



# ANNEX 1

## MACRO-AREA OF SCIENCE AND TECHNOLOGY

### PhD COURSE IN BIOENGINEERING, BIOINFORMATICS AND HEALTH TECHNOLOGIES

**LOCATION:** DEPARTMENT OF ELECTRICAL, COMPUTER AND BIOMEDICAL ENGINEERING

**COORDINATOR:** Prof. SILVANA QUAGLINI

**RESEARCH TOPICS:** bioinformatics, biomedical informatics (including artificial intelligence techniques applied to biomedical data), modeling of biological systems, biomedical technology (including advanced methods of signal and image analysis in multimodal contexts), computational biomechanics (including fluidodynamics), biological tissue engineering, biomaterials, synthetic biology.

**DEADLINE FOR APPLICATIONS:** **July 28, 2023 at 13:00, CET**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and interview.**

Candidates are allowed to take the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarships will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 15 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. motivation letter in Italian or English language (max 500 words) (up to 1 point);
- b. research project either in Italian or in English (max. 1500 words, bibliography not counted), related to PhD research topics. The project's structure should be as follows: short general



introduction about the state of the art relative to the chosen topic; presentation of the research's objectives; discussion of the expected results; evaluation of the theoretical and/or practical implications (up to 5 points);

- c. exams taken during the candidate's degree courses, bearing the mark (up to 6 points);
- d. scientific publications (up to 1 point);
- e. *curriculum vitae* (up to 2 points).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 8/15.**

The results of the qualifications assessment will be published online no later than **September 12, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 28, 2023, at 9:30 (CET)**, "Aula Seminari verde" of the Department of Electrical, Computer and Biomedical Engineering - Floor D - Via Ferrata n. 5 – Pavia.

The research project will be discussed during the interview and is meant to verify the candidate's aptitude towards research. It will not be binding if the candidate is admitted onto the PhD course.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFO:** <http://phdbb.unipv.eu/>

The PhD course involves the following programs:

1. Biomedical informatics
2. Diagnostic, therapeutic and rehabilitative bioengineering
3. Cell and tissue Bioengineering

**PHD COURSE  
IN COMPUTATIONAL MATHEMATICS, LEARNING, AND DATA SCIENCE**

**LOCATION:** DEPARTMENT OF MATHEMATICS "F. CASORATI"

**COORDINATOR:** Prof. LUCA FRANCO PAVARINO;

**COOPERATING INSTITUTION:** Università della Svizzera Italiana (USI) and Bruno Kessler Foundation

The PhD degree will be jointly conferred by the Rector of the University of Pavia and the Rector of the Università della Svizzera Italiana (USI).



The PhD student funded by Fondazione Bruno Kessler will perform the PhD activities at the Fondazione. The main location of the other PhD students will be the Università degli Studi di Pavia.

PhD students will have to spend a mobility period at the Università della Svizzera Italiana of at least six months over the three years. In the case of the PhD student funded by Fondazione Bruno Kessler, the mobility period at USI will be mandatory provided that it is required by the educational program of the student.

#### RESEARCH TOPICS:

##### Computational Mathematics

- **Mathematical Analysis and Modeling:** partial differential equation models and applications, functional analysis, nonlinear analysis, variational models and methods, calculus of variations
- **Numerical Analysis and Scientific Computing:** numerical methods for ordinary and partial differential equations (finite elements, spectral elements, isogeometric analysis), approximation of data and functions, numerical linear algebra, parallel and distributed computing, numerical simulation
- **Optimization and Operational Research:** Optimization methods, convex, integer, quadratic, and nonlinear programming, optimization algorithms, Control Theory
- **Biomathematics and computational medicine:** mathematical and numerical modeling in Biology, Physiology, Neurosciences, Cardiology, Epidemiology

##### Machine Learning, Deep Learning

**Mathematical Physics:** kinetic theory, granular media, statistical mechanics, diffusion equations, hyperbolic systems, socio-economic modeling

**Deep Learning:** Artificial Neural Networks, mathematical and computational aspects; Physics-Informed Neural Networks, Deep Operator Networks;

##### Data Science and Artificial Intelligence:

**Computational Physics and Biophysics:** mathematical and computer methods in Elementary Particle and High Energy Physics, Monte Carlo methods, quantum computing, biophysical models and Monte Carlo methods in Radiotherapy and Hadrotherapy

**Computational Statistics:** multivariate Statistics, data analysis, Bayesian Statistics, analytical models for Big Data and Data Sciences

**Decision Sciences:** decision models, decision under uncertainty, risk theory, game theory

**Machine Learning, Artificial Intelligence, Computational Intelligence:** Machine Learning, Statistical Learning, Artificial Neural Networks, Deep Learning; applications in Neuroscience, Neuroimaging, Cardiology, Epidemiology.

A more detailed description of the research carried out in this PhD program is available at <http://compmat.unipv.it/>. For details about research at the Department of Mathematics of the University of Pavia, see <http://matematica.unipv.it/>; for details about research at the Department of Brain and Behavioral Sciences of the University of Pavia (Medical and Genomic Statistical Unit), see [http://dbbs.unipv.it/ricerca\\_biostatistica\\_neurofisiologia\\_psichiatria/](http://dbbs.unipv.it/ricerca_biostatistica_neurofisiologia_psichiatria/) and <https://mastergds.it/>; for



details about research at USI Institute of Computational Sciences see <https://www.ics.usi.ch>; for details about research at Bruno Kessler Foundation, see <https://www.fbk.eu/it/>.

**DEADLINE FOR APPLICATION: June 26, 2023 at 12:00 CET**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: June 26, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview via videoconference.** Candidates are allowed to take the interview in English.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarships will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 15 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. letter of intent written in English (max 2000 words) including the research project to be carried out during the PhD course. This will not be binding if the candidate is admitted to the PhD program: **up to 3 points**;
- b. exams taken during the candidate's masters degree course: **up to 4 points**;
- c. a maximum of 1 reference letter, issued and submitted directly by a professor from the university where the applicant's degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referee who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee: **up to 2 points**;
- d. abstract of the Master thesis, if available (max 1000 words), publications and preprints. Concerning publications and preprints, candidates may also send an abstract and indicate a DOI (Digital Object Identifier), or otherwise provide a link to a web repository. Only publications from the last 5 years that are congruent with the research topics of the PhD course will be considered: **up to 2 points**;
- e. *curriculum vitae*: **up to 4 points**.

Except for the reference letter, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 10/15.**

The results of the qualification assessment will be published online no later than **July 10, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.



**INTERVIEW: July 18, 2023 at 9:00 (CET), via videoconference.**

The interview will be held in Italian or English and will verify the candidate's knowledge of English. The interview will concern the main topics covered by the PhD course and will include a short presentation of the research project meant to verify the candidates' aptitude towards research.

Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <http://compmat.unipv.it/>

#### **DETERMINATION OF THE UNIVERSITY AFFILIATION**

Once the ranking list has been determined, selected candidates will be asked to express their preference regarding the location of their PhD activities, between the University of Pavia and the Fondazione Bruno Kessler. The Academic Board of the PhD course will then assign the students' location based on the candidates' preference, until the PhD positions at one of the two locations have all been attributed. Then, the remaining PhD students will be assigned the positions at the other location, irrespective of their indicated preference.

### **PhD COURSE IN DESIGN, MODELING, AND SIMULATION IN ENGINEERING**

**LOCATION:** DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE

**COORDINATOR:** Prof. FERDINANDO AURICCHIO

**RESEARCH TOPICS:** Civil Engineering, Hydraulic Engineering, Building Engineering and Architecture, Computational Mechanics, Industrial Engineering, Applied Mathematics, Materials Engineering.

**DEADLINE FOR APPLICATIONS:** **July 28, 2023 at 13:00, CET**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and interview.** Candidates are allowed to take the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT:** **UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH**



**CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. exams taken during the candidate's degree courses, bearing the marks (up to **5** points);
- b. abstract of the master thesis, scientific publications, preprints (up to **2** points);
- c. *curriculum vitae* (up to **3** points).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 7/10.**

The results of the qualifications assessment will be published online no later than **September 15, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 25, 2023, at 10:00 (CET)**, Aula MS1 of the Department of Civil Engineering and Architecture – Via Ferrata n. 3, Pavia.

