Subject: Public competition for admission to PhD courses - XXX cycle

#### THE RECTOR

CONSIDERING Law n. 210 of July 3, 1998, art. 4;

**CONSIDERING** Law n. 240 of December 30, 2010, art. 19;

**CONSIDERING** the Ministerial Decree n. 45 of February 8, 2013;

**CONSIDERING** the University of Pavia Statute;

**CONSIDERING** the University of Pavia "Regulations for PhD courses" n. 1223 of July 24,

2013;

**CONSIDERING** the resolution of the Administrative Senate of April 14, 2014;

**CONSIDERING** the resolution of the Administrative Council of April 16, 2014;

**CONSIDERING** the Ministerial Note of July 22, 2014, reg. n. 20285, concerning "PhD

validation for the academic year 2014/2015";

**CONSIDERING** the need to issue the call for applications for public competitions to be

admitted to the PhD courses, XXX cycle, to be taken at the University of

Pavia

#### **DECREES**

### Art. 1 Activation

1. The University of Pavia hereby announces public competitions for admission to the XXX cycle (Academic Year 2014/2015) of PhD courses, listed below according to their macro-areas:

MA	MACRO-AREA OF SCIENCE AND TECHNOLOGY					
1	PHYSICS					
2	MATHEMATICS AND STATISTICS					
3	CHEMICAL AND PHARMACEUTICAL SCIENCES					
4	EARTH AND ENVIRONMENTAL SCIENCES					
5	BIOENGINEERING AND BIOINFORMATICS					
6	CIVIL ENGINEERING AND ARCHITECTURE (in cooperation with Istituto Universitario di Studi Superiori of Pavia - IUSS)					



7	ELECTRONICS, COMPUTER SCIENCE AND ELECTRICAL ENGINEERING						
8	MICROELECTRONICS						
MA	CRO-AREA OF LIFE SCIENCE						
9	GENETICS, MOLECULAR AND CELLULAR BIOLOGY						
10	EXPERIMENTAL MEDICINE						
11	PSYCHOLOGY, NEUROSCIENCE AND MEDICAL STATISTICS						
12	BIOMEDICAL SCIENCES						
MA	MACRO-AREA OF HUMANISTIC AND SOCIAL SCIENCES						
13	PRIVATE LAW, ROMAN LAW AND EUROPEAN LEGAL CULTURE						
14	PUBLIC LAW, CRIMINAL AND INTERNATIONAL JUSTICE						
15	ECONOMICS AND MANAGEMENT OF TECHNOLOGY (DREAMT) (in cooperation with the University of Bergamo)						
16	SCIENCES OF LITERARY AND MUSICAL TEXT						
17	HISTORY						

- 2. In annex 1 (p. 13 ff.), which forms an integral part of this call, for each course the location, course director, positions available, scholarships and other funding, selection procedure, admission test timetable and programmes offered are specified.
- 3. The PhD courses have a legal duration of three years, starting from November 1, 2014.
- 4. The number of PhD positions mentioned in this document may be increased, with subsequent provisions, if additional funding from public institutions or qualified private organisations is made available. In any case, the deadline for applications will remain unchanged.
- 5. The funding provided by external entities will be assigned provided an agreement is reached between the University and the entity involved.
- 6. This call for applications is equivalent to a notification to all intents and purposes. Further modifications, updates or additions to its content will be announced <u>exclusively</u> on the <a href="http://www.unipv.it/dottorati">http://www.unipv.it/dottorati</a> website.
- 7. The presentation of the application as outlined in art. 5 implies the acceptance by the candidate of the rules contained in this announcement. Failure to respect these rules will result in the candidate being excluded from the competition.

# Art. 2 Admission requirements

1. Applications are invited from candidates, regardless of age and nationality:



### UNIVERSITA' DEGLI STUDI DI PAVIA

- a. who hold an Italian "diploma di laurea (vecchio ordinamento)/laurea specialistica/laurea magistrale", or an equivalent second-level degree issued by an AFAM (Alta Formazione Artistica e Musicale) institution;
- b. who hold an academic degree awarded abroad and recognised in advance as being eligible for the PhD competition purposes only. The foreign degree must be comparable to an Italian second-level degree in terms of duration, level and disciplinary field. In respect of these conditions, the Teachers Board board will decide whether the degree is eligible for the PhD competition. During the application procedure, candidates will be asked to attach as uploads, in addition to the qualifications required for the specific PhD course, the following documents, in order for their foreign degree to be recognised:
  - i. in case of italian and EU citizens: self-declaration, pursuant to D.P.R. 445/2000 and subsequent modifications, of their academic degrees, including the courses attended, the marks received and the legal duration of the degree courses;
  - ii. in case of non-EU citizens: degree certificates, in Italian or English, including the courses attended, the marks received and the legal duration of the degree courses;
  - iii. any other document relevant to the assessment of a degree's eligibility, such as a Diploma Supplement or Dichiarazione di Valore in Loco.

The candidate may be required at any time to submit further documents, in order to verify the eligibility of his/her degree.

- c. who expect to receive the degree mentioned in para. a and b no later than October 31, 2014. Failure to attain the degree will result in candidates being excluded from the PhD course. Successful candidates will be conditionally admitted. Candidates being awarded a degree in Italy will be required to submit to the University administration office, no later than October 31, 2014, a self-declaration testifying they have attained the degree. Candidates awarded a degree abroad will, in the case of Italian and EU candidates, have to provide a self-declaration attesting to the attainment of the degree; non-EU candidates will follow the procedure indicated in art. 11, para. 5.
- 2. Applications from candidates already enrolled in a PhD course at the University of Pavia will not be accepted.

