortium under Ministerial Decree 117/2023, for the research project "Bioplastic in the Environment". Lead instructor: Prof. Fabrizio Adani. (CUP G43C23001190006)

1 scholarship co-funded by Gowan under Ministerial Decree 117/2023, for the research project "Fungicide resistance in grapevine downy mildew management: from resistance mechanisms to fitness of zoxamide-resistant strains". Lead instructor: Prof. Silvia Laura Toffolatti. (CUP G43C23001190006)

1 scholarship co-funded by Lallemand sas under Ministerial Decree 117/2023, for the research project "Management for energy savings during winemaking process, and especially during the steps of alcoholic and malolactic fermentations". Lead instructor: Ileana Vigentini. (CUP G43C23001190006)

3 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research projects: "Feeding strategies to enhance dairy efficiency and environmental sustainability by modifying rumen microbiome"; "Genetic characterisation of Vitis vinifera and Vitis spp. germplasm for the identification of resistance traits to biotic and abiotic stresses"; "Remote sensing of agroenvironmental indicators for sustainable agroecosystems management and human health protection" (CUP G43C23000910006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Public Administration doctorates, for the research project "Archaeology, sea and culture. Designing, organising and managing land and underwater interdisciplinary research projects (CUP G43C23000920006)

Doctoral programme coordinator











Prof. Piero Attilio Bianco, full professor in scientific-disciplinary sector AGR/12

piero.bianco@unimi.it

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-1 Cultural Anthropology and Ethnology
- LM-2 Archaeology
- LM-3 Landscape Architecture
- LM-6 Biology
- LM-7 Agrarian Biotechnologies
- LM-8 Industrial Biotechnologies
- LM-9 Pharmaceutical, Veterinary and Medical Biotechnologies
- LM-11 Science for Conservation of Cultural Heritage
- LM-17 Physics
- LM-18 Computer Science
- LM-26 Safety Engineering
- LM-30 Energy and Nuclear Engineering
- LM-32 Computer Systems Engineering
- LM-33 Mechanical Engineering
- LM-35 Environmental Engineering
- LM-40 Mathematics
- LM-42 Veterinary Medicine
- LM-44 Mathematical Modelling for Engineering,
- LM-48 Regional, Urban and Environmental Planning
- LM-53 Materials Engineering
- LM-56 Economics
- LM-60 Natural Sciences
- LM-69 Agriculture
- LM-70 Food Science
- LM-73 Environmental and Forestry Sciences











LM-74 Geology

LM-75 Environmental and Land Sciences

LM-76 Environmental and Cultural Economics

LM-77 Management

LM-81 Development Cooperation

LM-82 Statistics

LM-86 Livestock Management

Selection stages - Doctoral programme in Agriculture, Environment and Bioenergy

Qualification assessment date

Qualifications will be assessed starting from 4th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held starting from 12 September 2023 at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the Aula Magna, via Vanvitelli 32, 20133 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.

The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Molecular and cellular biology

Learning objectives

The doctoral programme aims to:

- train scientific experts with excellent skills in the field of biomolecular sciences and biotechnology;
- promote a molecular approach to the study of complex biological problems in model organisms (prokaryotic and eukaryotic microorganisms, animals and plants);
- encourage collaboration between research institutes, advanced training schools and companies in the fields of biomolecular sciences and biotechnology;
- encourage internationalisation by promoting international scientific collaborations, involving foreign lecturers, recruiting postgraduate students from abroad, and organising co-tutored dissertations involving study periods abroad.

Training activities will be characterised by:

- a multidisciplinary approach;
- interactivity;
- links to the business world;
- internationalisation.

A key element of the programme is the direct involvement of doctoral students in experimental research activities. Students will work full-time on a research project, providing critical insight and suggestions, and thereby acquiring scientific and organisational independence.

The doctoral programme is entirely in English.

Academic disciplines

01/B (Informatics)

02/D (Applied physics, physics teaching and history of physics)

05/A (Plant biology)

05/B (Animal biology and anthropology)

05/D (Physiology)

05/E (Experimental and clinical biochemistry and molecular biology)

05/F (Experimental biology)

05/G (Experimental and clinical pharmacology)

05/H (Human anatomy and histology)

05/I (Genetics and microbiology)











06/A (Pathology and laboratory medicine)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

18

Scholarships

8 University of Milan

1 scholarship funded by IRCCS MultiMedica - MultiMedica Spa for the research project: "Study of the molecular mechanisms controlling cardiovascular regenerative cell function in age-associated diseases"

1 scholarship funded by the Edmund Mach Foundation for the research project: "Study of the recovery from Flavescence doreè in grapevine infected by Candidatus Phytoplasma vitis in vineyard excluded from re-infection by S.titanus"

1 scholarship funded by the Department of Biomedical and Clinical Sciences for the research project: "Towards diagnostic fingerprinting using new optical biosensor technologies"

1 scholarship co-funded by Beingpharma srl under Ministerial Decree 117/2023 for the research project "Molecular characterization of the role of single bacterial species from a multi-strain formulation marketed as probiotics on the virulence of clinical isolates from bacterial prostatitis". Lead instructors: Prof. Paolo Landini and Prof. Stefano Colombo. (CUP G43C23001100006)

1 scholarship co-funded by CMI Roullier under Ministerial Decree 117/2023 for the research project "Seed biology traits governed by heterosis and their relation to environmental stresses". Lead instructor: Prof. Juan Ignacio Ezquer Garin. (CUP G43C23001100006)

1 scholarship co-funded by MSD Animal Health under Ministerial Decree 117/2023 for the research project "Biochemical and structural characterisation of toxic protein aggregates from cats affected by AA amyloidosis to design future treatments". Lead instructor: Prof. Stefano Ricagno. (CUP G43C23001100006)

4 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research projects: "Epigenetic and metabolic targeting of skeletal muscle, during aging" - "Functional analysis of dependency-associated non-coding RNAs to discover novel vulnerabilities of human cancer" - "Manipulating the outer membrane permeability of Gram-negative bacteria as a strategy to develop next generation antibacterial drugs" - "Characterization of the relationship between G-quadruplex, 3D nuclear organization, and genome stability" (CUP G43C23000800006)











Doctoral programme coordinator

Prof. Roberto Mantovani, full professor in scientific-disciplinary sector BIO/18

mantor@unimi.it

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-6 Biology
- LM-7 Agrarian Biotechnologies
- LM-8 Industrial Biotechnologies
- LM-9 Pharmaceutical, Veterinary and Medical Biotechnologies
- LM-11 Science for Conservation of Cultural Heritage
- LM-13 Pharmacy and Industrial Pharmacy
- LM-17 Physics
- LM-18 Computer Science
- LM-21 Biomedical Engineering
- LM-22 Chemical Engineering
- LM-32 Computer Systems Engineering
- LM-40 Mathematics
- LM-41 Medicine
- LM-42 Veterinary Medicine
- LM-54 Chemistry
- LM-56 Economics
- LM-60 Natural Sciences
- LM-61 Nutrition
- LM-66 Computer Systems Safety
- LM-68 Sport Science
- LM-69 Agriculture
- LM-70 Food Science
- LM-71 Industrial Chemistry
- LM-73 Environmental and Forestry Sciences











LM-74 Geology

LM-75 Environmental and Land Sciences

LM-76 Environmental and Cultural Economics

LM-82 Statistics

LM-86 Livestock Management

LM-91 Methods and Techniques for the Information Society

LM/SNT2 Health Professions for Rehabilitation

LM/SNT3 Health Professions for Technical Assistance

LM/SNT4 Health Professions for Preventive Care

Reference letters

The Faculty of Instructors requires that 1 reference letter, drawn up according to Form 2 attached hereto, be sent to the email address mcb.phd@unimi.it

Selection stages - Doctoral programme in Molecular and cellular biology

Qualification assessment date

Qualifications will be assessed on 4th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held starting from 11th September 2023 at 9:30 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in Room B8 of the Department of Biosciences, Via Celoria 26 - 20133 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.

The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Chemistry

Learning objectives

The doctoral programme aims to train students in the critical analysis of scientific research problems in the field of chemistry, and to provide them with the skills required to identify and pursue important research objectives. The programme is designed to develop professionals who will be able to work in the industrial sector, in private and public research institutes, and in academia.

Students will acquire all the knowledge and working methods necessary to carry out research activities to very high scientific standards in any of the numerous interdisciplinary fields of Chemistry. The central role of Chemistry in modern life is widely acknowledged today. This field of science intersects with several other scientific disciplines (such as physics and biology) and therefore finds application in many different fields, from medicine to nanomaterials, from agriculture to energy, from biology to electronics, from cultural heritage conservation to environmental protection. The input of advanced chemical research is essential in many other scientific disciplines and for the development of production in modern countries.

Doctoral programmes in Chemistry are offered in the following lines of research:

- 1. Synthesis, reactivity, reaction mechanisms, catalysis;
- 2. Structural chemistry, spectroscopic analysis;
- 3. Theoretical and computational chemistry;
- 4. Solid-state, interphase and electrolyte chemistry;
- 5. Chemistry of biologically active compounds, food and natural substances, biocatalysis;
- 6. Chemistry of the environment and of cultural heritage;
- 7. Chemistry of materials, chemistry for nanotechnologies, supramolecular chemistry, chemistry for energy.

An important aspect of the programme is that students meet foreign researchers and come into contact with internationally renowned research institutes. To this end, a significant part of teaching activities is assigned to foreign lecturers and students are given the opportunity to spend time in research institutions abroad.

The doctoral programme is entirely in English.

Academic disciplines

03/A (Analytical and physical chemistry)

03/B (Inorganic chemistry and applied technologies)

03/C (Organic, industrial and applied chemistry)

03/D (Medicinal and food chemistry and applied technologies)











Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

2

Scholarships

1 scholarship co-funded by Teva Sicor srl under Ministerial Decree 117/2023 for the research project "Strategies for Green and Convenient API Manufacturing". Lead instructor: Prof. Daniele Passarella. (CUP G43C23001140006)

1 scholarship co-funded by ATS Città Metropolitana di Milano (Milan local health authority) under Ministerial decree 117/2023 for the research project "Development of analytical methods in the Prevention Laboratory of regional importance at ATS Metropolitan City of Milan, using LC/MSMS technique, aimed at chemical safety in water for human use (regulated and emerging microcontaminants) and food (SRM pesticides)". Lead instructor: Prof. Paola Fermo. (CUP G43C23001140006).