The interview will concern the main topics covered by the PhD course.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <http://phd.unipv.it/phd-program-in-design-modeling-and-simulation-in-engineering/>

The PhD course involves the following programs:

- a. Civil Engineering and Architecture – tracks: i) Structures and Materials; ii) Hydraulic, Environment & Energy Engineering; iii) Building Engineering/Architecture
- b. Computational Mechanics.

**PhD COURSE  
IN PHYSICS**

**LOCATION:** DEPARTMENT OF PHYSICS

**COORDINATOR:** Prof. DANIELA MARCELLA REBUZZI

**COOPERATING INSTITUTION:** National Institute for Nuclear Physics - INFN

**TOPICS:** Nuclear and subnuclear physics, theoretical and mathematical physics, condensed matter physics (including experimental and theoretical solid-state physics, optics and photonics, quantum information), interdisciplinary and applied physics (biomedical physics, energy, ICT-Information and communication technology)

**DEADLINE FOR APPLICATION: June 26, 2023 at 12:00 (CET)**





**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: June 26, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview.** Candidates are allowed to take the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

The candidates' qualifications must, in the judgement of the examining committee, meet the standards of a solid application story. Subsequently, the preparation of the applicants is evaluated in an interview, whose purpose is to demonstrate a comprehensive knowledge of basic Physics and to assess the student's analytic ability, creativity, and potential for successful completion of the PhD course in Physics.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. exams taken during the candidate's degree courses, bearing the marks (**up to 4 points**);
- b. Master's degree thesis, possible publications and professional experience. A 2-page abstract of the thesis must be attached to the application. Publications and similar documents must be attached to the application in their complete version (**up to 2 points**);
- c. outline of the research project (max 2 pages), in Italian or English. This will not be binding if the candidate is admitted onto the PhD course (**up to 2 points**);
- d. a maximum of 2 reference letters, issued and submitted directly by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referees who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, these letters must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee (**up to 2 points**).

Except for the reference letters, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 6/10.**

The results of the qualifications assessment will be published online no later than **July 15, 2023**. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: July 25 and 26, 2023, at 9:00 (CET),** Physics Department, Via Bassi n. 6, Pavia.

The interview will concern the main topics covered by the PhD course and the research project.



Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <http://www-2.unipv.it/dottorati/scienzeetecnologie/fisica/index.php>

The PhD course involves the following programs:

1. Physics of Fundamental Interactions;
2. Condensed Matter;
3. Interdisciplinary and Applied Physics.

**PhD COURSE  
IN ELECTRONICS, COMPUTER SCIENCE  
AND ELECTRICAL ENGINEERING  
(INDUSTRIAL DOCTORATE)**

**LOCATION:** DEPARTMENT OF ELECTRICAL, COMPUTER AND BIOMEDICAL ENGINEERING

**COORDINATOR:** Prof. ILARIA CRISTIANI

**PARTNER COMPANIES:** ABB Switzerland Ltd, Bright Solutions Srl;

**RESEARCH TOPICS:** Photonics and Microwave Technologies, Space Communications Systems, Computer Engineering and Automation, Electrical Engineering, Mechatronics and Robotics

**DEADLINE FOR APPLICATIONS:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and interview.** Candidates are allowed to take the interview in English.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarships will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. degree marks of both the bachelor and master's degree. If the master's degree hasn't been attained yet, the marks obtained during the master's degree course will be considered, provided that at least half of the total credits required for the master's course have been achieved by the date of the application submission (**up to 6 points**);





- b. publications (**up to 1 point**);
- c. *curriculum vitae* (**up to 1 point**);
- d. 2 reference letters, issued and submitted directly by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant. The Committee will assess the relevance of what is declared in the letter, the scientific reputation of the person signing the letter and the number of letters submitted. During the online application, the candidate will enter the contact data of the chosen referees who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee (**up to 2 points**).

Except for the reference letters, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 6/10.**

The results of the qualifications assessment will be published online no later than **September 7, 2023**. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 13, 2023, at 9:30 (CET), via videoconference.**

Candidates will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <https://phdieie.unipv.it/>

The PhD course involves the following programs:

- a. Photonic, Microwave and Telecommunications
- b. Computer Engineering and Automation – including the curriculum in Financial Technologies (FinTech);
- c. Industrial Engineering.

### **PhD COURSE IN MATHEMATICS**

**LOCATION:** DEPARTMENT OF MATHEMATICS "F. CASORATI"

**COORDINATOR:** Prof. THOMAS WEIGEL (University of Milano-Bicocca)

**COOPERATING INSTITUTION:** University of Milano-Bicocca, Istituto Nazionale di Alta Matematica "F. Severi" (INdAM) and Consorzio Interuniversitario per l'Alta Formazione in Matematica (CIAFM).

The PhD degree will be jointly conferred by the Rector of the University of Pavia and the Rector of the University of Milano-Bicocca.



**CURRICULA:**

1. Algebra and Geometry;
2. Mathematical Analysis;
3. Numerical Analysis and Mathematical Modelling;
4. Mathematical Physics;
5. Probability and Statistics.

**RESEARCH TOPICS:**

With indications of the University Milano-Bicocca (MIB) or Pavia (PV) where they are developed:

Algebra and Geometry: group theory, theory of Lie algebras and their representations (MIB); category theory, algebraic geometry (PV), real and complex differential geometry (MIB and PV), symplectic geometry (MIB) and hyperbolic geometry (PV).

Mathematical Analysis: partial differential equations and their applications in physics, biology and engineering; control and optimization theory, nonlinear and functional analysis (MIB and PV); harmonic and geometric analysis (MIB); variational models and techniques, calculus of variations (PV).

Numerical Analysis and Mathematical Modelling: study of numerical methods (finite elements, isogeometric and virtual techniques) aimed at solving partial differential equations in the context of solid mechanics, fluid dynamics, interaction between fluids and structures, electromagnetism, and and with focus on applications in engineering and biomathematics; constrained optimization models and methods; computer aided design, approximations of data and functions, numerical linear algebra (MIB and PV).

Mathematical Physics: soft matter mathematical modelling, kinetic theory, classical and quantistic field theory, complex systems (PV); fluid mechanics (PV e MIB), geometric and analytic theory of integrable systems, Frobenius manifolds, dynamical systems and mathematical methods of quantum mechanics (MIB).

Probability, Statistics and Mathematical Finance: stochastic differential equations, statistical mechanics, stochastic control theory (MIB and PV); random walks, systems with interacting particles, economical and financial applications (MIB); quantum probability, convergence of probability measures, finitely additive probability measures, bayesian statistics (PV).

A more detailed description of the research interests of the members of the Academic Board of the PhD course and of the research topics carried out by the two participating departments is available at <http://phd.unipv.it/phd-program-in-mathematics/>, as well as in the websites <http://www.matapp.unimib.it/> and <http://matematica.unipv.it/> of the two departments.

**DEADLINE FOR APPLICATION: June 26, 2023 at 12:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: June 26, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview via videoconference.**

Candidates are allowed to take the interview in English.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 15 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH**



**CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. *curriculum vitae*: **up to 3 points**;
- b. exams taken during the candidate's degree courses, bearing the marks and both arithmetic and weighted mean (candidates must not consider honours while calculating the mean): **up to 5 points**;
- c. a minimum of 1 reference letter, in Italian or English language, issued and submitted directly by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referees who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee: **up to 4 points**;
- d. abstract of the master thesis, publications and pre-prints. For publications and pre-prints, candidates can send an abstract and a link to an online repository or a DOI (*digital object identifier*): **up to 3 points**.

In addition to the above-mentioned qualifications, candidates will have to submit a motivation letter, in which they explain their possible interest for one of the topic-related scholarships (including the PNRR scholarship), and specify which of the two participating departments they find most suited to their scientific interests (Department of Pure and Applied Mathematics at the University of Milano Bicocca, or "F. Casorati" Department of Mathematics of the University of Pavia). The candidate's choice must be scientifically motivated. The motivation letter will not be assessed, but it will be used as a starting point for the interview.

Except for the reference letter, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 7/15.**

The results of the qualifications assessment will be published online no later than **July 17, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: July 24, 2023. Videoconference starting at 9.00.**

The interview will be held in Italian or English and will in any case verify the knowledge of the English language. It will concern the main topics covered by the PhD course and will take its cue from the motivation letter submitted by the candidate. Candidates are asked to prepare a presentation (max 15 minutes, with possible use of slides in pdf format).

Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFO:** <http://phd.unipv.it/phd-program-in-mathematics/>

**DETERMINATION OF THE AFFILIATION TO A DEPARTMENT:** At the end of the enrollments, the Academic Board of the PhD program will attribute to each PhD student the affiliation to one of the

two departments involved, based upon the preference expressed in the motivation letter, and using the ranking order as a priority criterion, until all the scholarships of one of the two Universities have been assigned. To the first winner, in descending order of the ranking list, who is unable to obtain a scholarship from his/her preferred University, an INdAM scholarship will be assigned; this candidate will be allowed to choose his/her affiliation. Once all the scholarships of either one of the two Universities and the first INdAM scholarship have all been attributed, the remaining winners will be assigned to the other department, irrespective of their indicated preference, and will be attributed the University scholarships first and then the second INdAM scholarship.

**PhD COURSE  
IN CHEMICAL AND PHARMACEUTICAL SCIENCES,  
AND RELATED INDUSTRIAL INNOVATION**

**LOCATION:** DEPARTMENT OF CHEMISTRY;

**COORDINATOR:** Prof. GIORGIO COLOMBO;

**RESEARCH TOPICS:**

**Chemistry:** Green Chemistry; Asymmetric synthesis, Computational methods in bio-inorganic systems; Ligands for nucleic acids; synthesis of biologically active compounds via pericyclic reactions; Polymers for energetics; Supramolecular devices; Functional nanomaterials; Surfaces with molecular monolayers; Adsorbants and solid catalysts for analytical applications; Biomimetic chemosensors; Materials for stone/wood supports; Structures/properties of metallo-enzymes; Photochemistry, C-H activation; Development of new generation perovskite based solar cells/Fabrication and characterization of perovskite based solar cells/Physico chemical characterization of nanostructured materials; Analytical Chemistry applied to forensic sciences; Electroanalytical chemistry; Adsorbents, Solid Catalysts; Optical sensors for analytical applications.

**Pharmaceutical sciences:** Identification of novel neuroprotective and anticancer drugs; macromolecule immobilization; Identification of new neuroprotective and antitumor agents; Immobilization of macromolecules; Nutraceuticals from agri-food waste: isolation, characterization, bioactivity and bioaccessibility studies; Study of Molecularly Imprinted Polymers-biological target interactions; Development of innovative supports for analytical applications in the pharmaceutical field; LC-MS for the characterization of proteins of pharmaceutical interest; Drug discovery from plants; New site-specific therapeutic systems, development of scaffolds for tissue repair (cutaneous, tendon-osteoarticular, central and peripheral nervous system and tubular organs); Development of nanoparticulate protein systems for the active delivery of drugs and for anticancer immunotherapy; Development of medicines based on mesenchymal stem cell derivatives for regenerative medicine and drug delivery; Development of medicinal products for advanced therapies, somatic cell therapy and tissue engineering.

**Industrial innovation:** Scale-up of products and processes in the chemical and pharmaceutical fields; development of formulation strategies in pharmaceutical industry.



**DEADLINE FOR APPLICATION: July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: July 28, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview.** Candidates are allowed to have the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics, with the exception of the scholarship funded within the project “Facing Global Challenge”, must select, during the application process, the appropriate category (982); these candidates’ interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

Candidates who intend to apply for the scholarship funded within the project “Facing Global Challenge” must select, during the application process, the category 989 and state their interest for that scholarship to the examining committee before the interview; these candidates’ interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarship will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates’ knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 15 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE’S QUALIFICATIONS, AS FOLLOWS:**

1. arithmetic average of the marks obtained in the exams taken during the candidate’s degree courses, to be calculated and declared by the candidates themselves; in the case of degree obtained in a foreign institution, the committee will use the ECTS grading tables (**up to 9 points**);
2. *curriculum vitae et studiorum* (**up to 3 points**);
3. motivation letter, either in Italian or English (max 1000 characters, spaces included), along with / including a research project developed by the candidate (max 3000 characters, spaces included; max 2 figures), either in Italian or English (**up to 3 points**). The project, which will not be binding if the candidate is admitted onto the PhD program, must contain a general introduction about the state of the art on the topic, a presentation of the research objectives, a discussion of the expected results as well as an evaluation of the theoretical and/or practical implications.

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 9/15.**

The results of the qualifications assessment will be published online no later than **September 7, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 14, 2023, at 9:00 (CET)**, at the Department of Chemistry – Aula CG3 (General Section) – Viale Taramelli n. 12 – Pavia.

The interview will concern the topics covered by the PhD course and may include a discussion on the candidates' experimental thesis and/or on the research project, in order to assess their aptitude and potential.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** please contact the PhD Coordinator Prof. Giorgio Colombo: [phd.cfi@unipv.it](mailto:phd.cfi@unipv.it)

PhD course involves the following programs:

- a. Chemistry;
- b. Pharmaceutical Sciences;
- c. Industrial Innovation.

### **PHD COURSE IN EARTH AND ENVIRONMENTAL SCIENCES**

**LOCATION:** DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES;

**COORDINATOR:** Prof. RICCARDO TRIBUZIO;

**RESEARCH TOPICS:**

- Selection and characterization of fungal strains for innovative technologies in wastewater treatment
- Human-mediated effects of climate change on amphibian populations at a lowland-mountain interface
- A functional trait approach to study 'losers' and 'winners' of climate change in European alpine plant communities
- Study of the first continental tectono-sedimentary phases of the Alpine Cycle in the Basque-Cantabrian area of the Pyrenees.
- Linking rates of oceanic spreading with geochemical heterogeneity of the lower oceanic crust: a case study from the ultra-slow spreading Gakkel Ridge
- LET2BE - Linking the Exposed belt to the Buried one: motion of the crust in the Emilian arc of the Northern Apennines
- Greening Agroecosystems on the Bases of Nature Based Solutions: case studies in vineyards and olive tree plantations in the N-Apennines
- Dynamics of the crust-mantle transition zone from the United Arab Emirates ophiolite
- Morphological, ecological and behavioural adaptations of ectotherms to alpine lacustrine environments





- Chemical-physical parameters ruling the lower crust and upper mantle rheology
- Integrated soil erosion assessment in a Mediterranean catchment of the Northern Apennines. An innovative modelling framework to analyse sediment sources, transport and deposition processes.
- The effect of changing soil surface conditions on runoff and soil erosion using an experimental approach.
- Nature-based solutions (NbS) for hydrogeological hazard mitigation in the context of digital and ecological transition
- Implementation of acoustic environmental monitoring in the management of a National Park
- Modelling of the ecological network of the Province of Pavia for the assessment of the impacts on environmental connectivity and the definition of improvement and defragmentation actions
- Improvement of organic and biodynamic techniques for the enhancement of fertility and production systems in Po Valley, Italy.

**DEADLINE FOR APPLICATION: July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: July 28, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview via videoconference.** Candidates are allowed to take the interview in English.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

1. arithmetic mean of the marks obtained in the exams taken during the candidate's degree courses, to be calculated and declared by the candidates themselves (**up to 5 points**);
2. research project and qualifications (**up to 5 points**). The research project (max 5000 characters, spaces included), in Italian or English, must concern one of the research topics included in the PhD course. The project is meant to verify the candidate's aptitude towards research. It will not be binding if the candidate is admitted onto the PhD course. The qualifications include research and development activity for public and private institutions, scientific publications, postgraduate scientific education (internships, training courses, participation in conferences).

The qualifications must be submitted according with the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 5/10.**



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The results of the qualifications assessment will be announced no later than **September 12, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided during registration.

**INTERVIEW: September 14, 2023, starting at 9:30 (CET), via videoconference.**

The interview will be held in Italian or English and will be an opportunity to verify the candidate's knowledge of English. The interview will consist of a short presentation of the research project (max 15 minutes; the use of technological support such as slides is encouraged) that is designed to verify the candidate's aptitude towards research. The research project presented by the candidate will not, in any way, be binding if the candidate is admitted onto the PhD course. More details on research topics are available at the following website: <http://phd-dsta.unipv.it/>.

Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFO:** <http://phd-dsta.unipv.it>



## MACRO-AREA OF LIFE SCIENCES

### PhD COURSE IN GENETICS, MOLECULAR AND CELLULAR BIOLOGY

**LOCATION:** DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"

**COORDINATOR:** Prof. DAVIDE SASSERA

#### RESEARCH TOPICS:

- Functional and population genomics of humans and animal species, archaeogenomics and epigenomics.
- Molecular and cellular bases of hereditary and complex disorders, aging, cell and organ differentiation and development, evolutionary mechanisms.
- DNA replication and repair, transcription, regulation of gene expression.
- Microorganisms and viruses of clinical and biotechnological relevance. Interactions between prokaryotes and eukaryotes.
- Biotechnological and molecular approaches for the improvement of crop species.
- Functional and structural characterization of potential targets for pharmacological drugs, development of therapeutic molecules and study of mechanisms of action.

For further information please visit: <http://phdsgb.unipv.eu/site/en/home/research-topics.html>

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

#### ADMISSION PROCEDURE:

Candidates applying for the regular scholarships and for the scholarship funded within the project "Facing Global Challenge" (cat. 989) will be selected upon **qualifications assessment and tests (written test and interview)**.

Candidates applying for a topic-related scholarship (cat. 982), except for the scholarship funded within the project "Facing Global Challenge", will be selected upon **qualifications assessment, research project and interview**.

Candidates are allowed to have the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).



**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics, with the exception of the scholarship funded within the project “Facing Global Challenge”, must select, during the application process, the appropriate category (982); these candidates’ interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

Candidates who intend to apply for the scholarship funded within the project “Facing Global Challenge” must select, during the application process, the category 989 and state their interest for that scholarship to the examining committee before the interview; these candidates’ interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarship will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates’ knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE’S QUALIFICATIONS, AS FOLLOWS:**

- a. reference letters (up to two) in Italian or English, issued and submitted directly by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referee who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee (**up to 1 point**);
- b. scientific publications. Only publications from the last 5 years that are congruent with the research topics of the PhD course will be considered (**up to 1 point**);
- c. arithmetic mean of the marks obtained in the exams taken during the candidate’s degree courses, to be calculated and declared by the candidates themselves (**up to 8 points**).

*A curriculum vitae* is also required, which will not be considered for assessment.

In addition to the qualifications listed above, candidates applying for the category 982 (topic-related scholarships, with the exception of the scholarship funded within the project “Facing Global Challenge”) will have to upload a **research project** (max 5000 characters, including spaces and bibliography). The project’s structure must be written as follows: 1) short introduction about the state of the art relative to the chosen topic; 2) presentation of the research objectives; 3) discussion of the expected results with evaluation of the theoretical and/or practical implications. The research project will not be considered for assessment, but it will be discussed during the interview in order to ascertain the candidate’s aptitude towards research.

Except for the reference letters, the qualifications must be submitted according to the procedure described in art. 5, para. 2 of this call for applications.

**WRITTEN TEST: September 4, 2023, at 9:30 (CET),** Aula “Jucci” of the building “Golgi-Spallanzani” of the University of Pavia - Via Ferrata n. 9 – Pavia;

**INTERVIEW: September 6, 2023, at 9:30 (CET),** Aula “Jucci” of the building “Golgi-Spallanzani” of the



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University of Pavia - Via Ferrata n. 9 – Pavia.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <http://phdsgb.unipv.eu/site/en/home/admission-procedures.html>

### PhD COURSE IN EXPERIMENTAL MEDICINE

**LOCATION:** DEPARTMENT OF INTERNAL MEDICINE AND MEDICAL THERAPEUTICS

**COORDINATOR:** Prof. STEFANO PERLINI

**RESEARCH TOPICS:** general medicine, medical therapy, experimental surgery, microsurgery, anesthesiology, biomedical technologies, bioethics-noetics in surgical patients.

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and interview.** Candidates are allowed to take the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of the English language will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. *curriculum vitae* (up to 4 points);
- b. former periods of proven research activity at Italian or foreign scientific institutions (up to 3 points);
- c. published full papers in peer reviewed medical journals (up to 3 points).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 6/10.**

The results of the qualifications assessment will be announced no later than **September 6, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided during registration.

**INTERVIEW:** **September 13, 2023, at 15:00 (CET)**, at Aula Morone- 1 p Pad 2 Ex Clinica Chirurgica-Policlinico San Matteo - Strada Campeggi - Pavia.



Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <http://phdms.unipv.eu>

The PhD course involves the following programs:

- a. Internal medicine and medical therapeutics;
- b. Experimental surgery and microsurgery.

### **PhD COURSE IN PSYCHOLOGY**

**LOCATION:** DEPARTMENT OF BRAIN AND BEHAVIORAL SCIENCES

**COORDINATOR:** Prof. GABRIELLA BOTTINI

**RESEARCH TOPICS:** Psychology, Cognitive Neurosciences, Neuropsychiatric disorders.

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and interview.** Candidates are allowed to take the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. motivation letter in Italian or English (max 500 words) (**up to 1 point**);
- b. maximum of 2 reference letters issued and submitted directly by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referee who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee (**up to 1 point**);





- c. research project in Italian or English (max. 3000 words), related to PhD research topics. The project's structure must be novel and original and must be written as follows: 1) general introduction about the state of the art relative to the chosen topic; 2) presentation of the research objectives, including a clear definition of the research hypothesis; 3) description of the of materials and methodology (with a particular focus on the experimental procedure and the statistical data analysis); 4) discussion of the expected results with evaluation of the theoretical and/or practical implications of the research project. In any case, the project will not constitute a binding work program in case of admission to the PhD course (**up to 5 points**);
- d. arithmetic mean of the marks obtained in the exams taken during the candidate's degree courses (**up to 3 points**). For students with qualifications obtained abroad, a transcript of the grades is required, showing:
  - i. the arithmetic mean of the exams obtained for each course of study;
  - ii. the minimum grade for sufficiency and the maximum grade in the university of origin.

A *curriculum vitae* is also required, which will not be considered for assessment.

Except for the reference letters, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 7/10.**

The results of the qualifications assessment will be published online no later than **September 13, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 20, 2023, starting from 8:30 (CET)**, Sala Riunioni, Department of Brain and Behavioral Sciences (Psychology section), Piazza Botta n. 11, Pavia.

If the interview is held in Italian, the Committee will verify the candidate's knowledge of the English language through the reading and translation of a short text taken from an essay or scientific article. The candidate will be asked to describe the content and methodology of the research project submitted, as well as the reason why he/she is willing to undertake a doctoral course. The interview will take into consideration the candidate's disciplinary orientation, in particular for what concerns the research methodology in the field of behavioural, biomedical and instrumental sciences.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** [phd-pnds.unipv.eu](http://phd-pnds.unipv.eu)



**PhD COURSE  
IN PUBLIC HEALTH AND LIFESTYLE**

**LOCATION:** DEPARTMENT OF PUBLIC HEALTH, EXPERIMENTAL AND FORENSIC MEDICINE

**COORDINATOR:** Prof. CRISTINA MONTOMOLI

**RESEARCH TOPICS:**

**Biostatistics methods for biomedicine and public health:** environmental exposures and health in the general population. Environmental exposures and genetic susceptibility in chronic-degenerative diseases. Health indicators. Spatio-temporal evaluation models and predictive models of health determinants.

**Research methodology in public health:** design and analysis of observational and experimental studies. Models of statistical analysis for the identification of the population's health needs and for the evaluation of diagnostic tools, therapeutic interventions and **health and social care**.

**Hygiene and Preventive Medicine:** public health and community medicine, preventive medicine, rehabilitation and social **medicine**, primary prevention, secondary prevention and screening, tertiary prevention, prophylaxis, surveillance, environmental hygiene, workplace **and school hygiene**, food hygiene, health education and communication, health promotion.

**Health Organization:** epidemiology of services, analysis of current flows and health needs, evaluation of performance, population health, analysis of health policies and systems, impact and health technology assessment, planning and management of health services, international health and global health.

**Work environments that promote health:** research and application of factors that allow to **lead** healthy lifestyles, in order to prevent chronic non-communicable diseases (cardiovascular, musculoskeletal and chronic-degenerative) in economically active populations **and to bring about a close** integration with Total Workers Health (TWE) projects.