# Art. 3 Additional PhD positions jointly-supervised with companies and additional PhD positions in higher-education apprenticeships

- 1. Employees in highly qualified positions may undertake, while keeping their job position and stipend, a PhD programme. Such candidates' training objectives and research activities are arranged between the University and the company by means of a specific agreement. A separate ranking list is drawn up for these candidates. The agreement between the University and the company must be formalised no later than September 30, 2014. It will specify, among other things, the conditions and nature of the research to be carried out at the company and the division of the employee's time.
- 2. Pursuant to Law 167/2011, art. 5, if the conditions exist, it is possible to establish PhD positions in apprenticeships with external institutions and companies. A separate ranking list is drawn up for these candidates. A member of the company will take part in the selection procedure for these positions, which will be activated provided that the company identifies a candidate suitable for their needs. The Committee will examine, at the end of the interview, also the research topics related to the positions.



3. Candidates interested in these positions must select the appropriate administrative category during the application procedure, if available for their chosen PhD course.

#### Art. 4

# Additional positions reserved to candidates holding a degree awarded abroad, to candidates with a scholarship from a foreign country and to candidates holding a scholarship from a specific international mobility programme

- 1. Candidates holding a degree awarded abroad, those holding a scholarship from a foreign country, or candidates holding a scholarship from a specific international mobility programme will be selected through a qualification assessment and, unless otherwise specified in Annex 1 for the specific PhD course, will also undertake an interview via videoconference. This is aimed at verifying candidates' competence, ability and aptitude for research and their knowledge of Italian and/or English.
- 2. Candidates must select the appropriate administrative category, if available for their chosen PhD course, during the application procedure.
- 3. The examining committee will draw up specific reports and separate ranking lists.

### Art. 5 Applications

1. Candidates who wish to participate in a PhD competition at the University of Pavia have to apply online by the deadline of September 18, 2014 at 17:00 pm (Italian time). Applications can only online made via the procedure the following at https://studentionline.unipv.it/esse3/Home.do?cod\_lingua=eng. Applications submitted via any will Candidates are responsible for ensuring that their application has been completed accurately and in full; complaints related to the malfunctioning of the online procedure will not be accepted. Candidates are highly recommended to complete the online application well in advance of the application deadline.

Candidates must <u>pay the application fee</u>, amounting to € 32.00, <u>by the September 18, 2014</u> <u>deadline</u>. Failure to pay the admission fee by the deadline will result in candidates being excluded from the selection process. Candidates applying for the "Additional positions reserved to candidates holding a scholarships from international mobility programmes" are exempted from the application fee.

2. Candidates must register on the Esse3 system in order to access the online procedure. Candidates who have yet to register should select the "Registration" tab and insert the requested data; then, by selecting the "Login" item and entering the username and password provided by the system, they will be able to access their Personal Area and apply for the PhD competitions.

Candidates who have already registered on the University of Pavia website must select only the "Login" tab and access the Personal Area by entering the username and password already in their possession. Candidates are requested to check and update their personal data already present in the database, in particular the e-mail address which will be used for all communications related to the PhD competition.

In order to submit the application, candidates have to select the "Admissions" item from the left-hand menu, then, from the same menu, the "Admission test" link, and then the PhD competition in which they would like to take part.

During the application procedure, candidates have to:



### UNIVERSITA' DEGLI STUDI DI PAVIA

- enter their personal data, the information regarding their degree course and the details of a valid identity document; the same identity document will have to be uploaded and attached to the application and also presented on the day of the tests for identity purposes;
- choose the PhD competition, the appropriate administrative category and the foreign language, from those listed in Annex 1 for each PhD course, whose knowledge will be verified during the interview;
- attach, via an upload, proof of the qualifications required for their chosen specific PhD competition (see annex 1, p. 13 ff.).

Qualifications and documents must be attached as .pdf files and must not exceed 5MB each. Each file's denomination must bear the candidate's surname e the type of the qualification (e.g. surname\_curriculumvitae).

Candidates will have to prove they are in possession of the qualifications¹ issued by the Public Administration by means of a self-declaration, pursuant to art. 46 of D.P.R. 445/2000. The self-declaration regarding the exams taken must conform to the model available at the following link: <a href="http://www.unipv.it/dottorati">http://www.unipv.it/dottorati</a> or, if available, it can be downloaded from the website of the institution where the degree was awarded. The self-declaration must bear the exams taken, the marks, the CFU (credits) and the final mark, if the degree has already been attained. Non-EU applicants in possession of qualifications awarded abroad can not submit a self-declaration, but must attach to the application a copy of the relevant certificates.

With the exception of the degree required for admission (see art. 2, para. 1), all further qualifications must have been obtained by the application deadline.

The examining committee will take into consideration only the qualifications listed in Annex 1 (p. 13 ff.) for each PhD course.

Candidates with a disability (under the provisions of Law n. 104 of February 5, 1992 integrated by Law n. 17 of January 28, 1999) or affected by a Specific Learning Disability (under the provisions of Law n. 170 of October 8, 2010) should make a specific request in their application for the necessary assistance and, if required, for extra time to complete the selection tests. Candidates with disabilities are required to submit, via the medical committees, a medical certificate issued by the competent health authorities. Candidates with Specific Learning Disabilities must submit an appropriate clinical certificate issued by the National Health Service and dated no more than three years prior to the date of the test. In regions where it is not possible to diagnose such disorders as part of the specialist treatments carried out by the National Health Service, candidates must ensure that, within the limits of their human, instrumental and economic resources, the same diagnosis is carried out by a specialist or accredited structure.

It will not be possible to modify the application once the data has been confirmed and the application submitted online. The qualifications inserted can be updated, cancelled or modified, even after its submission online, provided this is done within the application deadline. No changes can be made after the deadline.