Doctoral programme coordinator

Prof. Daniele Passarella, full professor in scientific-disciplinary sector CHIM/06 daniele.passarella@unimi.it

Admission requirements

Master's degree of any class

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to <u>Form 2</u> attached hereto, be sent by email to the doctoral programme coordinator.

Selection stages - Doctoral programme in Chemistry

Qualification assessment date

The assessment outcome will be posted on the University website, on the programme webpage, before the start date of the

interviews.

Interviews

The interview schedule – specifying the place, date and time of the interview for each candidate, the title of his/her research project and the interview mode (in person or online) – will be posted on











the University website, on the programme webpage. The interview will be in English. The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Industrial Chemistry

Learning objectives

The general theme of the doctoral programme relates to the extensive field of application of chemistry to industrial processes. It aims to train students in understanding theoretical and practical problems, as well as economic, environmental and safety issues. Graduates will possess considerable scientific expertise and be able to organise and manage research activities, as well as analyse the aspects pertaining to variations in scale. The main research areas are: physical chemistry and catalysis in industrial processes; industrial electrochemistry and corrosion; synthesis, properties and structure of polymers; synthesis and processes of fine chemistry; synthesis, processes and control in primary chemistry; chemical biotechnology; innovative chemical processes; new structural and functional materials; innovative energy technologies; nanotechnologies.

An important aspect of the programme is that students meet foreign researchers and come into contact with internationally renowned research institutes. To this end, some teaching activities are assigned to foreign lecturers and students are given the opportunity to spend time in research institutions abroad.

The doctoral programme is entirely in English.

Academic disciplines

03/A (Analytical and physical chemistry)

03/B (Inorganic chemistry and applied technologies)

03/C (Organic, industrial and applied chemistry)

09/D (Chemical and materials engineering)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

1

Scholarships











1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Sustainable production of dimethyl ether (DME) from carbon dioxide (CO2)" (CUP G43C23001010006).

Doctoral programme coordinator

Prof. Dominique Roberto, full professor in scientific-disciplinary sector CHIM/03 dominique.roberto@unimi.it

Admission requirements

Master's degree of any class

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to <u>Form 2</u> attached hereto, be sent by email to the coordinator.

Selection stages - Doctoral programme in Industrial Chemistry

Qualification assessment date	The assessment out
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The assessment outcome will be posted on the University website, on the programme webpage, before the start date of the interviews.

Interviews

The interview schedule – specifying the date and time of the interview for each candidate, the title of his/her research project and the he interview mode (in person or online) – will be posted on the University website, on the programme webpage. The interview will be in English. The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Comparative, Private, Civil Procedural and Business Law

Learning objectives

The programme aims to promote academic debate among experts in the different legal fields that characterise the PhD. These multiple subject areas give the programme an interdisciplinary character and at the same time, based on the existing links between the various disciplines, provide a common perspective that allows for a more fruitful dialogue between jurists of different specialisms. The main objective of the programme is to appropriately structure and link research training activities, focusing on comparative law with a view to intensifying interactions among those studying private law, business law (in its two forms, commercial/industrial and occupational) and civil procedural law. Special attention is given to training students in the methodological aspects of scientific research. Similarities between the different legal fields addressed by the programme will be examined thoroughly during cycles of lectures dedicated to cross-sector topics. As in the past, authorities in the field will be involved and collaborations with universities and foreign researchers will be intensified.

Academic disciplines

12/A (Private law)

12/B (Commercial and labour law)

12/E (International, European Union, comparative, economic, market and maritime law)

12/F (Civil procedural law)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

6

Scholarships

6 University of Milan

Doctoral programme coordinator

Prof. Giuseppe Ludovico, associate professor in scientific-disciplinary sector IUS/07 giuseppe.ludovico@unimi.it

Curricula

- 1. Private law
- 2. Comparative law











- 3. Commercial and industrial law
- 4. Labour law
- 5. Civil procedural law

Admission requirements

Candidates must have a degree in class LMG/01 - Law under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99.

Selection stages - Doctoral programme in Comparative, Private, Civil Procedural and Business Law

Qualification assessment date

Qualifications will be assessed on 6th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held on 13th September 2023, at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the *Aula Processuale Civile* of the Department of Private Law and Legal History, Via Festa del Perdono 7 - 20122 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.

The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Public, International and European Union Law

Learning objectives

This doctoral programme aims to train highly qualified PhDs, equipped with the necessary research methodologies and able to critically process data and knowledge, through a coordinated study of topics with a common foundation in public law (constitutional law, administrative law, tax law). The programme includes studies of comparative law, and European and international law.

During the programme, doctoral students are expected to:

- gain a high-level skill set through an in-depth study of one of the research areas covered by the programme (public, international, and European law), featuring an interdisciplinary focus;
- acquire research methods and techniques specific to the field of law;
- design and carry out an original research project, predicated on strict adherence to the scientific method and a coherent structure, which contributes to expanding knowledge on a national and international level;
- develop their ability to convey their research findings (presenting findings at seminars and conferences, and in scientific journals).

Academic disciplines

12/C (Constitutional and ecclesiastical law)

12/D (Administrative and tax law)

12/E (International, European Union, comparative, economic, market and maritime law)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

9

Scholarships

7 University of Milan

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Public Administration doctorates, for the following research project: "Social











inclusion of people of foreign origin. Good practices in the cooperation between public administration and the third sector in the city of Milan" (CUP G43C23000810006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on Digital Transitions, for the following research project: "Cybersecurity and new technologies in public and private international law" (CUP G43C23000820006).

Doctoral programme coordinator

Prof. Francesca Biondi, full professor in scientific-disciplinary sector IUS/08

francesca.biondi@unimi.it

Curricula

- 1. International and European law
- 2. Constitutional and administrative law

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-19 Information and Publishing Systems
- LM-38 Modern Languages for Communication and International Cooperation
- LM-48 Regional, Urban and Environmental Planning
- LM-52 International Relations
- LM-59 Advertising and Communication for the Public and Private Sectors
- LM-62 Political Science
- LM-63 Public Administration
- LM-77 Management
- LM-78 Philosophy
- LM-81 Development Cooperation
- LM-87 Social services and policies
- LM-90 European studies
- LM-91 Methods and Techniques for the Information Society

LMG/01 Law.











Selection stages - Doctoral programme in Public, International and European Union Law

Qualification assessment date

Qualifications will be assessed on 5th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held starting from 12th September 2023 at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the *Sala Seminari* of the Department of Italian and Supranational Public Law, located in Via Festa del Perdono 7 - 20122 Milan

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway. For international students, elementary proficiency in Italian will be assessed as well.

The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Physics, Astrophysics and Applied Physics

Learning objectives

The main theme of this doctoral programme is physics in advanced sectors of pure and applied research, with a focus on topics of excellence pursued by UniMI and INFN staff. Research covers all areas of modern physics, as indicated in the 5 curricula. The required basic training is ensured by a significant set of courses run specifically for the PhD programme and held by UniMI professors and INFN researchers, with final exams.

Students will also attend an international school and hold a public seminar when they return. The programme provides various opportunities for student discussion and exchange across different curricula. In particular, a doctoral workshop is organised at the end of each academic year. Training is supplemented by coordinated series of subject-specific conferences ("Physics Colloquia"). Doctoral students will have to undertake original research under the guidance of a tutor from the University or the INFN, and possibly a co-tutor. Each year they will present their progress in a seminar open to the entire UniMI and INFN scientific community. To support research activities, the programme offers internship opportunities at national and international INFN laboratories as well as corporate or institutional research laboratories in the field of physics and related technologies.

The doctoral programme is entirely in English.

Partner institution

INFN Istituto Nazionale di Fisica Nucleare (Italian National Institute for Nuclear Physics)

Academic disciplines

02/A (Physics of fundamental interactions)

02/B (Physics of matter)

02/C (Astronomy, astrophysics, Earth and planetary physics)

02/D (Applied physics, physics teaching and history of physics)

09/E (Electrical and electronic engineering and measurements)

01/B (Informatics)

Research topics

Research topics are available on the University portal.

Duration

3 years











Places available

10, of which 1 without scholarship for the research project: "Study of light and IR radiation through highly scattering media"

Scholarships

1 scholarship funded by INAF (Italian National Institute of Astrophysics) - Astronomical Observatory of Brera (OABrera) for the research project: "Innovative research in the framework of INAF-OABrera scientific projects"

2 scholarships funded by the Department of Physics "Aldo Pontremoli", for the research projects: "Numerical estimate of polarizability tensor of chiral NanoSystems" and "Key resources and verification of bosonic computing"

1 scholarship co-funded by ISC srl under Ministerial Decree 117/2023 for the research project "THEON: ThermoElectrical Properties of semicOnductor and metallic Nanoalloys". Lead instructors: Prof. Francesca Baletto and Prof. Fabio Puglia. (CUP G43C23001170006)

1 scholarship co-funded by Nanotemper Technologies GmbH under Ministerial Decree 117/2023 for the research project "Advanced applications of differential dynamic microscopy to biomolecules: sizing, aggregation detection and characterization of molecular interactions". Lead instructor: Prof. Fabio Giavazzi. (CUP G43C23001170006)

1 scholarship co-funded by Nexid srl under Ministerial Decree 117/2023 for the research project "Artificial intelligence (AI) algorithms for the automated management of modern financial portfolios". This research project aims to develop artificial intelligence (AI) algorithms to automatically manage portfolios made up of modern financial instruments. The ultimate goal is to come up with a model to improve the allocation of products. In the framework of this project, the PhD student will collect historical as well as real-time financial data, including prices, market data and economic indicators. These data will be processed and used as input data for machine learning algorithms. Lead instructor: Prof. Alessandro Vicini. (CUP G43C23001170006).