**Industrial medicine and industrial hygiene:** scenarios and determinants of **work-related** neoplastic and neurodegenerative diseases; exposure through environmental measures and biological monitoring, **specifically focused on** emerging risk factors in the workplace, **by providing** predictive and preventive models of health damage.

**Forensic Medicine:** forensic pathology and forensic histopathology; forensic medicine and forensic examinations on living **persons**; in particular, study of the causes of death and disability and their relation to diseases and conditions that can be prevented through lifestyle actions.

**Forensic Sciences:** use and abuse markers of psychotropic substances and study of their effects on quality of life. Genetic markers related to drug or substance abuse response. Study of lifestyle-related epigenetic effects.

**Histology and Embryology:** assessment of morphological changes in cells and tissues in response to exposure to **diverse** environmental factors (chemical-physical, psychological). Use of



regenerative medicine/tissue engineering technologies for the regeneration of organs and tissues damaged by disease, trauma or incorrect lifestyles.

**Dietetics and Human Nutrition:** food security, food safety, sustainability of food models and systems, nutritional surveillance, food behavior, food education and dietary principles **for different** ages and physiological conditions of life (child, adult, elderly, pregnant, breastfeeding, sports).

**Clinical Nutrition:** assessment of the nutritional status and body composition in **pathophysiological condition**, pathophysiology and clinical nutrition, principles of diet therapy applied to diseases, functional foods, diets for special medical purposes and nutraceutical products, lifestyle medicine, personalized **and precision** nutrition.

**Physical activity for the promotion of well-being, prevention and treatment of non-communicable diseases:** study of the effectiveness of different paradigms and methodological approaches to research and intervention, necessary for the prevention and recovery of psychophysical well-being and health **both** in the healthy **people** and in the **ones** affected by non-communicable diseases.

**Sports performance:** study of different paradigms and methodological and technological approaches to research and intervention, useful for the study, the organization and planning of application and innovative projects aimed at the optimization of the training process and the maintenance/ improvement of **athletes'** performance and health.

**DEADLINE FOR APPLICATION: July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: July 28, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview.**

Candidates are allowed to take the interview via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of the English language will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. research project in Italian or English (max. 1500 words, bibliography excluded), related to the PhD research topics. The project's structure must be written as follows: 1) general introduction about the state of the art relative to the chosen topic; 2) presentation of the research objectives; 3) discussion of the expected results with evaluation of the theoretical and/or practical implications of the research project. (**up to 5 points**);



- b. motivation letter in Italian or English (max 500 words) (**up to 1 point**);
- c. arithmetic mean of the marks obtained in the exams taken during the candidate's degree courses, to be calculated and declared by the candidates themselves (**up to 1 point**);
- d. scientific publications (**up to 1 point**)
- e. *curriculum vitae* (**up to 2 points**).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications

**The minimum score to be admitted to the interview is 6/10.**

The results of the qualifications assessment will be published online no later than **September 18 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 29, 2023, starting from 9:00 (CET)**, at Aula Checcacci, Department of Public Health, Experimental Medicine and Forensic, via Forlanini 2, Pavia.

The interview will focus on the topics of the PhD course.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <https://spmsf.dip.unipv.it/it/didattica/post-laurea/dottorati-del-dipartimento/public-health-and-lifestyle>

## **PhD COURSE IN BIOMEDICAL SCIENCES**

**LOCATION:** DEPARTMENT OF BRAIN AND BEHAVIORAL SCIENCES

**COORDINATOR:** Prof. ANTONIO PISANI

**RESEARCH TOPICS:**

**BIOCHEMISTRY TRACK:**

Biochemical and immunological characterization of bacterial proteins, their role in infective process and possible vaccinal use.

Molecular bases of diseases associated to aging and amyloidosis; analysis of connective matrix in normal and pathological conditions; proteins of biomedical interest: functional and structural studies.

Generation and characterization of animal models of human diseases: basic to translational research



Biochemistry of human erythrocyte. Pathogenic mechanisms of diseases related to protein-misfolding; biochemical markers.

Biochemical mechanisms of platelet production.

Identification of new biomarkers in biological fluids from patients affected by severe lung disorders and rare neurodegenerative diseases; analysis of bronchoalveolar lavage fluids from COVID-19 and chronic airways disease patients to investigate the role of proteases and associated inhibitors in extracellular matrix degradation.

Elucidation of the molecular mechanism of amyloid fibrils formation *in vivo* and in experimental models of the disease. Investigation of structure, folding/misfolding dynamics of amyloidogenic proteins. Mechanism of toxicity of amyloid fibrils *in vivo*.

#### PHARMACOLOGY TRACK:

Receptor pathology, metabolism and cell kinetic study; environmental toxicology; gastrointestinal pharmacology; clinical pharmacology of active drugs on the central nervous system.

Antineoplastic drugs pharmacology; transplant pharmacology; pharmacoepidemiology and pharmacoconomics of active drugs on the central nervous system, the cardiovascular system and gastrointestinal system.

Pharmacology and molecular mechanisms associated with neurodegenerative diseases, such as neuroinflammation; single-cell -omics and nanotechnology for precision medicine applications.

Environmental effects on the immune system; pharmacology of the signaling transduction systems in the neurologic, oncologic and immune system diseases.

Neurobiology and behavioral pharmacology of neurodevelopmental disorders.

#### PHYSIOLOGY TRACK:

Molecular and cellular physiology of the nervous system; cellular communication and plasticity in the cerebral circuits; physiology and biophysics of sensory, motor and cognitive functions; mathematical model of cells, circuits and brain; cellular communication in the cardiovascular system; physiology of the skeletal and cardiac muscles; physiology of the gastrointestinal system.

#### NEUROSCIENCE TRACK:

Neurodegenerative diseases; neuroimmunology; neuro-oncology; epilepsy and sleep; primary headaches; neurorehabilitation; experimental models of neurological diseases; neuroepidemiology and research methodology; neuroendocrinology and functional neurology; pediatric neuroscience.

#### MEDICINE TRACK:

Disciplines within the medical sciences (cardiology, hematology, pathology, pediatrics); translational fundamental and clinical research on human diseases.

Cardiology: molecular basis of inherited cardiomyopathies and arrhythmias.

Pediatrics: immunopathological bases of diseases in childhood.

Hematology: molecular basis of myeloid neoplasms and its clinical implications; recognition of the mechanisms of progression to neoplasm; integrated genomic DNA/RNA profiling of myeloid



malignancies in the diagnostic setting, as well as the development of genomic classification and prognostic models.

Pathology: etiopathogenic role of viral infections and immunodeficiency-related conditions; molecular basis of extranodal lymphomas and its clinical implications; immunophenotypical characterization.

The PhD course in Biomedical Sciences is dedicated both to candidates graduated in scientific disciplines (for example Biology, Physics and Engineering) with an interest in basic and applied research to disease, and to candidates graduated in Medicine who choose the postgraduate doctoral training with the intent to acquire skills in the context of translational research. The mandatory training activity is intended to improve knowledge and skills required for understanding functional and pathological mechanisms using a multi-scale approach (molecular, cellular, systemic) and includes courses in mathematics, biophysics, computer science, physiology, biochemistry, pharmacology, pathology and therapy.

**DEADLINE FOR APPLICATION: June 26, 2023 at 12:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: June 26, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview.** Candidates are allowed to take the interview in English and/or via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. arithmetic mean of the scores obtained in the exams taken during the candidate's degree courses, to be calculated and declared by the candidates themselves (**up to 4 points**);
- b. *curriculum vitae et studiorum* (**up to 2 points**);
- c. scientific publications (**up to 2 points**);
- d. research project in Italian or English (max 3000 words), related to the PhD research topics. The project must be structured according to the template available at the following link: <http://drsbm.unipv.it/admission> (**up to 2 points**).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 6/10.**





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The results of the qualifications assessment will be published online no later than **September 8, 2023**. The results will be posted on the noticeboard of the Department of Brain and Behavioral Sciences and in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 14, 2023 at 9:00 (CET)** - Department of Brain and Behavioral Sciences – Room of the former Institute of General Physiology – Via Forlanini n. 6 – Pavia.