<sup>&</sup>lt;sup>1</sup> Pursuant to D.P.R. n. 445 of December 28, 2000 and subsequent modifications, Italian and EU citizens must provide a self-declaration attesting the following conditions and facts certified by the Public Administration:

a) enrolment in professional organisations or on lists managed by Public Administration;

b) membership of professional associations;

c) qualifications and exams taken;

d) professional qualifications, post-graduate qualifications, qualifying exams, training courses, refresher courses and technical qualifications;

e) student status.



After having submitted the application by September 18, 2014 at 17:00 pm (Italian time), candidates must ensure that they have received the e-mail proving they have successfully completed the procedure.

At the end of the procedure, candidates should print the application form together with the MAV (Payment against notice) of € 32,00, which must be paid by September 18, 2014. Failure to pay the application fee by the deadline will result in candidates being excluded from the competition. The MAV can be paid, commission free, at any branch of the Banca Popolare Commercio e Industria or across the counter at any credit institution in Italy. The payment can also be made using a PagoBANCOMAT payment card at any "Gruppo Unione di Banche Italiane" bank ATM. In these cases, the candidate must type the MAV identification code and amount; once the operation has been provided. completed, proof payment No payments other than MAV (Payment against notice) can be accepted, except in cases where candidates are resident outside Italy. Candidates resident abroad are allowed to pay the application fee via bank transfer to UNIVERSITÁ DEGLI STUDI DI PAVIA – SERVIZIO TESORERIA c/o UBI Banca Popolare Commercio e Industria - IBAN IT 32 I 05048 11302 000000046566, SWIFT: BLOPIT22XXX; BIC: POCIITM1XXX. The costs of the bank operation will have to be charged entirely by the candidate. The name of the candidate must be specified in the "reason for payment" field.

## 3. The application form must be printed and submitted to the examining committee on the day of the first test.

- 4. After the announcement deadline, the University will check the validity of the applications received and verify that the application fee has been paid within the deadline. In cases of invalid applications, or where the payment has not been made within the deadline, the candidate will be excluded from the competition. On the <a href="http://www.unipv.it/dottorati">http://www.unipv.it/dottorati</a> website the list of the candidates admitted to the selection procedure will be published for each PhD programme.
- 5. Candidates who wish to take part in more than one competition will have to submit a separate application for each, together with the qualification certificates requested, and pay a participation fee for each PhD competition selected.
- 6. All applicants are conditionally admitted to the PhD competitions while the University administration office checks that they actually possess the requirements for PhD enrolment, pursuant to D.P.R. n. 445 of December 28, 2000, artt. 43 and 71. The administration office reserves the right, at any time, to exclude candidates from the selection procedure. The Administration office will also check the veracity of candidates' self-declarations: candidates found to have made false declarations may face criminal proceedings and administrative sanctions, pursuant to art. 76 of D.P.R. 445/2000.

### Art. 6 EDISU benefits

- 1. PhD students, pursuant to D.P.C.M. of April 9, 2001, are entitled to enjoy, under the same conditions of the other University students, the benefits offered by the University of Pavia's EDiSU (Institution for the Right to Study).
- 2. Candidates who wish to enjoy these benefits (scholarships, reduced meal prices at canteens etc.) should consult the <a href="http://www.isu.pv.it">http://www.isu.pv.it</a> website where the call for applications for the relative benefits will be advertised. Candidates are allowed to apply for the EDISU benefits before their enrolment on the PhD has been completed.



# Art. 7 Examining Committee

- 1. The Committees in charge of the PhD competitions are appointed by the Rector in accordance with the University of Pavia's "Regulations for PhD courses".
- 2. The composition of the examining committee will be published, after the announcement deadline has passed, on the <a href="http://www.unipv.it/dottorati">http://www.unipv.it/dottorati</a> website.

# Art. 8 Selection procedure

- 1. Admission to the PhD courses is subject to the passing of a selection procedure aimed at assessing candidates' competence, ability and aptitude for research. In Annex 1 the selection procedures and notes for each PhD course are listed.
  - a) Selection procedure by qualifications assessment and tests (written test and interview)
- 2. The selection procedure by qualifications assessment and tests consists of a comparative assessment of the qualifications submitted by candidates, as well as two tests. The admission tests consist of a written test and an interview, including a verification of candidates' knowledge of a foreign language, selected from those listed for individual PhD courses and indicated in the application.

The examining committee can assign up to 30 points per test for the evaluation of each candidate. The written test may consist of examinations, exercises and essays on topics related to the PhD course.

Candidates who have passed the written test with a score of 21 points or more are admitted to the interview.

The interview is deemed to have been passed if a candidate obtains a score of 21 points or more. Unless otherwise specified in Annex 1, the examining committee can assign up to 10 points for candidates' qualifications for each PhD course, divided as indicated in Annex 1. The qualifications assessment takes place after the written test and before the correction of the papers. The results of the qualifications assessment will be announced before the interview.

- b) Selection procedure by qualifications assessment and interview
- 3. Unless otherwise specified in Annex 1, the examining committee can assign up to 10 points for candidates' qualifications, divided as specified in Annex 1 for each PhD course. For each PhD course, a minimum threshold may be set for admittance to the interview, as indicated in Annex 1. The results of the qualifications assessment will be announced before the interview, with the instructions and timing indicated in Annex 1. The interview includes a verification of candidates' knowledge of a foreign language, selected from those listed for each PhD course. The examining committee may assign up to 30 points as an interview points scale. The interview is deemed successful if a candidate obtains a score of 21 points or more.
  - c) Selection procedure by qualifications assessment only
- 4. Unless otherwise specified in Annex 1, the examining committee can assign up to 10 points to candidates' qualifications for each PhD course, divided as indicated in Annex 1. Candidates who have obtained at least 7 points are admitted to the ranking list.
- 5. The examining committee will draw up specific reports. Candidates will be ranked in descending order by totalling the scores obtained by each candidate in the scheduled tests and the qualifications assessment.