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on Digital Transitions, for the following research project: "Green chemistry goes nano for a sustainable future" (CUP G43C23000970006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Study and development of Innovative Systems for Power management operating at Cryogenic Temperatures (ISP@CryT)" (CUP G43C23000950006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Cultural Heritage doctorates, for the following research project: "STudies of the effects of microbiologicAl growth on stone-air INterface of cultural heritage (STAINS)" (CUP G43C23000960006)











Doctoral programme coordinator

Prof. Matteo Paris, full professor in scientific-disciplinary sector FIS/03 phd@fisica.unimi.it

Curricula

- 1. Astrophysics
- 2. Condensed matter physics
- 3. Nuclear and particle physics
- 4. Theoretical physics
- 5. Applied physics

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-6 Biology
- LM-8 Industrial Biotechnologies
- LM-9 Pharmaceutical, Veterinary and Medical biotechnologies
- LM-11 Science for Conservation of Cultural Heritage
- LM-13 Pharmacy and Industrial Pharmacy
- LM-17 Physics
- LM-18 Computer Science
- LM-20 Aerospatial and Astronautic Engineering
- LM-21 Biomedical Engineering
- LM-22 Chemical Engineering
- LM-25 Automation Engineering
- LM-26 Safety Engineering
- LM-27 Telecommunications Engineering
- LM-28 Electrical Engineering
- LM-29 Electronic Engineering
- LM-30 Energy and Nuclear Engineering
- LM-32 Computer Systems Engineering
- LM-33 Mechanical Engineering











LM-40 Mathematics

LM-44 Mathematical Modelling for Engineering

LM-53 Materials Engineering

LM-54 Chemistry

LM-58 Universe Sciences

LM-66 Computer Systems Safety

LM-71 Industrial Chemistry

LM-74 Geology

LM-75 Environmental and Land Sciences

LM-79 Geophysics

LM-82 Statistics

LM-91 Methods and techniques for the information society

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to Form 2 attached hereto, be sent to the email address phd@fisica.unimi.it

Selection stages - Doctoral programme in Physics, Astrophysics and Applied Physics

Qualification assessment date

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

The interview schedule – specifying the place, date and time of the interview for each candidate, the title of his/her research project and the interview mode (in person or online) – will be posted on the <u>University website</u>, on the programme webpage. The interview will be in English. The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Computer Science

Learning objectives

The doctoral programme in Computer Science aims to provide students with advanced scientific, methodological and technological knowledge in computer science and related sectors and their corresponding fields of application. This knowledge will prepare students and introduce them to theoretical and applied research, with particular attention to interdisciplinarity and internationalisation, developing research skills so that they are able to produce original independent research of interest to the international scientific community and businesses.

The doctoral programme aims to provide students with:

- solid wide-ranging knowledge on the basics of science and methodologies and technologies pertinent to IT and related fields,
- advanced and in-depth skills in specific areas,
- interdisciplinary skills necessary to promote cultural and methodological synergies,
- sound knowledge of research methodologies and of how to organise and manage research and disseminate results,
- opportunities to train internationally,
- better preparation and placement within academic research groups and companies.

The doctoral programme is entirely in English.

Academic disciplines

01/B (Informatics)

09/H (Computer engineering)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

6, of which 1 without scholarship for the research project: "Evaluating the effectiveness of dynamic and static analysis methods to detect advanced malware relying on emerging hardware technologies (e.g. Hypervisor, SMM)"

Scholarships











1 scholarship co-funded by the Italian National Cancer Institute (*Istituto Nazionale dei Tumori*) under Ministerial Decree 117/2023, for the research project "Developing computational models for creating and analysing "knowledge graphs" for oncology". Lead instructor: Prof. Elena Casiraghi. (CUP G43C23001180006)

1 scholarship co-funded by SST Clinica Odontoiatrica under Ministerial Decree 117/2023 for the research project "Developing systems for the automated recognition of facial anthropometric repere points, to be used in telemedicine" Lead instructor: Prof. Giuliano Grossi. (CUP G43C23001180006)

1 scholarship co-funded by K2K srl under Ministerial Decree 117/2023 for the research project: "Neural network development and optimization: exploring cognitive architecture and advanced applications". Lead instructor: Prof. Giuliano Grossi (CUP G43C23001180006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Public Administration doctorates, for the following research project: "Information technologies and methods for transparency in the Public Administration" (CUP G43C23000930006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on Digital Transitions, for the following research project: "Al-driven Knowledge Modeling for the Digital Transformation in Humanities and Social Sciences" (CUP G43C23000940006)

Doctoral programme coordinator

Prof. Roberto Sassi, full professor in scientific-disciplinary sector INF/01 roberto.sassi@unimi.it

Admission requirements

Master's degree of any class

Reference letters

The Faculty of Instructors requires that a minimum of 1 and up to 3 reference letters, drawn up according to Form 2 attached hereto, be sent to the email address phdcomputerscience@di.unimi.it

Selection stages - Doctoral programme in Computer Science

Qualification assessment date

Qualifications will be assessed on 4th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.











Interviews

Interviews will be held online starting from 12 September 2023 at 10:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

The interview will be in English.











Doctoral programme in International and Public Law, Ethics and Economics for Sustainable Development (LEES)

Learning objectives

Despite the urgency of the Sustainable Development Goals integrated into the UN 2030 Agenda, some of the most influential global actors continue to disclaim their responsibility to contribute to them. The magnitude of the problem justifies a multidisciplinary research programme on the institutions for sustainability, based on putting to work together law, ethics and economics - to which the LEES doctorate is dedicated. The legal system defines the rule of law limits to the political balance between fundamental rights and economic stability, and indicates the intolerability of phenomena of marginalization and inequality. However, new ideas of justice are needed: after redefining the concept of social well-being, these ideas need to reconceive distributive justice from both an inter-generational and intra-generational perspective. Comparative studies, as well as de jure condendo ones, will design multi-level institutions for sustainable development, finally questioning the fact that various private institutions can be sheltered from the claims of social justice, such as the access to innovation, the fair distribution of decision-making rights to stakeholders within enterprises, and the democratic self-government of common goods. Strategic litigation will be studied in order to promote institutional change and respect for human rights inside and outside the courts. An economic analysis will set the condition to verify when institutional change is supported by collective rational choice models and if it corresponds, thanks also to plasticity of preferences, to the emergence of game theoretical equilibria eliciting conformity (social norms).

The doctoral programme is entirely in English.

Academic disciplines

12/C (Constitutional and ecclesiastical law)

12/D (Administrative and tax law)

12/E (International, European Union, comparative, economic, market and maritime law)

12/H (Roman law, history of medieval and modern law, and philosophy of law)

13/A (Economics)

13/B (Business administration and management)

Research topics

Research topics are available on the <u>University portal</u>.

Duration

3 years











Places available

5, of which 1 without scholarship and reserved for employees of public research centres and institutions engaged in highly qualified operations (students will continue to earn their salary);

Scholarships

3 University of Milan

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Public Administration, for the following research project: "The role of international public organizations in promoting a change in the vision of corporate purpose (corporate sustainability)" (CUP G43C23000830006)

Doctoral programme coordinator

Prof. Lorenzo Sacconi, full professor in scientific-disciplinary sector SECS-P/02

lorenzo.sacconi@unimi.it

Curricula

- Sustainable Development
- Human Rights And Strategic Litigation

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-1 Cultural Anthropology and Ethnology
- LM-16 Finance
- LM-35 Environmental Engineering
- LM-48 Regional, Urban and Environmental Planning
- LM-49 Tourism Development and Management
- LM-50 Development and Management of Education Services
- LM-51 Psychology
- LM-52 International Relations
- LM-55 Cognitive Sciences
- LM-56 Economics
- LM-59 Advertising and Communication for the Public and Private Sectors
- LM-62 Political Science
- LM-63 Public Administration
- LM-64 Religion











LM-69 Agriculture

LM-70 Food Science

LM-73 Environmental and Forestry Sciences

LM-75 Environmental and Land Sciences

LM-76 Environmental and Cultural Economics

LM-77 Management

LM-78 Philosophy

LM-81 Development Cooperation

LM-84 History

LM-87 Social Services and Policies

LM-88 Sociology and Social Research

LM-90 European Studies

LM-92 Communication

LM/SC-GIUR Law Science

LMG/01 Law.

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to Form 2 attached hereto, be sent to the email address lees@unimi.it

Selection stages - Doctoral programme in International and Public Law, Ethics and Economics for Sustainable Development (LEES)

Qualification assessment date

Qualifications will be assessed starting from 4th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held starting from 13th September 2023, from 9.00 a.m. to 7 p.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in Room Jean Monnet of the Department of Public Law, located in Via Festa del Perdono 7 - 20122 Milan.











Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.











Doctoral programme in Experimental Medicine

Learning objectives

Experimental medicine develops and applies technology and biological models for studying pathogenic mechanisms in human disease. It involves various disciplines (biochemistry, biology, molecular biology, anatomy, physiology, pathology, immunology, genetics and microbiology/virology) that are providing a rapidly growing understanding of the mechanisms that enable the development of pathological processes. The course aims to acquaint students with the technologies and research methodologies in the area of biomedicine and biotechnology based on in vitro and in vivo experimental models and '-omic' approaches, and on their application to the study of cellular and molecular mechanisms involved in the pathogenesis of human disease. The overall goal is to train high-level scientists that can combine an understanding of biological processes and pathogenic mechanisms with the ability to apply advanced experimental techniques. The specific objectives of the programme are:

- 4. to develop the ability to define problems and devise experiments to solve them in accordance with scientific standards;
- 5. to study biochemical, molecular and cellular mechanisms in physiopathology using advanced technologies;
- 6. to develop the ability to critically assess scientific literature;
- 7. to provide solid, up-to-date knowledge in the specific field;
- 8. to teach how to conduct independent research, and to inform on related ethical implications.

The doctoral programme is entirely in English.

Academic disciplines

05/E (Experimental and clinical biochemistry and molecular biology)

05/F (Experimental biology)

05/G (Experimental and clinical pharmacology)

06/A (Pathology and laboratory medicine)

06/D (Specialised clinical medicine)

06/N (Healthcare, applied medical technologies, physical exercise and sports science professions)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available











11

Scholarships

9 University of Milan

1 scholarship funded by the Department of Medical Biotechnology and Translational Medicine, for the research project: "Development of AI-based digital tools for the analysis of human tumor sections"

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Premature senescence in RTT mice: a novel role for MeCP2 in the regulation of brain aging?" (CUP G43C23000840006)

Doctoral programme coordinator

Prof. Nicoletta Landsberger, full professor in scientific-disciplinary sector BIO/11 nicoletta.landsberger@unimi.it

Admission requirements

Master's degree of any class

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to <u>Form 2</u> attached hereto, be sent to the email address <u>phd.experimental-medicine@unimi.it</u>

Selection stages - Doctoral programme in Experimental Medicine

Qualification assessment date

Qualifications will be assessed on 4th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held starting from 13th September 2023 at 9:30 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in Room F of the Interdisciplinary Laboratory for Advanced Technologies (*Laboratorio Interdisciplinare Tecnologie Avanzate - LITA*), located in Via Fratelli Cervi 93, 20090 Segrate (MI).











Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.