The interview will be focused on the main topics covered by the PhD course and in particular the research project submitted by the candidate. The research project will not be binding if the candidate is admitted to the PhD program.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** <http://drsbm.unipv.it/admission>

### PhD COURSE IN TRANSLATIONAL AND PRECISION MEDICINE

**LOCATION:** DEPARTMENT OF MOLECULAR MEDICINE

**COORDINATOR:** Prof. ENZA MARIA VALENTE

**RESEARCH TOPICS:**

“Basic research”: 1. Gene editing and potential applications; 2. Stem cells and tissue homeostasis; 3. The cell biology of cancer; 4. Protein structure, function and homeostasis; 5. Mechanisms and regulation of immunity; 6. Intercellular communication and cell signaling

“Clinical research”: 1. Cancer genetics; 2. Gastrointestinal inflammation and cancer; 3. Infections and immune response to pathogens; 4. Mendelian diseases; 5. Atherosclerosis and thrombosis; 6. Blood cancers

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and tests (written test and interview)**. Both tests will be held in English for all candidates.

Candidates are allowed to take the interview via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics, with the exception of the scholarship funded within the project “Facing Global Challenge”, must



select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

Candidates who intend to apply for the scholarship funded within the project "Facing Global Challenge" must select, during the application process, the category 989 and state their interest for that scholarship to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarship will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the written test and the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. arithmetic mean of the marks obtained in the exams taken during the candidate's degree courses, to be calculated and declared by the candidates themselves (**up to 5 points**);
- b. *curriculum vitae et studiorum* (**up to 2 points**);
- c. a maximum of 2 reference letters issued and submitted directly by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referee who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee (**up to 2 points**);
- d. scientific publications. Only publications from the last 5 years that are congruent with the research topics of the PhD course will be considered (**up to 1 point**).

Except for the reference letters, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**WRITTEN TEST: September 5, 2023, at 9:00 (CET),** Aula "Mosca" of the Department of Molecular Medicine – Biology and Genetics section – Via Forlanini n. 14/16, Pavia.

The written test consists of the writing of an abstract in English, based on a scientific article on the research topics of the PhD course. Before the beginning of the test the committee will draw, from a list of previously selected articles, a clinical article and a basic research article, among which candidates can make their choice. The written test is aimed at assessing the analytical, deductive and synthesis skills of the candidate.

The results of the written test will be published by **September 6, 2023 at 13.00 (CET)** on the website of the Department of Molecular Medicine or communicated to the candidates via email.



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**INTERVIEW: September 12, 2023, at 9:00 (CET),** Aula “Mosca” of the Department of Molecular Medicine – Biology and Genetics section – Via Forlanini n. 14/16, Pavia.

The interview will concern a research topic drawn by each candidate, either related to basic research or clinical research areas, at the choice of the candidate. It will also focus on the candidates education and on the research projects of their interest, with the purpose of verifying their aptitude towards research.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFO:** <http://molecularmedicine.unipv.it/phd-programme/>

## **MACRO-AREA OF HUMANISTIC AND SOCIAL SCIENCES**

### **PhD COURSE**

#### **IN PRIVATE LAW, ROMAN LAW AND EUROPEAN LEGAL CULTURE**

**LOCATION:** DEPARTMENT OF LAW

**COORDINATOR:** Prof. UMBERTO STEFINI

**RESEARCH TOPICS:** Civil Law; Labour Law and Employment Relations; Commercial Law, Intellectual Property and Unfair Competition; Roman Law; European Legal Culture.

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:**

**ADMISSION PROCEDURE:**

Candidates applying for the regular scholarships and for the scholarship funded within the project “Facing Global Challenge” (cat. 989) will be selected upon qualifications assessment and tests (written test and interview). Candidates are allowed to have the interview in English, French or Spanish language. At the choice of the candidate, the written test will focus on one of the following topics: Civil Law; Labour Law and Employment Relations; Commercial Law, Intellectual Property and Unfair Competition; Roman Law; Legal History. During the interview, candidates will discuss the research project submitted along with the application.

Candidates applying for a topic-related PNRR scholarship (cat. 982) will be selected upon qualifications assessment, research project and interview. Candidates are allowed to have the



interview in English, French or Spanish language. The upload of a research project, as described in the “Qualifications assessment” paragraph below, is compulsory.

Only candidates applying for the topic-related scholarship on “Consumer’s protection in the new digital legal transactions: a social and legal transformation” are allowed to take the interview via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

Candidates who wish to apply for both the regular positions (cat. 989) and the topic-related scholarships (cat. 982) will have to take the written test and then state their interest for one or more topic-related scholarships at the beginning of the interview. For this purpose, such candidates will have to select the category 989. For these candidates, the research project will have to be focused on the topic(s) of the topic-related scholarships.

**LINGUISTIC KNOWLEDGE:** candidates’ knowledge of the English language will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE’S QUALIFICATIONS, AS FOLLOWS:**

- a. arithmetic mean of the marks obtained in the exams taken during the candidate’s degree courses, to be calculated and declared by the candidates themselves (**up to 4 points**);
- b. scientific publications, excluding the master’s degree thesis (**up to 2 points**);
- c. other relevant qualifications (**up to 1 point**);
- d. research project written in Italian, English, French or Spanish language (max 2000 words) indicating the research topic chosen by the candidate among those listed above. The project’s structure should be as follows: general introduction about the state of the art relative to the chosen topic; presentation of the research objectives; description of the methods; discussion of the expected results; evaluation of the theoretical and/or practical implications (**up to 3 points**).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**WRITTEN TEST: September 12, 2023 at 10:00 (CET),** Department of Law – C.so Strada Nuova n. 65, Pavia.

For the topics concerning the program in “Private Law, Labor Law and Intellectual Property”, during the written test candidates will be allowed to consult codes without comments by scholars and without case law. For the topics concerning “Roman Law and European Legal Culture” candidates will be allowed to use the sources in the ancient languages (Latin or Greek): *Gai Institutiones*, *Corpus iuris civilis*, *Fontes iuris Romani antejustiniani* (etc.), *Glossa*, *Corpus Iuris Canonici* (etc.).

**INTERVIEW: September 14, 2023 at 9:30 am (CET),** Department of Law – C.so Strada Nuova n. 65, Pavia.

**INFORMATION:** <http://phddpdecge.unipv.eu/site/home.html>

The PhD course involves the following programs:

- a. Private Law, Labour Law, Commercial Law and Intellectual Property;



- b. Roman Law and European Legal Culture.

**PhD COURSE  
IN PUBLIC LAW, CRIMINAL AND INTERNATIONAL JUSTICE**

**LOCATION:** DEPARTMENT OF LAW

**COORDINATOR:** Prof. SERGIO SEMINARA

**RESEARCH TOPICS:** general theory, structure and dynamics of Italian and comparative public law; relationships between legal systems (international, European and national systems); administrative law; fundamental rights; constitutional law; citizenship and immigration law; environmental law; domestic and international criminal law; criminology; criminal procedure and enforcement; public and private international law; international organization; institutions of the European Union; judicial cooperation.

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:**

Candidates applying for the regular scholarships will be selected upon qualifications assessment and tests (written test and interview).

Candidates applying for a topic-related scholarship (cat. 982) will be selected upon qualifications assessment and interview. Such candidates will have to submit, along with the qualifications listed below, a research project (max. 5000 characters, including spaces and bibliography). The project's structure should be as follows: general introduction about the state of the art relative to the chosen topic; presentation of the research objectives; description of the methods; discussion of the expected results; evaluation of the theoretical and/or practical implications. The research project must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications. The research project will not be considered for assessment, but it will be discussed during the interview in order to ascertain the candidate's aptitude towards research.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English, German, French or Spanish will be verified during the interview. Foreign candidates will also have to demonstrate adequate knowledge of Italian.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. arithmetic mean of the marks obtained in the exams taken during the candidate's degree courses, to be calculated and declared by the candidates themselves (**up to 6 points**);



- b. scientific publications (**up to 4 points**).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**WRITTEN TEST: September 13, 2023 at 9:30 am (CET)**, at the Aula G1 – Palazzo San Tommaso – Piazza del Lino n. 2, Pavia.

During the written test candidates will be allowed to consult codes without comments by scholars and without case law.

**INTERVIEW: September 15, 2023 at 9:30 am (CET)**, at the Department of Law – Aula III – C.so Strada Nuova n. 65, Pavia.