- 6. If candidates have an identical score on the ranking list, the scholarship will be awarded on a means basis, pursuant to D.P.C.M. of April 9, 2001 and subsequent modifications and additions; for positions without a scholarship, the youngest candidate will have priority.
- 7. The President of the Examining Committee will submit to the Rector the competition reports.
- 8. The admission tests schedule, indicated in Annex 1 of this announcement, is equivalent to a notification to applicants. Further modifications, updates or additions to its content will be announced on the <a href="http://www.unipv.it/dottorati">http://www.unipv.it/dottorati</a> website. Candidates will not receive any further communication from the University administration office.
- 9. On the day of the tests, candidates will be asked to present the valid identity document whose details were entered during the application procedure. Candidates will also have to sign the printed application forms which must then be handed in to the Committee.
- 10. Failure to take part in the admission tests will be considered as constituting a withdrawal from the application process.

## Art. 9 Admission to the PhD courses

- 1. The Rector, by Rectoral Decree, acts to verify the validity of the competition records and approves the ranking lists. Candidates who have placed highly on each ranking list are declared winners, provided they meet the admission requirements for access to the PhD competition and enrolment onto a PhD course.
- 2. Candidates are admitted to the PhD courses in the ranking list order until all positions for the given PhD are taken. Should a candidate decide not to take up his/her place before the start of the course, their place may be taken by other candidates following the ranking list order. Should a candidate win more than one competition, he/she will have to choose only one PhD course and communicate this choice in writing.

# Art. 10 Public Administration employees

1. Prevailing laws regarding time off work or special leave will apply to any public administration employees admitted onto a PhD course.

### Art. 11 PhD course enrolment

- 1. The ranking lists will be published on the University's official noticeboard <a href="https://www-5.unipv.it/alboufficiale/">http://www-5.unipv.it/alboufficiale/</a> and on the <a href="https://studentionline.unipv.it/esse3/Home.do?cod lingua=eng">https://studentionline.unipv.it/esse3/Home.do?cod lingua=eng</a> website. In order to check their results, candidates have to login by entering the username and password provided at the end of the registration procedure, click on "Admissions" from the left-hand menu and then on "Admission test". <a href="Candidates will not be informed personally: the publication of the ranking list is equivalent to an official notice to applicants.">https://www-5.unipv.it/esse3/Home.do?cod lingua=eng</a> website. In order to check their results, candidates have to login by entering the username and password provided at the end of the registration procedure, click on "Admissions" from the left-hand menu and then on "Admission test". <a href="Candidates will not be informed personally: the publication of the ranking list is equivalent to an official notice to applicants.">https://www.admissions</a> and the publication of the ranking list is equivalent to an official notice to applicants.
- 2. Candidates can appeal against the approval of the ranking list to the TAR (Regional Administrative Tribunal) within 60 days from the publication of the results on the University's official noticeboard, or make a special appeal to the President of the Republic within 120 days; in the absence of an appeal, the provision shall be incontrovertible.



- 3. **Successful applicants must enrol** for the PhD course by following the instructions provided on the <a href="http://www.unipv.it/dottorati">http://www.unipv.it/dottorati</a> website.
- 4. Successful applicants who do not yet hold the second-level degree necessary to enrol onto a PhD will be conditionally admitted. In such cases, the applicant must commit to attaining the degree by October 31, 2014 pursuant to Art. 2, para. 1 of this announcement. By the same deadline of October 31, 2014 they will be requested to provide the University Administration office with proof of graduation by following the procedure described in Art. 2, para. 1.
- 5. Candidates in possession of an academic degree obtained in a non-EU country, if successful, will have to provide the University Administration, within a deadline agreed with the office, the following documents:
  - a. A legally-validated translation into Italian or English of their degree certificate, bearing the list of the exams taken during their academic career and the marks obtained;
  - b. the original "Dichiarazione di valore in loco", issued by the competent Italian diplomatic representative in the country where the academic qualification has been attained. The Administration office also reserves the right to ask students with a foreign degree obtained within the EU to provide a "Dichiarazione di valore in loco" in cases where its validity is doubted.
- 6. Upon enrolment, non-EU citizens resident abroad must submit to the Administration office, no later than December 31, 2014, a photocopy of their visa/residence permit/application for the residence permit.
- 7. Competition winners will have to pay, through MAV (Payment against notice), the amount of € 295,51, which includes the accident insurance during the PhD activities.
- 8. Successful candidates, who do not enrol and pay the enrolment fee by the deadline of 5 days from the day following the publication online (<a href="https://studentionline.unipv.it/esse3/Home.do?cod lingua=eng">https://studentionline.unipv.it/esse3/Home.do?cod lingua=eng</a>) of the ranking list, will be considered as having forsaken their position.
- 9. The University Administration reserves the right to check the validity of winners' declarations. Any applicants found to have made false statements will lose the benefits deriving from these declarations.