Doctoral programme in Translational Medicine

Learning objectives

The doctoral programme aims to train researchers who are able to develop research projects that bridge the gap between laboratory activity and clinical sciences, facilitating the translational process in both directions.

Aims:

- understand and study biological structures in the different levels of organisation, their
 physiological and pathological modifications in the framework of interactions between people
 and the environment, exploring diagnostic and therapeutic interventions and facilitating their
 application in clinical practice;
- learn a scientific translational research approach which can favour points of contact between biological and clinical-behavioural discoveries and preventive, therapeutic and rehabilitation practices in order to improve health and lifestyles, also considering the global increase in life expectancy;
- 3. develop a solid base in the methodological disciplines required to properly formulate experimental hypotheses, define experimental designs and critically interpret results;
- 4. promote communication between biological and clinical-behavioural research, particularly in relation to processes underlying movement and physical activity, in the areas of prevention, mental and physical wellbeing, sport and professional performance, in conditions of health, illness and disability, in a unified perspective;
- 5. understand the ethical implications of biological and clinical research.

The doctoral programme is entirely in English.

Academic disciplines

02/D (Applied physics, physics teaching and history of physics)

05/D (Physiology)

05/E (Experimental and clinical biochemistry and molecular biology)

05/F (Experimental biology)

05/H (Human anatomy and histology)

06/A (Pathology and laboratory medicine)

06/B (General clinical medicine)

06/C (General clinical surgery)

06/D (Specialised clinical medicine)

06/E (Specialised clinical surgery)











06/F (Integrated clinical surgery)

06/G (Paediatrics)

06/I (Radiology)

06/L (Anaesthesiology)

06/N (Healthcare, applied medical technologies, physical exercise and sports science professions)

09/G (Systems engineering and bioengineering)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

3

Scholarships

2 scholarships funded by the Department of Pathophysiology and Transplantation for the research projects: "Identification of prognostic biomarkers of adaptive immunity in inflammatory bowel diseases" and "Identification and evaluation of the genetic mechanisms underlying liver disease development to develop precision medicine approaches"

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Establishment of new in vitro models to study the West Nile virus-host interaction and seroepidemiologic studies on emerging arbovirus infections" (CUP G43C23000850006)

Doctoral programme coordinator

Prof. Chiarella Sforza, full professor in scientific-disciplinary sector BIO/16 chiarella.sforza@unimi.it

Admission requirements

Master's degree of any class

Selection stages - Doctoral programme in Translational Medicine

Qualification assessment date

Qualifications will be assessed on 15th May 2023.











Interviews

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews will be held starting from 12 September 2023.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the Curie Room of the San Paolo Hospital (Block C, third floor), Via A. di Rudinì 8, 20142 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.











Doctoral programme in Clinical Research

Learning objectives

Students will learn a correct research approach for studying the causes and the clinical-therapeutic management of diseases.

Specific objectives:

- identify clinical issues and uncertainties in pathogenesis, diagnosis, prognosis and in therapeutic approaches in various diseases;
- correctly apply different research methodologies (randomized trials, longitudinal, cross-sectional or transversal studies and case control studies);
- identify and use biological and genetic markers for studying clinical syndromes, guiding diagnosis and assessing the clinical outcome of different pathologies;
- develop critical skills to analyse and comment clinical research results published or presented at national and international conferences;
- introduce students to independent clinical research methods and to the issues and critical points relating to ethics in clinical research.

The doctoral programme is entirely in English.

Academic disciplines

02/D (Applied physics, physics teaching and history of physics)

05/E (Experimental and clinical biochemistry and molecular biology)

05/H (Human anatomy and histology)

06/A (Pathology and laboratory medicine)

06/B (General clinical medicine)

06/D (Specialised clinical medicine)

06/E (Specialised clinical surgery)

06/F (Integrated clinical surgery)

06/G (Paediatrics)

06/I (Radiology)

06/M (Public health)

06/N (Healthcare, applied medical technologies, physical exercise and sports science professions)

Research topics

Research topics are available on the University portal.

Duration











3 years

Places available

12, of which 5 are reserved, on a priority basis, for candidates holding a Master's degree in Medicine (class LM-41) and currently enrolled in a medical postgraduate school

Scholarships

8 University of Milan, of which 5 are reserved, on a priority basis, for candidates holding a Master's degree in Medicine (class LM-41) who are currently enrolled in a medical postgraduate school.

1 scholarship funded by B&M SRL for the research project: "Evaluation of the safety and effectiveness of high intensity focal ultrasound (HIFU) combined with dynamic quadripolar diathermy for face and neck rejuvenation"

1 scholarship funded by Bio Origin Solutions for the research project: "Evaluating innovative pharmacological approaches for the treatment of Medication-related Osteonecrosis of the Jaws (MRON)"

1 scholarship funded by the healthcare services company Di Blasio Srl for the research project: "Morphometric analysis of the face and dental arches in patients with rare syndromes"

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "PNRR-POC-2022-12376580 - Analyses of HPV and host body fluid biomarkers as non-invasive strategy for detection of head and neck cancer relapse" (CUP G43C23000890006)

Doctoral programme coordinator

Prof. Massimo Del Fabbro, full professor in scientific-disciplinary sector MED/50 massimo.delfabbro@unimi.it

Curricula

- Oral sciences
- Specialized medical sciences

Admission requirements

LM-41 Medicine

LM-46 Dentistry and Orthodontics

LM/SNT1 Nursing and Midwifery

LM/SNT2 Health Professions for Rehabilitation











LM/SNT3 Health Professions for Technical Assistance

LM/SNT4 Health Professions for Preventive Care.

Reference letters

The Faculty of Instructors requires that 1 reference letter, drawn up according to Form 2 attached hereto, be sent by email to the doctoral programme coordinator.

Selection stages - Doctoral programme in Clinical Research

Qualification assessment date

Qualifications will be assessed on 5th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held starting from 12 September 2023 at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the De Marchi Room of the Policlinico Hospital, located in Via Commenda 9 - 20122 Milano.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.











Doctoral programme in Environmental Sciences

Learning objectives

The doctoral programme provides solid grounding and research training in the field of Environmental Sciences, promoting interaction with Italian and foreign research groups as well as with institutions that study and manage the environment and health, and facilitating the internationalisation process.

As a highly interdisciplinary programme, it aims to provide students with:

- an understanding of the methodological, instrumental, analytical, and statistical approaches to study the environment;
- the ability to draw together interdisciplinary knowledge concerning the various components of environmental systems.

The programme ensures high standards of learning in the integrated study of complex environmental systems regarding:

- current and past biological and non-biological components;
- functional relations between the biotic and abiotic components and their mediating mechanisms;
- changes in the times of ecological, evolutionary and geomorphological processes. The programme focuses on the following aspects:
- biodiversity, at all levels of organisation of living organisms;
- -relations between biotic components, and between them and the abiotic environment, including in anthropogenic components;
- human-environment interactions, also in a diachronic perspective, both in terms of the impact of anthropic activities on environmental systems, and of the impact of the environment on risks for humans and human activities.

Another objective is to develop innovative methods for teaching environmental sciences.

Academic disciplines

01/A (Mathematics)

02/C (Astronomy, astrophysics, Earth and planetary physics)

04/A (Earth sciences)

05/A (Plant biology)

05/B (Animal biology and anthropology)

05/C (Ecology)

05/G (Experimental and clinical pharmacology)

05/I (Genetics and microbiology)

06/A (Pathology and laboratory medicine)











06/M (Public health)

07/C (Agricultural, forest and biosystems engineering)

07/E (Agricultural chemistry, agricultural genetics and pedology)

07/G (Animal science and technology)

07/H (Veterinary medicine)

Research topics

Research topics are available on the **University portal**.

Duration

3 years

Places available

8

Scholarships

3 for the implementation of the projects of the Department of Environmental Science and Policy funded by the Italian Ministry of University and Research (MUR) in the framework of the Departments of Excellence 2023-2027 Call under Law no. 232 of 11 December 2016: "Estimation of climate loss and damage functions in the agri-food system through micro-data", "Adaptation strategies to climate change based on the genetic improvement of cultivated species", "Environmental changes and biodiversity of agri-food systems"

1 scholarship co-funded by Engitec Technologies Spa under Ministerial Decree 117/2023 for the research project: "Development of a hydro-metallurgical process for the multi-component recovery of materials from spent lithium-ion batteries". Lead instructors: Mirko Magni and Prof. Luigi Orsi. (CUP G43C23001160006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Designing Green and Blue Infrastructures as a tool for environmental transition and a generating model of territorial resilience and ecosystem services" (CUP G43C23001020006)

2 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Public Administration doctorates, for the following research projects: "Enhancement of the information potential of databases to support the formulation, implementation and evaluation of environmental policies" - "Strengthening of the public administration's ability to promote actions aimed at reconciling environmental management and biodiversity conservation" (CUP G43C23001030006)











1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Cultural Heritage, for the following research project: "Enhancement and sustainable use of cultural heritage in the era of ecological transition: open data and citizen science" (CUP G43C23001040006)

Doctoral programme coordinator

Prof. Marcella Guarino, full professor in scientific-disciplinary sector AGR/10 marcella.guarino@unimi.it

Admission requirements

Master's degree of any class

Selection stages - Doctoral programme in Environmental Sciences

Qualification assessment date The assessment outcome will be posted on the University website,

on the programme webpage, before the start date of the

interviews.

Interviews

The interview schedule – specifying the place, date and time of the interview for each candidate, the title of his/her research project and the interview mode (in person or online) – will be posted on the University website, on the programme webpage. The interview will be in English. The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Literature, Arts and Environmental Heritage

Learning objectives

The doctoral programme in Literature, arts and environmental heritage is structured around two central ideas: the "text" (broadly considered as the product of an intentional creative action in the literary, artistic and environmental domains), its history and success, the forms of its production and reception; the "context", meaning all the historical and environmental circumstances in which such creative activity has developed. This programme draws from the rich experience of the previous doctoral programmes in Classical Antiquity, History of Italian language and Literature, Cultural and Environmental Heritage Sciences, delving into the cultural contents of its various disciplines (classical and modern philology and literature, linguistics, history and classical antiquity, archaeology, history of art, music and of performing arts, environmental humanities), and reorganising them in a broad and organic multidisciplinary perspective.