**INFORMATION:** <http://dottorati.unipv.eu/on-dip/phddpgpi/Home.html>

The PhD course involves the following programs:

- a. Public law;
- b. Criminal and international justice.

### PHD COURSE IN PHILOSOPHY

**LOCATION:** DEPARTMENT OF HUMANITIES (University of Pavia)

**COORDINATOR:** Prof. LUCA FONNESU;

**COOPERATING INSTITUTION:** Department of Antiquities, Philosophy, History (DAFIST) of the University of Genova; Department of Humanities of the University of Piemonte Orientale; Department of Philosophy and Education Sciences of the University of Turin.

The PhD degree will be jointly conferred by the Rector of the University of Pavia, the Rector of the University of Genova, the Rector of the University of Piemonte Orientale, and the Rector of the University of Torino.

#### **RESEARCH TOPICS:**

##### *Curriculum Ethics and Political Theory*

Metaethics – Normative ethics - Ethical theory and applied Ethics - Bioethics - Political Philosophy - Theories of Justice - Theories of Democracy – History of ethics - History of political thought - Usefulness of philosophy in the understanding of the digital world

##### *Curriculum Mind, Science and Language*

Philosophy of language and mind - Philosophy of Logic and Philosophy of Physics - Epistemology and philosophy of science - Causality, Perception and Cognizance - Psychology of reasoning - Philosophy of Cognitive Sciences - Analytical Ontology and Metaphysics - Contextualism and relativism-Philosophy of Frege, Russell and Wittgenstein - Usefulness of philosophy in the understanding of the digital world





*Curriculum History of Philosophical and Scientific Thought*

History of Ancient, Medieval, Modern and Contemporary Philosophy - Philosophy of Illuminism - Classical German Philosophy - Relations between the history of philosophy, the history of scientific thought, in particular modern, and the history of medicine - Usefulness of philosophy in the understanding of the digital world

*Curriculum Theory: Phenomenology, Ontology and Hermeneutics*

Aesthetics - Hermeneutics - Social Ontology - Collective Intentionality - Phenomenology - Theories of Perception, Imagination and Emotion - Interreligious dialogue - Philosophy of Art and of the New Media - Usefulness of philosophy in the understanding of the digital world

**DEADLINE FOR APPLICATION: July 28, 2023 at 13:00, CET**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE: July 28, 2023**

**ADMISSION PROCEDURE: qualifications assessment and interview via videoconference.** Candidates are allowed to take the interview in English.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarships will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 60 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. Graduation mark (or arithmetic mean of the marks obtained during the Master's Degree if the candidate has applied before the attainment of the second-level degree), Index and abstract of the thesis (max 500 words), extract of the master's thesis (max 3000 words including bibliographic references): **up to 20 points**;
- b. publications and other scientific titles: **up to 5 points**;
- c. research project (max 3000 words) drafted by the candidate, consistent with the research topics of the PhD course: **up to 30 points**;
- d. two reference letters, in Italian or English language, issued and submitted directly by professors from the university where the applicant's degree was awarded or by other professors/researchers who have had direct contact with the applicant. During the online application, the candidate will enter the contact data of the chosen referee who, through a specific online procedure, will have to upload the reference letter directly in the University portal by the deadline of the call. Unlike the other documents, the letter must not be uploaded by the candidate during the online application procedure. Letters uploaded by the candidate him/herself will not be evaluated by the committee: **up to 5 points**.

In addition to the qualifications listed above, candidates will have to submit a **motivation letter stating the program of their interest, among those offered (see below)**. The motivation letter will not be assessed, but it will be a starting point for the interview.



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With the exception of the reference letters, the qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 40/60.**

The results of the qualification assessment will be published online **no later than August 31, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 1, 2023, at 9.30, via videoconference.**

The interview, held in Italian or English, will include a discussion of the candidates' research project and their scientific outline.

Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

**INFORMATION:** [www.finophd.eu](http://www.finophd.eu)

The following programs are provided:

- a) Mind, science and language
- b) Ethics and Political Theory
- c) History of philosophical and scientific thought
- d) Theory: Phenomenology, Ontology and Hermeneutics

## PHD COURSE IN LINGUISTICS

**LOCATION:** DEPARTMENT OF HUMANITIES

**COORDINATOR:** Prof. SILVIA LURAGHI

**RESEARCH TOPICS:** Language typology, Historical and Indo-European linguistics, Sociolinguistics, English linguistics, Pragmatics, Theoretical linguistics, Corpus linguistics, Computational linguistics, Applied linguistics, Second Language Acquisition and Teaching, Linguistics of modern languages.

**DEADLINE FOR APPLICATION:** June 26, 2023 at 12:00 (CET)

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** June 26, 2023

**ADMISSION PROCEDURE:** qualifications assessment and interview.

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related



scholarships. Such scholarships will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** the candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 60 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. Knowledge at least at B2 QCER level of foreign languages, other than English, demonstrated by certification dated not more than 5 years from the date of publication of this call, or documentation attesting the achievement of an academic degree or the attendance of courses related to these languages: **up to 5 points**.

The languages are evaluated as follows:

- Each language at B2 level: up to 1 point
- Each language at C1/C2 level: up to 2 points.

- b. Any publications: only the publications relating to the last 5 years from the deadline of the call and considered as consistent with the research topics of the PhD course will be evaluated. Each publication receives a maximum of 1 point: **up to 5 points**;

- c. Research project in Italian or English (max. 3,000 words + bibliography), related to research topics pertaining to the disciplinary areas of the PhD course. The project will be structured as follows: general introduction on the state of the art relating to the subject chosen by the candidate, presentation of the research objectives envisaged, description of the working methods and sources to be used, discussion of the expected results: **up to 50 points**;

The following items are evaluated:

- Relevance: **up to 8 points**
- Structure and objective coherence and clarity: **up to 36 points**
- Bibliography: **up to 6 points**

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 42/60.**

The results of the qualifications assessment will be announced no later than **July 21, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: July 25, 2023, starting from 9:30 am (CET), via videoconference on Zoom platform.**

During the interview, the research project submitted by the candidate will be discussed. The research project will not be binding if the candidate is admitted onto the PhD course. The interview will have the purpose to ascertain the candidate's aptitude towards research and will also concern the topics of the PhD course. The knowledge of the English language will be verified during the interview.



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**UP TO 30 POINTS ARE ASSIGNED FOR THE INTERVIEW, AS FOLLOWS:**

- discussion of the research project: **up to 23 points**
- knowledge of the English language: **up to 2 points**
- knowledge of the topics pertaining to the PhD programs: **up to 5 points**

Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to attend the interview due to technical difficulties.

**INFORMATION:** <https://studiumanistici.dip.unipv.it/it/didattica/dottorati/dottorato-di-ricerca-linguistica>

The following programs are provided:

- a. Language typology, general and historical linguistics
- b. Sociolinguistics and pragmatics
- c. Applied and computational linguistics
- d. English language and linguistics.

### **PhD COURSE IN SCIENCES OF THE LITERARY AND MUSICAL TEXT**

**LOCATION:** DEPARTMENT OF HUMANITIES

**COORDINATOR:** Prof. GIUSEPPE ANTONELLI

**RESEARCH TOPICS:** Textual Criticism from the Middle Ages to the Present; Critical Editions of Texts and Literary Criticism from the Middle Ages to the 21st Century; History of Italian Language; History of Theatre and Cinema; Modern Foreign Languages and Literatures; Musicology.

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and tests (written test and interview).**

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must select, during the application process, the appropriate category (982); these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

**LINGUISTIC KNOWLEDGE:** candidates' knowledge of English, French, German, Spanish or Russian will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**



- a. summary of the second-level degree thesis in Italian or English (max. 1000 words) (**up to 1 point**);
- b. exams taken during the candidate's degree courses, if relevant for the research areas of the PhD course (**up to 1 point**);
- c. research project, either in Italian or in English (max. 3000 words, bibliography not counted), related to research topics pertaining to the programs listed below. The project's structure should be as follows: general introduction about the state of the art relative to the chosen topic; presentation of the research objectives; description of the methods and the sources the candidate intends to use; discussion of expected results (**up to 8 points**).

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**WRITTEN TEST: September 18, 2023, at 9:00 (CET).** More information on the test, as well as the location, will be communicated to candidates by the Committee via email.