### Art. 12 Scholarships

- 1. The annual gross amount of a PhD scholarship is currently € 13.638,47, including the I.N.P.S. contribution that is at the expense of the scholarship holder. PhD scholarships are regulated by the provisions of Law n. 476 of August 13, 1984, art. 4.
- 2. The Rector, by Rectoral decree, awards the scholarship to the successful candidates following the order of the ranking lists and until all scholarships for the given PhD have been assigned.
- 3. Scholarships have a duration of one year and are confirmed annually, provided that the student has been admitted to the following year by the Teachers Board.
- 4. The scholarships are paid in monthly deferred instalments.
- 5. The scholarship amount is increased by 50% for any research periods carried out at foreign institutions, duly authorized by the Teachers Board. The research periods abroad must not exceed a maximum of 18 months in total.
- 6. PhD scholarships cannot be combined with apprenticeship contracts, research grants or other scholarships awarded for any reason whatsoever. The only exceptions are grants and scholarships assigned by national or international bodies to support with internships abroad the research activities.



7. Students who have already benefited from a PhD scholarship, even partially, are not eligible for a second one.

# Art. 13 PhD students' obligations

- 1. Admission onto a PhD course entails full-time and dedicated commitment. Course activities are mandatory and are organised and structured by the Teachers Board of each PhD course. The Teachers Board may set specific rules for PhD courses jointly supervised with companies, students of medical specialities or public administration employees attending PhD courses.
- 2. Attendance to the training activities is mandatory according with the conditions set by the Teachers Board.

# Art. 14 PhD students' teaching activity

1. The PhD student, if authorised by the Teachers Board, may act as a tutor as well as fill a supplementary teaching role up to a maximum of 40 hours per academic year. PhD students in the medical area are allowed to take part in clinical and assistance activities.

# Art. 15 Joint attendance with medical specialisation school

- 1. Final-year students of the University of Pavia's medical specialisation school, who have successfully passed the PhD competition, are allowed to enrol onto a PhD course provided that the joint attendance has been approved by the specialisation school Committee.
- 2. The joint attendance must be requested at the same time as the enrolment onto the PhD course, by submitting to the University Administration the following documents:
  - a. written authorization issued by the specialisation school Committee, testifying that the attendance to the PhD course is compatible with the activity and the commitment requested by the specialisation school;
  - b. list of the publications and self-declaration on the research activity carried out during the specialisation school.
- 3. During the year of joint attendance, the student is not entitled to receive a PhD scholarship.

# Art. 16 Incompatibility

1. Enrolment onto a PhD course is incompatible with a simultaneous enrolment on a degree course, Italian "Master" course, non-medical specialisation school, TFA or other PhD course (except in cases of joint-supervision agreements with a foreign institution) both in Italy and abroad.

#### Art. 17 Ethical Code

1. PhD students will have to abide by the provisions of the University of Pavia Ethical Code, available at the following link: <a href="http://www.unipv.eu/site/home/ateneo/statuto-e-regolamenti/codice-etico.html">http://www.unipv.eu/site/home/ateneo/statuto-e-regolamenti/codice-etico.html</a>

# Art. 18 Final exam and attainment of the PhD degree

1. The title of PhD ("Dottore di ricerca"), unless otherwise specified in Annex 1, is awarded by the Rector of the University of Pavia, following a positive assessment of the research thesis. The thesis is publicly discussed in front of a committee appointed by the Rector.

### Art. 19 Use of personal data

- 1. Pursuant to Law n. 196 of June 30, 2003 ("Personal data protection code"), the information supplied by candidates will be gathered by the University of Pavia's Research Division and used for the management of the admission competitions and for candidates' eventual academic career. Granting consent for the handling of personal data is therefore obligatory and failure to do so will result candidates' exclusion from the competition.
- 2. The information provided by the candidates will be communicated to the University of Pavia's administrative offices and to the departments directly concerned with the legal and financial positions of the successful candidates.
- 3. Candidates are entitled to the rights stated in art. 7 of the Law 196 of June 30, 2003, including access to personal data, its modification, updating, integration, cancellation etc., and likewise reserve the right to oppose any use of the data other than the institutional purposes stated above.

### Art. 20 Head of Administrative Procedures

1. The Head of Administrative Procedures, under Law no. 241 of 7 August 1990 and subsequent modifications and additions, is Claudia Morini – Research Division – Via Ferrata n. 1 – 27100 Pavia (Italy) – tel. +39 (0)382 985972/37/83/84 – fax +39 (0)382 985996 – e-mail claudia.morini@unipv.it.

### Art. 21 Final regulations

- 1. In relation to any issues not explicitly specified in this announcement, the provisions of existing Italian legislation on PhDs and of the University of Pavia's "Regulations for PhD courses" apply.
- 2. Only the Italian version of this call for applications will be binding in case of controversies.

Pavia, July 31, 2014

### **ANNEX 1**

### MACRO-AREA OF SCIENCE AND TECHNOLOGY

#### PHD IN PHYSICS

LOCATION: DEPARTMENT OF PHYSICS DIRECTOR: Prof. LUCIO ANDREANI

**DURATION:** 3 years

**RESEARCH 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)

SCHOLARSHIPS	10	6 scholarships funded by the University of Pavia;
		2 scholarships funded by the National Institute of Nuclear Physics;
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "ICT and electronics";
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Energy efficiency, renewable energy development, and distributed microgeneration"
POSITIONS WITHOUT SCHOLARSHIPS	3	
TOTAL POSITIONS	13	

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

Candidates resident abroad and, if they have a justifiable need, candidates living in Italy are allowed to take a web-based interview via video conference, provided a written e-mail request to <u>concorsodottorati@unipv.it</u> is made at the same time as the application submission.

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.

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



# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 4 points);
- b) Masters thesis, publications and professional experience (up to 2 points). A 4-page abstract of the thesis must be attached to the application; if possible, the complete thesis should also be made available online. Publications and similar documents must be attached to the application in their complete version;
- 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 presentation letters, issued by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant, and submitted by the author to concorso-dottorati@unipv.it no later than September 18, 2014 at 17:00 pm (Italian time). The subject field must bear the candidate's name, surname and the PhD course denomination (up to 2 points).