Academic disciplines

10/A (Archaeological sciences)

10/B (Art history)

10/C (Cinema, music, performing arts, television and media studies)

10/D (Sciences of antiquity)

10/E (Medieval Latin and romance philologies and literatures)

10/F (Italian studies and comparative literatures)

10/G (Glottology and linguistics)

10/N (Eastern and African cultures)

11/A (History)

11/B (Geography)

11/C (Philosophy)

11/E (Psychology)

Research topics

Research topics are available on the **University portal**.

Duration

3 years

Places available

2











Scholarships

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "The Japanese book and visual heritage in the public and private collections of the Piemonte region: analysis, digitization and valorisation" (CUP G43C23000990006)

1 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for Cultural Heritage doctorates, for the following research project: "Innovating to recover the past: from archaeology to digital archives - IRPAAD" (CUP G43C23001000006)

Doctoral programme coordinator

Prof. Fabrizio Slavazzi, full professor in scientific-disciplinary sector L-ANT/07

fabrizio.slavazzi@unimi.it

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-2 Archaeology
- LM-3 Landscape Architecture
- LM-5 Library Studies
- LM-10 Conservation of Architectural and Environmental Heritage
- LM-11 Science for Conservation of Cultural Heritage
- LM-12 Design
- LM-14 Modern Philology
- LM-15 Ancient Philology, Literature and History
- LM-19 Information and Publishing Systems
- LM-36 Asian and African Languages and Literatures
- LM-37 Modern American and European Languages and Literatures
- LM-38 Modern Languages for Communication and International Cooperation
- LM-39 Linguistics
- LM-45 Musicology and Musical Heritage
- LM-48 Regional, Urban and Environmental Planning
- LM-49 Tourism Development and Management











LM-50 Development and Management of Education Services

LM-51 Psychology

LM-65 Performing Arts and Multimedia Production

LM-75 Environmental and Land Sciences

LM-78 Philosophy

LM-80 Geography

LM-84 History

LM-89 Art History

LM-92 Communication

LM-94 Interpreting and Specialised Translating

LMR/02 Conservation and Restoration of Cultural Heritage.

Selection stages - Doctoral programme in Literature, Arts and Environmental Heritage

Qualification assessment date

Qualifications will be assessed on 6th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held on 13th September 2023 at 9:30 a.m.

Interviews will be held in person in the *Sala Seminari* (central courtyard, ground floor) of the Department of Literary Studies, Philology and Linguistics, located in Via Festa del Perdono 7 – 20122 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.











Doctoral programme in Exercise and Sport Sciences

Learning objectives

The interuniversity doctoral research programme in Exercise and Sport Sciences is organised in collaboration with the Università Cattolica del Sacro Cuore. The qualification of Doctor of Philosophy, abbreviated as "Dott. Ric." or "Ph.D.", is awarded jointly by the Rector of the University of Milan and the Rector of the Università Cattolica del Sacro Cuore, in accordance with Ministerial Decree no. 45 of 8 February 2013.

The PhD programme aims to develop a solid research training in the field of exercise and sport sciences, through the development of knowledge and methodologies in the following areas: sport as a complex social phenomenon, elite sport (sport performance), sport for all / sport for health. Adopting a transdisciplinary and international approach, the PhD programme also intends to promote collaborations and synergies on current projects with national and international research groups and organizations that operate through innovative methodologies in the field of physical exercise and sport. Thanks to its partnerships with the leading international academic institutions in this field, the programme has a strong international bent and is creating an international network of doctoral-level training. This network will pave the way for mutually beneficial exchanges and mobility opportunities for students and instructors from different countries. The primary objectives identified are: familiarity with various research and clinical paradigms and methodological approaches helpful for the study and the improvement of the areas listed above; in-depth knowledge of phenomena relating to sport in its many iterations; the ability to harmonise knowledge and schools of thought across a variety of disciplines; designing and carrying out applied and innovative projects drawing upon principles of research predicated on sound scientific theories and evidence.

Academic disciplines

06/N (Healthcare, applied medical technologies, physical exercise and sports science professions)

11/E (Psychology)

11/D (Pedagogy and educational theories)

13/B (Business administration and management)

14/C (Sociology)

08/D (Architectural design)

Research topics

Research topics are available on the <u>website</u> of the University serving as administrative location of the programme.

Duration

3 years











Places available

5

Scholarships:

2 University of Milan

3 scholarships offered by Università Cattolica del Sacro Cuore: of these, 1 is financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics (CUP G43C23001300006), and 1 is financed with funds allocated by Ministerial Decree 118/2023 for Public Administration doctorates (CUP G43C23001310006)

Doctoral programme coordinator

Prof. Caterina Gozzoli, full professor in scientific-disciplinary sector 11/E3 at the Università Cattolica del Sacro Cuore caterina.gozzoli@unicatt.it; phd.sport@unicatt.it

Admission requirements

Master's degree of any class

Selection stages - Doctoral programme in Exercise and Sport Sciences

Qualification assessment date

Qualifications will be assessed starting from 4th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held online on 12 September 2023 at 10:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the website of the University serving as administrative location, on the programme webpage.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.











Doctoral programme in Nutritional Sciences

Learning objectives

The doctoral programme in Nutritional Sciences offers integrated multidisciplinary and translational training in Nutrition research. The programme intends to train students in research in multiple fields, including nutrition, medicine, food chemistry, biology and veterinary medicine. Specialty areas include human nutrition, diet therapy, nutraceuticals (including animal), foods and food production, well-being, community nutrition and food education, as well as animal nutrition (also as a model) and food safety. Nutritional knowledge and skills are integrated synergistically, as part of an innovative and attractive training path.

Academic disciplines

03/D (Medicinal and food chemistry and applied technologies)

05/D (Physiology)

05/E (Experimental and clinical biochemistry and molecular biology)

05/G (Experimental and clinical pharmacology)

06/A (Pathology and laboratory medicine)

06/B (General clinical medicine)

06/D (Specialised clinical medicine)

06/F (Integrated clinical surgery)

06/G (Paediatrics)

06/H (Gynaecology)

07/G (Animal science and technology)

07/H (Veterinary medicine)

11/E (Psychology)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

13

Scholarships

6 University of Milan, of which 1 is reserved, on a priority basis, for candidates holding a Master's degree in Medicine (class LM-41) who are currently enrolled in a medical postgraduate school.











1 scholarship funded by OBM Ospedale Bambini Buzzi Milano Onlus for the research project: "Preclinical models and clinical evaluation of efficacy of diet-therapeutic approaches in the treatment of leukodystrophies"

1 scholarship funded by PIÙ UNICI CHE RARI - Italian Non-Profit Association of Alexander Disease, for the research project: "Gut-brain axis in hereditary cerebral white matter diseases: analysis of clinical, biological, biochemical and genetic factors in Alexander Disease"

1 scholarship co-funded by ATS Città metropolitana di Milano (Milan local health authority) under Ministerial Decree 117/2023 for the research project "Identification and molecular quantification of enteric viruses in water and food: development of new approaches in the prevention of foodborne diseases". Lead instructor: Prof. Claudia Alteri. (CUP G43C23001220006)

1 scholarship co-funded by Istituto Auxologico Italiano under Ministerial Decree 117/2023, for the research project: "Metabolic effects of treatment with Naltrexone/Bupropion and GLP-1 analogs in subjects with severe obesity in the context of a 4-week rehabilitation hospitalization". Lead instructor: Prof. Simona Bertoli. (CUP G43C23001220006)

3 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research projects: "Smart animal nutrition" - "Telemedicine in the nutritional management of pediatric-aged individuals with rare diseases" - "Ex-Moon - Unbiased comprehensive profiling of extended honeymoon in T1D" (CUP G43C23000860006)

Doctoral programme coordinator

Prof. Luciano Pinotti, full professor in scientific-disciplinary sector AGR/18

luciano.pinotti@unimi.it

Admission requirements

Master's degree of any class

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to <u>Form 2</u> attached hereto, be sent to the email address <u>miriam.cordoni@unimi.it</u>, and in cc to the doctoral programme coordinator at his email address luciano.pinotti@unimi.it.

Selection stages - Doctoral programme in Nutritional Sciences

Qualification assessment date

Qualifications will be assessed on 4th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.











Interviews

Interviews will be held online on 13th September 2023, at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.











Doctoral programme in Earth Sciences

Learning objectives

The doctoral programme in Earth Sciences aims to train young researchers so that they are able to autonomously investigate a broad range of geoscience topics. The mission is to train high profile geologists with scientific-technical-experimental training in the study, modelling and management of georesources, who are able to solve problems effectively. Based on past experience, the programme will focus on immediately marketable hard & soft skills and meet the need for post-graduate education with up-to-date, innovative know-how. In particular, it will provide advanced specialist training:

- 1. in basic, applied and theoretical research on problems relating to the structure, composition, evolution and dynamics of the Earth;
- 2. in the characterisation and modelling of the Earth System;
- 3. in basic and applied research on land use, natural hazards, energy and water resources, geomaterials, mineral prospecting and enhancement of cultural heritage.

The geological perspective of the overall functioning of the Earth System includes research centred on the processes at work on the surface and inside the Earth, on their impact on ecosystems and human activities and, conversely, the short and long-term consequences of human activity on the environment. The complex interactions between geosphere, biosphere, atmosphere and hydrosphere are stored in the geological record, which can be decoded to:

- reconstruct the development and evolution of our planet, combining experimental observations and models;
- define natural resources (oil, gas, mineral raw materials, water), their use and sustainable exploitation;
- evaluate geological hazards (e.g., earthquakes, volcanic eruptions, floods, landslides);
- devise works of geological engineering and infrastructures;
- implement environmental reclamation technologies;
- develop exploitation of raw materials for industrial applications;
- preserve and make the most of our cultural geo-paleontological heritage;
- evaluate forensic applications.

The EARTH SYSTEM: PROCESSES AND MODELLING curriculum aims to develop scientific-technical skills for understanding, quantifying and modelling the current Earth system and the geological record, characterised by complex interactions between geosphere, biosphere, atmosphere and hydrosphere.

The GEORESOURCES curriculum aims to develop innovative skills to address the global challenges deriving from the growing need for georesources. Research activities will focus on a wide spectrum of geological skills regarding the identification and exploitation of energy, mineral and water











resources while preserving the landscape. The aim is to train high-profile geologists with scientific-technical-experimental training for research, modelling and management of georesources and for studying and enhancing the landscape and cultural heritage.

