UNIVERSITÀ DI PAVIA
Area Ricerca
e Terza Missione

ANNEX 1

PhD COURSE

IN DESIGN, MODELING, AND SIMULATION IN ENGINEERING

LOCATION: Department of Civil Engineering and Architecture

COORDINATOR: Prof. Ferdinando Auricchio

DURATION: 3 years

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

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).

Candidates who wish to compete for topic-related scholarships must state their interest before the beginning of the interview.

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 **March 6, 2026.** 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: March 18, 2026, at 9:30 (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 and to state for which scholarships they wish to apply. 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 ELECTRONICS, COMPUTER SCIENCE AND ELECTRICAL ENGINEERING

(Industrial PhD course)

LOCATION: Department of Electrical, Computer and Biomedical Engineering

COORDINATOR: Prof. Ilaria Cristiani

DURATION: 3 years

COOPERATING COMPANIES: Bright Solutions srl, ABB Switzerland Ltd

RESEARCH TOPICS: Photonics and Microwave Technologies, Space Communications Systems, Computer Engineering (Cyber-physical Systems, Artificial Intelligence, Artificial Vision), Automation, Electrical Engineering, Mechatronics and Robotics.

Eight programs are provided, including an international program in cooperation with the Lodz University of Technology, Polonia.

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

Candidates who wish to compete for topic-related scholarships must state their interest before the beginning of the interview.

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's 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 themselves 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 **March 5, 2026**. 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: March 12, 2026, 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:

1. Photonics
2. Microwave Technologies
3. Telecommunications
4. Cyber Physical Systems
5. Artificial Intelligence and Computer Vision (including the topic on Financial Technologies, FinTech)
6. Automation
7. Electrical Engineering (in cooperation with Lodz University of Technology, Poland)
8. Mechatronics and Robotics.

PhD COURSE OF NATIONAL INTEREST
IN MICRO- AND NANO-ELECTRONICS

(Industrial PhD course)

LOCATION: University of Pavia

COOPERATING INSTITUTIONS:

- University of Bologna
- Free University of Bolzano
- University of Genova
- Polytechnic of Torino
- University of Milano-Bicocca
- University of Napoli "Federico II"
- University of Salento

DURATION: 3 years

AFFILIATED COMPANIES: STMicroelectronics Srl

AFFILIATED ENTITIES: CHIPS-IT Foundation

COORDINATOR: Prof. Piero Malcovati

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 20 POINTS ARE ASSIGNED UPON ASSESSMENT OF EACH CANDIDATE'S QUALIFICATIONS, AS FOLLOWS:

1. exams taken during the candidate's degree courses, bearing the marks: up to **12 points**
2. scientific publications: up to **3 points**
3. other qualifications considered as relevant: up to **5 points.**

The qualifications must be submitted, along with a complete *curriculum vitae et studiorum*, 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 **8/20**.

The results of the qualifications assessment will be published online no later than **March 13, 2026**. 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: March 23, 2026. The interviews schedule will be published at https://phd-mne.unipv.it/ and https://phd.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: https://phd-mne.unipv.it and https://phd.unipv.it

PhD COURSE

IN CHEMICAL AND PHARMACEUTICAL SCIENCES,

AND RELATED INDUSTRIAL INNOVATION

LOCATION: Department of Chemistry

COORDINATOR: Prof. Giorgio Colombo

DURATION: 3 years

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; 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.

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).

Candidates who wish to compete for topic-related scholarships must state their interest before the beginning of the interview.

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 **March 10, 2026**. The results will be posted on the Chemistry Department noticeboard 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: starting from March 18, 2026, at 9:00 (CET), at the Department of Chemistry – 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

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. Andrea Mondoni

DURATION: 3 years

RESEARCH TOPICS:

Advancing the Management of Aquatic Invasive Alien Species: integration of bioacoustic tools and citizen science - *codice 989*

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 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 to 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.

The results of the qualifications assessment will be announced no later than **March 12, 2026.** 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: March 23, 2026, 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

PhD COURSE

IN GENETICS, MOLECULAR AND CELLULAR BIOLOGY

LOCATION: Department of Biology and Biotechnology "Lazzaro Spallanzani"

COORDINATOR: Prof. Davide Sassera

DURATION: 3 years

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

Candidates who wish to compete for topic-related scholarships must state their interest before the beginning of the interview.

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 **2 points**
c. arithmetic means 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 **3 points**
d. research project (max 5000 characters, spaces included), in Italian or English, which will not be binding if the candidate is admitted onto the PhD course: **up to 4 points.**

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.

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

The results of the qualifications assessment will be announced no later than **March 12, 2026.** 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: March 17, 2026, starting at 9:30 (CET), via videoconference.

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.

The following topic-related scholarships, for which separate ranking lists will be drafted, are provided:

- Structural and biophysical studies (NMR and cryo-EM) of the ternary complex between HMGB1-CXCL12-CXCR4
- Development of dynamic 3D and 4D in vitro models for the preclinical screening of solid and blood tumors
- Dissecting the molecular underpinnings of clinically relevant NET cell states to improve patients' outcome.

INFORMATION: https://dbb.dip.unipv.it/it/didattica/post-laurea/dottorati-di-ricerca/dottorato-di-ricerca-genetica-biologia-molecolare-e > admission procedures.

PhD COURSE

IN EXPERIMENTAL MEDICINE

LOCATION: Department of Internal Medicine and Medical Therapeutics

COORDINATOR: Prof. Stefano Perlini

DURATION: 3 years

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

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 **March 3, 2026**. 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: March 10, 2026, at 15:00 (CET), at Aula di Ortopedia (padiglione 29 - 1° piano), Fondazione I.R.C.C.S. Policlinico San Matteo – Viale Golgi n. 19 - 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

DURATION: 3 years

RESEARCH TOPICS: Psychology, Cognitive Neurosciences, Neuropsychiatric disorders.

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).

Candidates who wish to compete for topic-related scholarships must state their interest before the beginning of the interview.

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 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 average 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 **March 12, 2026**. 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: March 16, 2026, **starting from 9:00 (CET),** "Sala Riunioni", Department of Brain and Behavioral Sciences (Psychology section), Piazza Botta n. 11, Pavia.

The interview will be held either in Italian or English. 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

The PhD course involves the following programs:

1. Cognition and Neuroscience
2. Developmental and Applied Psychology

PhD COURSE IN

BIOMEDICAL SCIENCES

LOCATION: Department of Brain and Behavioral Sciences

COORDINATOR: Prof. Antonio Pisani

DURATION: 3 years

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.

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 pharmacoeconomics 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.

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).

Candidates who wish to compete for topic-related scholarships must state their interest before the beginning of the interview.

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://phdbms.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.

The results of the qualifications assessment will be published online no later than **March 6, 2026**. 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: March 24, 2026, at 14:00 CET, Department of Brain and Behavioral Sciences (Room of the ex-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, which 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://phdbms.unipv.it/admission/