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

The results of the qualifications assessment will be published online no later than October 15, 2014.

The results will be posted on the "Dipartimento di Fisica" noticeboard and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

INTERVIEW: October 27, 2014, at 9:00 (Italian time), Physics Department, Via Bassi n. 6, Pavia

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

The interview by video conference will start at 14:00 pm (Italian time) of October 27, 2014. The candidates will be asked to show a valid identification document. The University of Pavia does not accept any responsibility for a candidate's failure to take the interview due to technical difficulties.

INFORMATION: http://www-2.unipv.it/dottorati/scienzeetecnologie/fisica/n/web\_PhD/

The following topics are covered by the PhD programme:

- 1. Physics of Fundamental Interactions (Nuclear and Subnuclear Physics, Theoretical and Mathematical Physics);
- 2. Condensed Matter, Optical Physics, Quantum Information;
- 3. Interdisciplinary and Applied Physics.

#### PHD IN MATHEMATICS AND STATISTICS

LOCATION: "F. CASORATI" DEPARTMENT OF MATHEMATICS

DIRECTOR: Prof. GIAN PIETRO PIROLA

**DURATION:** 3 years **RESEARCH TOPICS:** 

- partial differential equations, calculus of variations, nonlinear and functional analysis;

- algebraic and differential geometry, symplectic and hyperbolic geometry, theory of categories;
- mathematical physics, fluid mechanics, kinetic theory;
- numerical analysis, optimization, scientific computing;
- probability and statistics, mathematical finance.

SCHOLARSHIPS	4	4 scholarships funded by the University of Pavia
POSITIONS WITHOUT SCHOLARSHIPS	1	
TOTAL POSITIONS	5	

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

Candidates resident abroad are allowed to take a web-based interview by video conference, provided a written e-mail request to <a href="mailto:concorso-dottorati@unipv.it">concorso-dottorati@unipv.it</a> is made at the same time as the application submission.

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

# QUALIFICATIONS ASSESSMENT 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) curriculum vitae (up to 2 points);
- b) exams taken during the candidate's degree courses, bearing the marks (up to 3 points);
- c) at least one letter of presentation, in Italian or English, issued by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant and submitted by the author to <u>concorso-dottorati@unipv.it</u> by September 18, 2014 at 17:00 pm (Italian time); the subject field must bear the candidate's name, surname and the PhD course denomination (up to 3 points);
- d) abstract of the Masters thesis, preprints and publications (up to 2 points).

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

The results of the qualifications assessment will be published online no later than September 23, 2014.

The results will be posted on the "Dipartimento di Matematica" noticeboard and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

INTERVIEW: September 29, 2014, at 10:00 (Italian time) — Dipartimento di Matematica "F. Casorati" - via Ferrata n. 1 — Pavia



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

The interview by video conference will begin at 14:00 (Italian time). Candidates will be asked to present a valid identification document. The University of Pavia cannot be held responsible for a candidate's failure to take the interview due to technical difficulties.

INFORMATION: <a href="http://www-dimat.unipv.it/~matstat/?q=en/node/550">http://www-dimat.unipv.it/~matstat/?q=en/node/550</a>

The following programmes are foreseen:

- a) Mathematics and scientific calculus;
- b) Probability and statistics.

#### PHD IN CHEMICAL AND PHARMACEUTICAL SCIENCES

**LOCATION**: DEPARTMENT OF CHEMISTRY

**DIRECTOR**: Prof. MAURO FRECCERO

**DURATION**: 3 years

RESEARCH TOPICS: Design, synthesis and development of bioactive compounds. Drug discovery from natural sources; study of glicopeptide vaccines. Computational methods in bio-organic systems. Organocatalysis; green chemistry; photochemistry; structures and properties of metalloenzymes. Synthesis, structural and functional characterization of materials and nanomaterials for applications in energetics, sensing, tissue engineering and nanomedicine. Functionalised solid phases for analytical applications. Molecular and supramolecular sensors. Materials and techniques for cultural heritage. Study of drug/macromolecule interaction via bio-chromatography and molecularly imprinted polymers. Novel modified and site-specific delivery systems, scaffolds and hemoderivatives for tissue repairing, stem cells encapsulation

Circapsulation		
SCHOLARSHIPS	11	6 scholarships funded by the University of Pavia;
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Relaunching the pharmaceutical industry through organic compounds including those from natural sources for innovative diagnostic applications and as potential drug candidates";
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Advanced materials (in particular ceramic) for structural applications";
		1 scholarship funded by the Istituto Nazionale di Ricerca Metrologica (INRIM) to undertake research in "Application of neutron activation analysis for the characterization of the silicon materials used to determine the Avogadro Constant";
		1 scholarship funded by Atom S.p.A. and dedicated to the memory of Luciano De Ambrosis, to undertake research in "Polymer-based materials for energy harvesting and their applications to the footwear industry";
		1 scholarship funded by the Department of Chemistry to undertake research in "G-quadruplex ligands targeting HIV-1 genome, as novel and selective antiviral drugs"
POSITIONS WITHOUT SCHOLARSHIP	3	
TOTAL POSITIONS	14	

**ADDITIONAL PHD POSITIONS JOINTLY-SUPERVISED WITH COMPANIES:** 1 (Invatec S.p.A., Roncadelle - Brescia). This position is activated provided a specific agreement between the University and the company is formalised no later than September 30. Only the company's employees can apply for this position.