The programme is organised to meet teaching and research requirements related to the broad spectrum of geosciences. The lines of research developed during the doctoral programme in Earth Sciences are highly topical with extensive international significance, as witnessed by close cooperation with leading international research institutions. Special attention is dedicated to training researchers to tackle complex research topics in an independent and innovative manner. Training of doctoral students includes short courses and workshops, work experience in Italian and international institutions/laboratories, collaboration with industry, participation in Italian and international conferences and workshops, and other activities focused on overall training.

The doctoral programme is entirely in English.

Academic disciplines

04/A (Earth sciences)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

10, of which 1 without scholarship for the research project: "Experimental modelling of interactions between non-oxide ceramic matrix composites (CMCs) and application environments".

Scholarships

5 University of Milan

1 scholarship funded by the Institute of Environmental Geology and Geoengineering of the National Research Council for the research project: "Experimental investigation of element (and isotope) fractionation by volatilisation of magma oceans during planet formation"

2 scholarships for the implementation of the project of the Department of Earth Sciences "Ardito Desio", funded by the Italian Ministry of University and Research (MUR) in the framework of the Departments of Excellence 2023-2027 Call under Law no. 232 of 11 December 2016.

1 scholarship co-funded by Unicalce Spa under Ministerial Decree 117/2023 for the research project "Content and distribution of Critical Raw Materials in lime production mining sites: a depositological study of useful lithologies and processing wastes". Lead instructor: Giovanni Grieco. (CUP G43C23001120006)











Doctoral programme coordinator

Prof. Maria Iole Spalla, full professor in scientific-disciplinary sector GEO/03

iole.spalla@unimi.it

Curricula

- 6. Earth system: processes and modelling
- 7. Georesources

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-11 Science for Conservation of Cultural Heritage
- LM-17 Physics
- LM-18 Computer Science
- LM-22 Chemical Engineering
- LM-23 Civil Engineering
- LM-27 Telecommunications Engineering
- LM-29 Electronic Engineering
- LM-30 Energy and Nuclear Engineering
- LM-32 Computer Systems Engineering
- LM-34 Naval Engineering
- LM-35 Environmental Engineering
- LM-40 Mathematics
- LM-48 Regional, Urban and Environmental Planning
- LM-53 Materials Engineering
- LM-54 Chemistry
- LM-58 Universe sciences
- LM-60 Natural Sciences
- LM-69 Agriculture
- LM-71 Industrial Chemistry
- LM-72 Navigation
- LM-73 Environmental and Forestry Sciences











LM-74 Geology

LM-75 Environmental and Land Sciences

LM-79 Geophysics

LM-82 Statistics

Reference letters

The Faculty of Instructors requires that 1 reference letter, drawn up according to Form 2 attached hereto, be sent to the email address phd.earth.sciences@unimi.it

Selection stages - Doctoral programme in Earth Sciences

Qualification assessment date

Qualifications will be assessed on 5th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held on 12 September 2023, at 9:30

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the Meeting Room of the Department of Earth Sciences "Ardito Desio", Via Mangiagalli 34 - 20133 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.











Doctoral programme in Pharmaceutical Sciences

Learning objectives

The doctoral programme is designed to train highly skilled doctors to work successfully in the industrial and academic fields, and in the sector of medicines and healthcare products. The training, which aims at providing advanced methodological knowledge and scientific content in the pharmaceutical sector, includes theory and research, both centred on the design, synthesis, development and control of new biologically active compounds, new pharmaceutical forms, special foods, cosmetics, biocides and medical devices, typical of the fields covered in the doctoral programme:

- Design and synthesis of biologically active compounds
- Pharmaceutical, biopharmaceutical and toxicological analysis
- · Drug metabolism and pharmacokinetics
- Pharmaceutical technology and legislation
- Chemistry of foods and dietary products
- · Fermentation chemistry and biotechnology
- · Advanced synthetic methodologies
- Physico-chemical characterization of biologically active compounds
- Herbal drugs, botanicals and active ingredients of plant origin
- Statistical methods for experimental data processing in the chemical analysis laboratory.

The doctoral programme is entirely in English.

Academic disciplines

03/A (Analytical and physical chemistry)

03/B (Inorganic chemistry and applied technologies)

03/C (Organic, industrial and applied chemistry)

03/D (Medicinal and food chemistry and applied technologies)

05/A (Plant biology)

Research topics

Research topics are available on the **University portal**.

Duration

3 years

Places available

10











Scholarships

6 University of Milan

4 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research projects: "ADMET profile and study of the mechanism of action of hyaluronic acid and/or derivatives for the treatment of osteoarticular inflammatory process" - "Innovative photo-redox approach for the synthesis of non-natural amino acids and peptidomimetics to obtain "smart materials" - "Cell membrane-based biomimetic nanoparticles as drug delivery in immunotherapies". "Production and pharmaceutical utilization of the lipophilic component of photosynthetic microorganisms grown from waste sources and wastewater from the agribusiness industry" (CUP G43C23001080006)

Doctoral programme coordinator

Prof. Giulio Vistoli, full professor in scientific-disciplinary sector CHIM/08

giulio.vistoli@unimi.it

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

LM-6 Biology

LM-8 Industrial Biotechnologies

LM-9 Pharmaceutical, Veterinary and Medical Biotechnologies

LM-13 Pharmacy and Industrial Pharmacy

LM-21 Biomedical Engineering

LM-22 Chemical Engineering

LM-26 Safety Engineering

LM-53 Materials Engineering

LM-54 Chemistry

LM-61 Nutrition

LM-69 Agriculture

LM-70 Food Science

LM-71 Industrial Chemistry

Reference letters











The Faculty of Instructors requires that 1 reference letters, drawn up according to <u>Form 2</u> attached hereto, be sent to the email address <u>dottorato.scifarm@unimi.it</u>, and in cc to the doctoral programme coordinator at his email address.

Selection stages - Doctoral programme in Pharmaceutical Sciences

Qualification assessment date

Qualifications will be assessed starting from 4th September 2023.

The assessment outcome will be posted on the <u>University</u> <u>website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held online starting from 13th September 2023 at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.











Doctoral programme in Pharmacological Biomolecular Sciences, Experimental and Clinical

Learning objectives

The doctoral programme, positioned as the third level of University education, makes the most of the multidisciplinary knowledge of the teaching staff to train biomedical experts in the most modern aspects of pharmacological research. In particular, the areas of interest are:

- Basic research: the study of key mechanisms and molecules in physiopathological processes to identify new pharmacological targets and/or new markers predictive of disease and therapeutic effectiveness. Research involves: 1) the analysis of molecular and cellular aspects of complex physiological processes, 2) the study of pathogenic mechanisms in diseases, 3) the study of biological markers that can be of use in the translation of preclinical research to humans.
- Research applied to the pharmacological-toxicological study of active ingredients: 1) analysis
 of the activity of active principles, including biological drugs under development or in clinical
 use, 2) analysis of foods, food supplements and therapeutic plant derivatives, 3) analysis of
 xenobiotic activity.
- Research applied to the creation of innovative systems for studying pathologies and developing drugs and evaluation of their effects on the population. Research is based on: 1) the development of cellular and animal models also through genetic engineering methodologies, 2) optimising preclinical protocols for simple and complex diseases, including co-morbidities, 3) in silico approaches to the study of new drug-toxicology targets, 4) the use of databases and population studies also to assess drug use and outcomes in terms of clinical events.
- Technical-scientific collaboration with other clinical centres, for revising documentation on active compounds and plant protection products, as well as for pharmacovigilance. In conclusion, students will develop competencies applicable to various areas of academic and industrial research, allowing effective bench-to-bedside translation and a multidisciplinary approach essential for public health, with a significant socio-economic impact on health.

The doctoral programme is entirely in English.

Academic disciplines

05/D (Physiology)

05/E (Experimental and clinical biochemistry and molecular biology)

05/F (Experimental biology)

05/G (Experimental and clinical pharmacology)

05/H (Human anatomy and histology)

05/I (Genetics and microbiology)

06/A (Pathology and laboratory medicine)











06/D (Specialised clinical medicine)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

17, of which 1 without scholarship for the research project: "Unveiling molecular mechanisms of Moyamoya angiopathy: from in vitro cell models to multi-omic approaches"

Scholarships

8 University of Milan

1 scholarship co-funded by INGM under Ministerial Decree 117/2023 for the research project "Investigating of Hepatitis B protein "x" (HBx) as a novel therapeutic target for Chronic Hepatitis B and hepatocellular carcinoma". Lead instructor: prof. Raffaele De Francesco. (CUP G43C23001150006)

1 scholarship co-funded by Merck Serono Spa under Ministerial Decree 117/2023 for the research project "In silico study to evaluate the impact of post-translational modifications on molecular recognition mechanisms and the biological activity of immunoglobulins". Lead instructor: Prof. Ivano Eberini. (CUP G43C23001150006)

1 scholarship co-funded by IRCCS Fatebenefratelli under Ministerial Decree 117/2023 for the research project "Early life stress exposure, gut microbiome and immune system: implication for the onset of mental disorders". Lead instructor: Prof. Annamaria Cattaneo. (CUP G43C23001150006)

1 scholarship co-funded by Linnea Sa under Ministerial Decree 117/2023 for the research project "Biological activity and characterization of natural extracts prepared with innovative and ecogreen technologies: from the university laboratory to the pharmaceutical industry". Lead instructor: Enrico Sangiovanni. (CUP G43C23001150006)

2 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research projects: "Study of circulating lipid markers to engineer precision diagnostics and targeted pharmacological approaches in cancer" (lead instructor: Prof Paola Antonia Corsetto) and "Innovative methods to develop muscle cell models for motor neuron disease modelling and therapy", (lead instructor: Maria Rita Galbiati) (CUP G43C23001050006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree118/2023 for Public Administration, for the following research project: "Enhancing the role of-botanical gardens for public health: a heritage shared between the municipality, regional institutions and universities". Lead instructor: Prof. Luigi Sironi. (CUP G43C23001060006)











1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on Digital Transitions, for the following research project: "An ecological and environmental approach to the valorisation of natural waste in alpine and prealpine areas: phytochemical evaluation and feasibility study for their use for health purposes "Lead instructor: Prof. Mario Dell'Agli. (CUP G43C23001070006)

Doctoral programme coordinator

Prof. Giuseppe Danilo Norata, full professor in scientific disciplinary sector BIO/14

danilo.norata@unimi.it

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

LM-6 Biology

LM-7 Agrarian Biotechnologies

LM-8 Industrial Biotechnologies

LM-9 Pharmaceutical, Veterinary and Medical Biotechnologies

LM-13 Pharmacy and Industrial Pharmacy

LM-17 Physics

LM-18 Computer Science

LM-21 Biomedical Engineering

LM-41 Medicine

LM-42 Veterinary Medicine

LM-54 Chemistry

LM-55 Cognitive Sciences

LM-60 Natural Sciences

LM-61 Nutrition

LM-69 Agriculture

LM-70 Food Science

LM-75 Environmental and Land Sciences

LM-82 Statistics

LM/SNT1 Nursing and Midwifery











LM/SNT2 Health Professions for Rehabilitation

LM/SNT3 Health Professions for Technical Assistance

LM/SNT4 Health Professions for Preventive Care.