The written test will consist of:

1. for the Modern Philology program: discussion of philological-critical issues referred to crucial texts of Italian and Romance literature or linguistic-stylistic analysis and historical-literary commentary of a chosen text;
2. for the Modern Foreign Languages and Literatures program: discussion in the chosen language of either philological-literary or linguistic issues pertaining to authors, texts, textual genres, specific periods of the language and culture, or historical/literary/stylistic/linguistic analysis with commentary on a text;
3. for the Musicology program: historical, analytical and stylistic discussion of at least two musical pieces chosen among those from different periods and repertoires proposed by the Committee, including those relevant to ethnomusicology, popular contemporary music and media studies.

The list of candidates admitted to the interview will be published according to a procedure that will be communicated the day of the written test.

**INTERVIEW: September 25, 2022, at 9:00 (CET)**

The interview will be in either Italian or the foreign language chosen by the candidate among those listed above and will concern:

1. a thorough discussion of the research project;
2. the assessment of the candidate's competence related to the chosen program;
3. the assessment of the knowledge of one of the following languages: English, French, German, Spanish, Russian.

**INFORMATION:** <http://phdfm.unipv.eu/site/en/home.html>

The PhD course involves the following programs:

**MODERN PHILOLOGY**



Research areas:

1. Genetic criticism and textual tradition; critical editions of texts from the origins to the 20th century;
2. History of literary criticism;
3. Theory of literature;
4. Renaissance and Modern literature and culture;
5. Italian linguistics;
6. Edition and comment of early Romance texts;
7. Drama and performance. Film language: analysis and criticism;
8. Metrical theory and analysis;
9. Reception of Greek and Latin texts in modern literatures.

**MODERN FOREIGN LANGUAGES AND LITERATURES**

Research areas:

The program covers 6 areas, interacting also on a comparative basis: English studies; Germanic philology; French studies; German studies; Spanish studies; Slavonic studies. Within these linguistic areas, the following fields are foregrounded:

1. Critical edition and analysis of Medieval Germanic texts;
2. Ancient book studies;
3. Criticism of the European novel;
4. Textual analysis and criticism (theory and practice);
5. Literary translation;
6. Language studies;
7. History of theatre and drama (script and performance).

**MUSICOLOGY**

Research areas:

1. Critical edition of musics from the Middle Ages to the 21st century;
2. Music theories and analysis from the Middle Ages to the 21st century;
3. Musical theatre from the 17th to the 21st century;
4. Music and literature;
5. Music and media;
6. Organology and music iconography;
7. Ethnomusicology;
8. Popular music.





**PHD COURSE IN  
COMMUNICATION SCIENCES AND PRACTICES  
(INDUSTRIAL DOCTORATE)**

**LOCATION:** DEPARTMENT OF POLITICAL AND SOCIAL SCIENCES

**COORDINATOR:** Prof. FLAVIO ANTONIO CERAVOLO

**PARTNER COMPANIES:** SACE SpA, H-Ventures Solutions Srl, Spindox SpA;

**RESEARCH TOPICS:** Digital communication, reputation management and public opinion, narrative models, quantitative and qualitative research for communication and marketing.

**DEADLINE FOR APPLICATION:** **July 28, 2023 at 13:00 (CET)**

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** **July 28, 2023**

**ADMISSION PROCEDURE:** **qualifications assessment and interview.** Candidates are allowed to have the interview via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**LINGUISTIC KNOWLEDGE:** the candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- a. graduation marks of both the bachelor and master's degree, or weighted and arithmetic average of the marks obtained during the degree course: **up to 7 points;**
- b. internship, research or work experience consistent with the topics of the PhD course: **up to 2 point;**
- c. any training courses, "*master*" courses or other educational qualifications consistent with the topics of the PhD course: **up to 1 point.**

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 6/10.**

The results of the qualifications assessment will be announced no later than **August 11, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: September 6, 2023, at 14:00 CET**, at the Department of Political and Social Science, C.so Strada Nuova n. 65, Pavia. The interviews via videoconference will be held on September 11, 2023 starting from 14:00 CET.

The interview will focus on the topics of the PhD course as well as on the candidate's studies.

Candidates who requested to take the interview via videoconference will be informed by the Committee about the date and time of the interview. Before the interview, candidates will be asked



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to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to take the interview due to technical difficulties.

## PHD COURSE IN HISTORY

**LOCATION:** DEPARTMENT OF POLITICAL AND SOCIAL SCIENCES

**COORDINATOR:** Prof. ELISABETTA COLOMBO

**RESEARCH TOPICS:** Pre-classical ancient Near East; Ancient history and historiography; Greek, Etruscan-Italic and Roman archaeology, topography and art; History and civilization of Greek and Latin Middle Age; Modern and Contemporary History; Constitutional and Administrative History; History and Politics of European Integration; History of Asia and Africa.

For further information on the research topics please visit the PhD course website:  
<http://phdstoria.unipv.eu/site/en/home.html>

**PhD students will be required to spend a research period abroad of at least 12 months over the three years.**

**DEADLINE FOR APPLICATION:** June 26, 2023 at 12:00 CET

**DEADLINE FOR THE PAYMENT OF THE APPLICATION FEE:** June 26, 2023

**ADMISSION PROCEDURE:** **qualifications assessment and interview.** Candidates are allowed to take the interview in English.

Only candidates who are abroad at the time of the interview for work or study reasons are allowed to take the interview via videoconference. The videoconference must be requested by selecting the appropriate option in the online application procedure (see art. 5 of this Call for applications).

**NOTE:** Candidates who intend to apply for the scholarships to undertake research in specific topics must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. Candidates will be included in the main ranking list, with the attribution of a possible eligibility for the topic-related scholarships. Such scholarships will be attributed to the first eligible candidate in the ranking list. If the candidate renounces the scholarship, he/she will be excluded from the ranking.

**LINGUISTIC KNOWLEDGE:** the candidates' knowledge of English will be verified during the interview.

**QUALIFICATIONS ASSESSMENT: UP TO 10 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:**

- d. exams taken during the candidate's degree courses, including the marks (**up to 2 points**);



- e. post lauream diplomas (specialization schools, Italian Master courses); participation in archaeological excavation campaigns in a supervisory position; collaborations with libraries/museums/archives, with medium-high responsibilities; proven training period abroad; possible additional work or research activities at qualified institutions (subject to the approval of the committee). All the above-mentioned activities must be confirmed by uploading the relevant dated certificates issued by the management (**up to 1 point**);
- f. publications (only if already published or accepted for publication; a pdf file, as well as full information pertaining to the publisher, must be provided); conference reports already accepted for publication (a certificate issued by the editor or the conference organizer must be provided). Publications and conference reports must be less than 5 years old and must be congruent with the research topics of the PhD course (**up to 2 points**);
- g. research project in Italian or English (max 16000 characters, including spaces; bibliography, sources and figures not counted), related to one of the above-mentioned PhD research fields. The research project is to be structured as follows: short literature review; presentation of the research project and its goals; discussion of the expected outcomes (this must specify the project's likely contribution to the disciplinary field/s concerned); provisional research plan during the three years of PhD course (**up to 5 points**).

A *curriculum vitae* is also required, which will not be considered for assessment.

The qualifications must be submitted according to the procedure indicated in art. 5, para. 2 of this call for applications.

**The minimum score to be admitted to the interview is 6/10.**

The results of the qualifications assessment will be announced no later than **July 20, 2023**. The results will be posted in the Personal Area of the candidate in the University website. This can be accessed using the login information provided at the end of the registration procedure.

**INTERVIEW: July 25, 2023, starting from 10:00 am (CET).** The interview will take place in presence; videoconferencing is allowed only for applicants who are abroad at the time of the interview for work or study reasons.

The interview will be held in Italian or English and will verify the candidate's knowledge of the English language. The interview will focus on the research project in order to ascertain the candidate's aptitude towards research and his/her expertise and background in the research project's field of studies. The research project will not be binding if the candidate is admitted onto the PhD course.

Before the interview, candidates will be asked to show a valid identity document. The University of Pavia does not take any responsibility for a candidate's failure to attend the interview due to technical difficulties.

**INFORMATION:** <http://phdstoria.unipv.eu/site/home.html>