**ADDITIONAL POSITIONS RESERVED FOR HIGHER-EDUCATION APPRENTICESHIPS:** 1 apprenticeship contract to be stipulated with B Natural S.r.l. – Corbetta (MI), to undertake research in "Study of the nutraceutical properties of beehive products". A member of the company will take part in the selection procedure for these positions, which will be activated provided that the company identifies a candidate suitable for their needs. The Committee will examine, at the end of the interview, also the research topics related to the positions.

ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview): candidates are allowed to take the tests in English.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

a) exams taken during the candidate's degree courses, bearing the marks (up to 10 points).

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

WRITTEN TEST: October 20, 2014, at 14:00 pm (Italian time), at the Department of Chemistry – Aula I (Organic Chemistry Section) - Viale Taramelli n. 10 – Pavia

**INTERVIEW: October 22, 2014, at 10:00 (Italian time)**, at the Department of Chemistry – Aula Riunioni (Organic Chemistry Section) - Viale Taramelli n. 10 – Pavia

INFORMATION: <a href="http://phdscchim.unipv.eu/site/en/home.html">http://phdscchim.unipv.eu/site/en/home.html</a>

The following programmes are scheduled:

- a) Chemical Sciences;
- b) Pharmaceutical Sciences.

PLEASE NOTE: Candidates who are interested in the scholarships funded by:

- 1) Istituto Nazionale di Ricerca Metrologica (INRIM) to perform research in "Application of neutron activation analysis for the characterization of the silicon materials used to determine the Avogadro Constant"
- 2) Atom S.p.A., and dedicated to the memory of Luciano De Ambrosis, to undertake research in "Polymer-based materials for energy harvesting and their applications to the footwear industry"
- 3) Department of Chemistry, to undertake research in "G-quadruplex ligands targeting HIV-1 genome, as novel and selective antiviral drugs"

must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.



#### PHD IN EARTH AND ENVIRONMENTAL SCIENCES

LOCATION: DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES

**DIRECTOR: Prof. MARIA CHIARA DOMENEGHETTI** 

**DURATION:** 3 years

**RESEARCH TOPICS:** Origin of the lower oceanic crust; Mantle Geochemistry; Basin analysis and hydrocarbon geology; Physical stratigraphy of turbidite systems; Active Tectonics; Eco-compatible materials for historical building; Evolutionary biology; Fungal Ecology and Biological Control; Fungal Bioremediation; Biology and Conservation of Peripheral Plant Populations; Marine Ecology

SCHOLARSHIPS	8	4 scholarships funded by the University of Pavia;
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Advanced Materials (in particular ceramics) for structural applications";
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by the Ministry Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Broadband communication systems by means of satellites for multiple users to the aim of safety, prevention and intervention in the case of natural disasters";
		1 scholarship funded by the Department of Earth and Environmental Sciences to undertake research in "Distribution pattern and detrital flux to the Po Plain-Adriatic foredeep during pliocene-pleistocene";
		1 scholarship funded by the Petroleum Institute of Abu Dhabi to undertake research in "Impact of diagenesis on reservoir quality evolution and origin of H2S in jurassic gas reservoirs"
POSITIONS WITHOUT SCHOLARSHIP	2	
TOTAL POSITIONS	10	

**ADDITIONAL PHD POSITIONS JOINTLY-SUPERVISED WITH COMPANIES:** 1 (Fondazione Minoprio – Vertemate con Minoprio - Como). This position is activated provided a specific agreement between the University and the company is formalised no later than September 30, 2014. Only the company's employees can apply for this position.

ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A SCHOLARSHIPS FROM THE "NASSTEC" INTERNATIONAL MOBILITY PROGRAMME (Native Seed Science, Technology and Conservation Initial Training Network): 11

Candidates applying for the additional positions reserved to candidates holding a scholarships from the "NASSTEC" international mobility programme will be selected through a qualifications assessment. The examining committee will draw up a specific report and ranking list.



# ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A SCHOLARSHIP FROM THE ERASMUS MUNDUS "MARES" INTERNATIONAL MOBILITY PROGRAMME (Marine Ecosystem Health and Conservation): 1

Candidates applying for the additional positions reserved to candidates holding a scholarships from the "MARES" international mobility programme will be selected through a qualifications assessment. The examining committee will draw up a specific report and ranking list. The candidate selected for this position will receive a three-year research grant funded by the Educational, Audiovisual and Culture Executive Agency (EACEA) within the MARES Erasmus Mundus Joint Doctorate.

#### ADMISSION PROCEDURE: qualifications assessment and interview

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 5 points);
- b) a research project (max. 5.000 characters, spaces included) in Italian or English (up to 3 points). The topic of the research project is free and does not necessarily have to concern one of the research topics included in the PhD course (for example, it can be a development of the research carried out for the Masters thesis). 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;
- c) other qualifications, publications, letters of presentation (max. 2) (up to **2** points). The letters of presentation must be issued by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant, and submitted by the author to concorso-dottorati@unipv.it no later than September 18, 2014 at 17:00 pm (Italian time). The subject field must bear the candidate's name, surname and the PhD course denomination.

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 called for interview is 7/10.

Candidates should include a brief summary of their Master thesis (max. 2.000 characters, spaces included).

The results of the qualifications assessment will be announced no later than **October 15, 2014**. The results will be posted on the "Dipartimento di Scienze della Terra e dell'Ambiente" noticeboard and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

INTERVIEW: October 22, 2014, at 9:30 (Italian time), Room D7 - Dipartimento di Scienze della dell'Ambiente, Ferrata 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 in a short presentation of the research project (max 15 minutes; the use of technologic support such as slides is strongly encouraged) that is designed to verify the candidate's aptitude for PhD programme research topics. 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 programmes and research projects are available following website: http://phdsta.unipv.eu/site/en/home.html.