Reference letters

The Faculty of Instructors requires that 2 reference letters, drawn up according to <u>Form 2</u> attached hereto, be sent to the coordinator's email address <u>danilo.norata@unimi.it</u>, and to dottorato.sfsc@unimi.it.

Selection stages - Doctoral programme in Pharmacological Biomolecular Sciences, Experimental and Clinical

Qualification assessment date

Qualifications will be assessed on 6th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held on 14th September 2023, at 8:30 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in Room D of the "Rodolfo Paoletti" Department of Pharmacological and Biomolecular Sciences, Via Balzaretti 9 - 20133 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English. Each candidate will have 10 minutes to give a PowerPoint presentation of their research project, and 5 minutes to answer the Committee's questions on the presentation.











Doctoral programme in Legal Studies "Cesare Beccaria"

Learning objectives

The programme provides high-level interdisciplinary training during which the doctoral student is offered the possibility of further study of law, with special reference to criminal law and procedure, Roman law, history, philosophy and sociology of law, and ecclesiastical and canon law.

The programme includes lessons and active participation at seminars, during which the PhD candidate will be encouraged to research different topics in detail. He/she will also be involved in research projects promoted by the Faculty of Instructors and will be urged to write and publish contributions in the framework of these projects.

During the three-year period, the student will write an extensive and original scientific paper under the supervision of one or more tutors. The paper may be interdisciplinary.

Part of the programme may also be conducted at a foreign university or research institute.

Academic disciplines

12/C (Constitutional and ecclesiastical law)

12/G (Criminal law and criminal procedure)

12/H (Roman law, history of medieval and modern law, and philosophy of law)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

1

Scholarships

1 scholarship co-funded by Legalsoftech srl under Ministerial Decree 117/2023 for the research project "Identifying cognitive, behavioural and psychological hurdles to the use of IT platforms and automated services for repetitive and low-added-value functions when performing legal searches and drafting professional documents. Investigating legal design practices and their underlying relational and communication dynamics. Formulating hypothesis on useful principles and practices for developing more effective technological platforms inspired by the best principles of legal design". Lead instructor: Prof. Luigi Cominelli. (CUP G43C23001130006)











Doctoral programme coordinator

Prof. Francesca Poggi, full professor in scientific-disciplinary sector IUS/20

francesca.poggi@unimi.it

Curricula

- 1. Criminal law and criminal procedure
- 2. Roman law and legal history
- 3. Legal philosophy, sociology of law, ecclesiastical and canon law

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

- LM-18 Computer Science
- LM-32 Computer Systems Engineering
- LM-52 International Relations
- LM-56 Economics
- LM-62 Political Science
- LM-63 Public Administration
- LM-66 Computer Systems Safety
- LM-78 Philosophy
- LM-81 Development Cooperation
- LM-84 History
- LM-88 Sociology and Social Research

LMG/01 Law.

Selection stages - Doctoral programme in Legal Studies "Cesare Beccaria"

Qualification assessment date Qualifications will be assessed on 5th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the

interviews.

Interviews will be held on 14th September 2023, at 10:00 a.m.











The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the study room of the Philosophy of Law section at the Department of Law "Cesare Beccaria", located in Via Festa del Perdono 7 - 20122 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.











Doctoral programme in Mathematical Sciences

Learning objectives

The main purpose of the PhD programme is to introduce PhD students to research in mathematics, an activity that finds its main purpose in advancing knowledge in the various fields of mathematics. To this end, the programme aims to technically train PhD students by providing them with the specialist mathematical tools that are essential to work in mathematics. In addition to the purely technical aspects, one of the objectives is to teach PhD students to navigate bibliographic research in order to identify relevant contributions. Another aspect is to teach PhD students how to interact with their colleagues on campus and elsewhere in order to facilitate progress in their research. A further aspect consists in training PhD students to disseminate and publicize their research, usually by presenting their work at seminars and conferences and by visiting other research institutes where they can present their findings, e.g. in scientific discussions.

The doctoral programme is entirely in English.

Academic disciplines

01/A (Mathematics)

13/D (Statistics and mathematical methods for decisions)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

1

Scholarships

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Climate, environment and degradation of cultural heritage: from stochastic molecules interacting on the nanoscale, to concentration mean-fields on the macroscale. Models and estimates using laboratory measurements" (CUP G43C23000980006)

Doctoral programme coordinator

Prof. Dario Paolo Bambusi, full professor in scientific-disciplinary sector MAT/07 dario.bambusi@unimi.it











Admission requirements

Master's degree of any class

Reference letters

The Faculty of Instructors requires that 1 reference letter, drawn up according to Form 2 attached hereto, be sent to the email address segrdott.mat@unimi.it

Selection stages - Doctoral programme in Mathematical Sciences

Qualification assessment date

The assessment outcome will be posted on the University website, on the programme webpage, before the start date of the interviews.

Interviews

The interview schedule – specifying the place, date and time of the interview for each candidate, the title of his/her research project and the interview mode (in person or online) – will be posted on the University website, on the programme webpage. The interview will be in English. The above-mentioned posting constitutes notification to the interested parties.











Doctoral programme in Food Systems

Learning objectives

The aim of this doctoral programme is to prepare researchers and scholars specialised in nutrition with international standard methodological know-how, autonomy and specific skills in scientific research on food systems. With these learning objectives, the doctoral programme in Food Systems envisages many cross-sector research topics:

- food technologies, process control and innovation;
- microbiology of foods and bioprocesses;
- food chemistry and biochemistry;
- human nutrition;
- ecology of agri-food and agri-environmental systems.

The doctoral programme is entirely in English.

Academic disciplines

- 03/A (Analytical and physical chemistry)
- 03/D (Medicinal and food chemistry and applied technologies)
- 05/D (Physiology)
- 05/E (Experimental and clinical biochemistry and molecular biology)
- 06/D (Specialised clinical medicine)
- 07/A (Agricultural economics and appraisal)
- 07/C (Agricultural, forest and biosystems engineering)
- 07/D (Plant pathology and entomology)
- 07/E (Agricultural chemistry, agricultural genetics and pedology)
- 07/F (Food science and technology)
- 07/I (Agricultural microbiology)

Research topics

Research topics are available on the University portal.

Duration

3 years











Places available

5, of which 1 without scholarship for the research project: "Sustainable management of invasive arthropods for fruit productions"

Scholarships

1 scholarship co-funded by Edison - Nuova Alba srl under Ministerial Decree 117/2023 for the research project "Microbial processes of attenuation and degradation of contaminants for the application of site-specific bioremediation interventions of water and soil". Lead instructor: Prof. Lucia Cavalca. (CUP G43C23001210006)

2 scholarships offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research projects: "Design of soft solid foods intended for special diets: tribological and nutritional assessment" - "Sustainable approaches to reduce the degradation process of fresh food" (CUP G43C23000870006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree118/2023 for Public Administration, for the following research project: "Bioactive compounds from agro-food chain waste for crop disease management" (CUP G43C23000880006)

Doctoral programme coordinator

Prof. Diego Mora, full professor in scientific-disciplinary sector AGR/16

diego.mora@unimi.it; food-systems@unimi.it

Curricula

- Chemistry and biochemistry
- Agri-environment
- Food science & nutrition

Admission requirements

Master's degree of any class

Selection stages - Doctoral programme in Food Systems

Qualification assessment date

Qualifications will be assessed on 5th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.











Interviews

Interviews will be held online on 13^{th} September 2023, at 10:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

The interview will be in English.











Doctoral programme in Veterinary and Animal Science

Learning objectives

The PhD programme in Veterinary and Animal Science contributes to develop highly qualified professionals capable of conducting research projects in the fields of veterinary science and zootechnics, and in the related areas of biotechnology, providing students with innovative technological and scientific knowledge and skills.

PhD students have to carry out an individual research project under the supervision of a tutor. For their project, they must choose one of the research topics proposed in the framework of the programme. In line with the University's strategic objectives, for each research project the programme provides PhD students with the opportunity to train for at least three months within an international research group.

The PhD in Veterinary and Animal Science aims to provide students with the following:

- A baseline knowledge of the methodologies needed to design and carry out interdisciplinary research projects
- A theoretical and practical foundation for the organisation, management and dissemination of research findings
- Opportunities to train and work in an international setting
- A qualification enabling them to join research groups within academia and beyond, including in the CNR (Italian National Research Council), in scientific institutes for research, as well as in zooprophylactic, industrial, and professional institutes.

The doctoral programme is entirely in English.

Academic disciplines

05/E (Experimental and clinical biochemistry and molecular biology)

07/A (Agricultural economics and appraisal)

07/C (Agricultural, forest and biosystems engineering)

07/G (Animal science and technology)

07/H (Veterinary medicine)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

14











Scholarships

12 University of Milan

1 scholarship co-funded by Salf Spa - Pharmacological Laboratory under Ministerial Decree 117/2023 for the research project "Evaluation of new strategies for preserving explanted organs using ex vivo pig models. Lead instructor: Cristina Lecchi. (CUP: G43C23001200006)

1 scholarship offered by the University of Milan and financed with funds allocated by Ministerial Decree 118/2023 for doctoral programmes on PNRR topics, for the following research project: "Combined mode of action of novel emulsifiers in monogastric diets to improve feed efficiency, animal welfare and mitigate the environmental impact" (CUP G43C23000900006)

Doctoral programme coordinator

Prof. Fabrizio Ceciliani, full professor in scientific-disciplinary sector VET/03

fabrizio.ceciliani@unimi.it

Admission requirements

Master's degree of any class

Selection stages - Doctoral programme in Veterinary and Animal Science

Qualification assessment date

Qualifications will be assessed on 1st September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held on 12 September 2023, at 9:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage. Each candidate will have to give a 5-minute PowerPoint presentation of their research project.

Interviews will be held in person in Room L121 of the Lodi campus, located in Via dell'Università 6 – 26900 Lodi (MI).

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview will be in English.











Doctoral programme in Linguistic, Literary and Intercultural Studies in European and extra-European Perspectives

Learning objectives

The doctoral programme, which is a third cycle programme, promotes advanced training for research on a broad spectrum of languages, literature and cultures of different geographical areas (Europe, Africa, the Americas, Asia), and on related interlinguistic and intercultural phenomena. Besides basic methodological training, the learning objectives of the various disciplines studied are organised into distinct research areas, and according to geographical and socio-cultural criteria. This aims, first and foremost, to allow doctoral students to further their training in a discrete area of study, through tailored educational activities, as well as through seminars focused on launching independent research in their specific field of study. Additionally, the programme includes a set of learning activities common to all students, some centred on the contacts between the various linguistic areas, and some on the three subject areas identified by the programme title (language, literature, and intercultural studies). The programme also includes training on computer-based analytical tools, which are now extensively used internationally. The result of this educational pathway is an international scholar in the very best sense of the word, fluent in several languages and able to participate in the scientific debate in Europe and beyond, perfectly positioned to act as a mediator between Italian and international studies.

The linguistic areas of specialisation for the programme are: Arabic, Chinese, Danish, French, Hindi, Japanese, English, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, and German.

Academic disciplines

10/E (Medieval Latin and romance philologies and literature)

10/F (Italian studies and comparative literatures)

10/H (French studies)

10/I (Hispanic studies)

10/L (English and Anglo-American studies)

10/M (Germanic and Slavic languages, literatures and cultures)

10/N (Eastern and African cultures)

11/A (History)

13/C (Economic history)

Research topics

Research topics are available on the University portal.

Duration

3 years











Places available

7

Scholarships

7 University of Milan

Doctoral programme coordinator

Prof. Maria Vittoria Calvi, full professor in scientific-disciplinary sector - L-LIN/07

maria.calvi@unimi.it

Admission requirements

Degree obtained in one of the following classes under Ministerial Decree 270/2004, or in one of the corresponding classes under Ministerial Decree 509/99:

LM-14 Modern Philology

LM-36 Asian and African Languages and Literatures

LM-37 Modern American and European Languages and Literatures

LM-38 Modern Languages for Communication and International Cooperation

LM-39 Linguistics

LM-94 Interpreting and Specialised Translating

Selection stages - Doctoral programme in Linguistic, Literary and Intercultural Studies in European and extra-European Perspectives

Qualification assessment date

Qualifications will be assessed on 6th September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.











Interviews

Interviews will be held on 14th September 2023, at 10:00 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in Room Shakespeare, Department of Languages, Literatures, Cultures and Mediations, Piazza Sant'Alessandro 1, 20123 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.

Applicant must pass an aptitude test before the interview. The test assesses proficiency in the student's selected language of specialisation, as reflected in their research proposal, and is taken on a pass/ fail basis.











Doctoral programme in Studies on Organized Crime

Learning objectives

The doctoral programme in Studies on Organized Crime aims to fulfil the need for highly specialized individuals in a field of such complexity and importance that new scientific know-how, as well as professional profiles and sensibilities, are required. It also aims to provide students with the knowledge (in sociology, history, law, economics, etc.) required to identify, define and contrast manifestations of organized crime, even within the scope of prevention, on the basis of sound theoretical foundations and appropriate methodological approaches.

Academic disciplines

11/A (History)

12/C (Constitutional and ecclesiastical law)

12/D (Administrative and tax law)

12/E (International, European Union, comparative, economic, market and maritime law)

12/G (Criminal law and criminal procedure)

12/H (Roman law, history of medieval and modern law, and philosophy of law)

13/B (Business administration and management)

13/C (Economic history)

13/D (Statistics and mathematical methods for decisions)

14/A (Political theory)

14/B (Political history)

14/C (Sociology)

14/D (Applied sociology)

01/B (Informatics)

Research topics

Research topics are available on the University portal.

Duration

3 years

Places available

5, of which 1 without scholarship.











Scholarships

4 University of Milan

Doctoral programme coordinator

Prof. Fabio Basile, full professor in scientific-disciplinary sector IUS/17

fabio.basile@unimi.it

Admission requirements

Master's degree of any class

Selection stages - Doctoral Programme in Studies on Organized Crime

Qualification assessment date

Qualifications will be assessed on 1st September 2023.

The assessment outcome will be posted on the <u>University website</u>, on the programme webpage, before the start date of the interviews.

Interviews

Interviews will be held on 12 September 2023, at 11:30 a.m.

The interview schedule - specifying the date and time of the interview for each candidate, as well as the title of his/her research project - will be posted on the <u>University website</u>, on the programme webpage.

Interviews will be held in person in the *Aula Seminari* of the Department of International, Legal, Historical and Political Studies, Via Conservatorio 7, 20122 Milan.

Candidates who cannot attend the interview in person for justified reasons may take the interview remotely. To this end, they must submit a request using Form 3.

The interview can be in Italian or English, at the candidate's choice. English proficiency will be assessed anyway.



Il sottoscritto/the undersigned









ANNEX A

DICHIARAZIONE SOSTITUTIVA DI ATTO NOTORIO

Self drafted affidavit (art. 47 del DPR n° 445/2000) (art. 47 Presidential Decree n. 445/2000)

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cognome/surname	nome/name	
nato a/born in	il/on	
veritiere e falsità in atti	richiamate dall'articolo 76 del Dpr 445/2000 in cand using fake documents are crimes punishable by 2000)	
	iara sotto la propria personale responsabilità declares under his/her own responsibility	
che le pubblicazioni/ i titoli sotto	elencati, prodotti in copia tramite upload, sono c	conformi all'originale.
that the publications and the qua	lifications listed below, produced as copies, comp	ly with the originals.
Milano,		
		Data/date
		Firma/Signature

Ai sensi dell'art. 3 del DPR 445/2000 l'autocertificazione può essere utilizzata solo dai cittadini appartenenti all'Unione europea. I cittadini non europei devono produrre documenti originali o in copia autenticata secondo la normativa vigente.

According to the art. 3 of the Presidential Decree no. 445/2000, only Eu citizens are entitled to use this form. Non Eu citizens must submit the original documentation or photocopies authenticated in compliance with the law in force



Il sottoscritto/the undersigned









ANNEX B

DA COMPILARSI SOLO SE SI PRESENTA DOMANDA DI AMMISSIONE PER POSTI RISERVATI / THIS FORM MUST BE FILLED ONLY BY THOSE APPLYING FOR RESERVED POSITIONS INSERIRE IL PRESENTE ALLEGATO IN PROCEDURA DI UPLOAD

DICHIARAZIONE SOSTITUTIVA DI ATTO NOTORIO

Self drafted affidavit art. 47 del DPR n° 445/2000/art. 47 Presidential Decree n. 445/2000

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	egree (Master's degree) in the area of LM-41 Medicine Specialisation School in medical area in at;	the University
che le pubblicazioni/ i titoli sot	to elencati, prodotti in copia tramite upload, sono conformi a	ll'originale:
that the publications and the qu	ualifications listed below, produced as copies, comply with the	e originals:
Milano,	Data/date	
	Fir	ma/Signature

Ai sensi dell'art. 3 del DPR 445/2000 l'autocertificazione può essere utilizzata solo dai cittadini appartenenti all'Unione Europea. I cittadini non europei devono produrre documenti originali o in copia autenticata secondo la normativa vigente. According to the art.











3 of the Presidential Decree no. 445/2000, only Eu citizens are entitled to use this form. Non Eu citizens must submit the original documentation or photocopies authenticated in compliance with the law in force.











FORM 1

PROGETTO DI	RICERCA / PROJECT
Cognome e nome del candidato Applicant's Name	
Corso di dottorato PhD	
1) Titolo del progetto / Project title	
2) Sommario / Abstract	
3) Obiettivi e rilevanza dei risultati ottenibili nel contes the context of the state of the art	sto dello stato dell'arte / Project aims and their relevance in
4) Descrizione del progetto / Project description	
5) Bibliografia / References	

Il progetto dovrà avere almeno 2.000 e non più di 4.000 parole, bibliografia esclusa. The project should have at least 2,000 and not more than 4,000 words, excluding references.











FORM 2 (ITALIAN VERSION)

LETTERA DI REFERENZA

Cognome e nome del candidato	Corso di dottorato	
carididato	doctorato	

Da compilare in tutte le parti

Cognome e nome del referente	Ruolo	
Università/Ente		
Indirizzo	Città	
CAP	Paese	
Telefono	Email	
Data		

Come valuta la qualità del candidato rispetto ad altri studenti di pari livello formativo (studenti di un corso, laureandi, ecc...)?

Sotto lamedia(50%)	Тор 50%	Top 25%	Top 10%	Top 5%	Top 2%

Come valuta l'attitudine del candidato alla attività di ricerca?

Inabilitato arispondere	Sotto la media	Media	Buona	Ottima	Eccezionale

Commento (Giudizio personale sul candidato)











FORM 2 (ENGLISH VERSION)

REFEREE FORM

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pplicant in ove	erall promise fo	or the doctorate	e (check one)	
Below Average	Average	Good	Outstandi	ng Exceptional
ents here valuation abou	t the candidate	e)		
			nts here aluation about the candidate)	











FORM 3

RICHIESTA COLLOQUIO TELEMATICO - ONLINE INTERVIEW

DA COMPILARSI <u>SOLO</u> SE IL COLLOQUIO PER L'AMMISSIONE È PREVISTO IN PRESENZA DAL BANDO E IL CANDIDATO È IMPOSSIBILITATO A PRESENTARSI

THIS FORM MUST BE FILLED <u>ONLY</u> BY APPLICANTS WHO ARE UNABLE TO SIT THE INTERVIEW ON THE UNIVERSITY PREMISES AS REQUIRED BY THE PHD ADMISSION CALL

IL/LA SOTTOSCRITTO/A - THE UNDERSIGNED (COGNOME/SURNAME)	
(NOME/NAME)	
PASSAPORTO O CARTA D'IDENTITÁ/PASSPORT (DR IDENTIY CARD n°
EMAIL	
RICHIEDE DI SOSTENERE L'ESAME DI AMMISSION	E AL DOTTORATO IN MODALITÁ TELEMATICA/
REQUESTS TO TAKE THE PHD ADMISSION EXAM	REMOTELY
PER I SEGUENTI MOTIVI /FOR THE FOLLOWING	REASONS:
DATA/DATE	FIRMA DEL RICHEDENTE /
	SIGNATURE OF THE APPLICANT