The following programmes are foreseen:

- 1) Earth;
- 2) Environment;



- 3) MARES;
- 4) NASSTEC.

**PLEASE NOTE:** Candidates who intend to apply for the scholarship funded by the Department of Earth and Environmental Sciences to undertake research in "Distribution Pattern and Detrital Flux to the Po Plain-Adriatic Foredeep During Pliocene-Pleistocene" or for the scholarship funded by the Petroleum Institute of Abu Dhabi to perform research in "Impact of Diagenesis on Reservoir Quality Evolution and Origin of H<sub>2</sub>s in Jurassic Gas Reservoirs" must express their interest before the interview begins. The Committee will examine, at the end of the interview, candidates' specific research topics and will publish separate ranking lists.

#### PHD IN BIOENGINEERING AND BIOINFORMATICS

LOCATION: DEPARTMENT OF ELECTRICAL, COMPUTER AND BIOMEDICAL

**ENGINEERING** 

**DIRECTOR: Prof. RICCARDO BELLAZZI** 

**DURATION:** 3 years

**RESEARCH TOPICS:** Bioinformatics, Biomedical and Health informatics, Mathematical models of Biological Systems and Systems Biology, Biomedical Technology, Computational Biomechanics, Regenerative medicine, Tissue engineering, Synthetic Biology

SCHOLARSHIPS	6	3 scholarships funded by the University of Pavia;
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "New applications of biomedical industry";
		1 scholarship funded by the Department of Electrical, Computer and Biomedical Engineering (50%) and by the Department of Civil Engineering and Architecture (50%) to undertake research in "Clinical Decision Support systems and patients' empowerment";
		1 scholarship funded by the Department of Electrical, Computer and Biomedical Engineering – funds provided by an integrated Cariplo/Region project, Action 3, to undertake research in "Bioinformatics methods to support onco-haematology research"
POSITIONS WITHOUT SCHOLARSHIP	3	
TOTAL POSITIONS	9	

**ADDITIONAL PHD POSITIONS JOINTLY-SUPERVISED WITH COMPANIES:** 1 (Fondazione Maugeri). This position is activated provided a specific agreement between the University and the company is formalised no later than September 30, 2014. Only the company's employees can apply for this position.

ADDITIONAL POSITIONS RESERVED TO CANDIDATES WITH SCHOLARSHIP FROM A FOREIGN COUNTRY: 1

# ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A SCHOLARSHIPS FROM INTERNATIONAL MOBILITY PROGRAMMES: 1

Candidates applying for the additional positions reserved to candidates with scholarship from a foreign country and to candidates holding a scholarships from international mobility programmes will be selected through qualifications assessment and interview in person or via videoconference/webcam. The examining committee will draw up a specific reports and ranking lists.

**ADMISSION PROCEDURE: qualifications assessment and interview:** candidates are allowed to take the interview in English. Candidates resident abroad are allowed to take a web-based interview via video conference, provided a written e-mail request to <a href="mailto:concorso-dottorati@unipv.it">concorso-dottorati@unipv.it</a> is made at the same time as the application submission.

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



# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED 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. 1.500 words), related to PhD research themes. 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 3 points);
- c) exams taken during the candidate's degree courses, bearing the marks (up to 3 points);
- d) scientific publications (up to 2 points);
- e) curriculum vitae (up to 1 point).

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 7/10.

The results of the qualifications assessment will be published online no later than **October 6, 2014**. The results will be posted on the "Dipartimento di Ingegneria industriale e dell'informazione" noticeboard and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

**INTERVIEW:** October 13, 2014, at 10:00 (Italian time), "Aula Seminari" of the Department of Electrical, Computer and Biomedical Engineering (ex "Aula Dipartimento di Informatica e Sistemistica") - Floor D - Via Ferrata n. 1 - 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.

The interview by videoconference will start at 14:00 pm (Italian time) of **October 13, 2014**. The candidates will be asked to show a valid identification document. The University of Pavia does not accept any responsibility for a candidate's failure to take the interview due to technical difficulties.

INFORMATION: <a href="http://phdbb.unipv.eu/site/en/home.html">http://phdbb.unipv.eu/site/en/home.html</a>

The following programmes are scheduled:

- a) Bioinformatics, Health Informatics, Modeling of Biological Systems;
- b) Biomedical Engineering, Biomedical Technology, Biomechanics;
- c) Regenerative medicine, Tissue engineering, Synthetic biology.

**PLEASE NOTE:** Candidates who are interested in the scholarship funded by the Department of Electrical, Computer and Biomedical Engineering (50%) and by the Department of Civil Engineering and Architecture (50%) to undertake research in "Clinical Decision Support systems and patients' empowerment" or in the scholarship funded by the Department of Electrical, Computer and Biomedical Engineering - funds provided by an integrated Cariplo/Region project, Action 3, to to undertake research in "Bioinformatics methods to support onco-haematology research" must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. The admissions committee will draw up specific ranking lists.

#### PHD IN CIVIL ENGINEERING AND ARCHITECTURE

LOCATION: DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE

**DIRECTOR: Prof. FERDINANDO AURICCHIO** 

**COOPERATING UNIVERSITY:** Istituto Universitario di Studi Superiori of Pavia (IUSS). The PhD degree will be jointly issued by the University of Pavia and the Istituto Universitario di Studi Superiori of Pavia (IUSS)

**DURATION:** 3 years

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

SCHOLARSHIPS	8	4 scholarships funded by the University of Pavia;
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Broadband communication systems by means of satellites for multiple users to the aim of safety, prevention and intervention in the case of natural disasters";
		2 scholarships funded by the Department of Civil Engineering and Architecture, iCardio-Cloud funds, to undertake research in "Bringing cardiovascular virtual reality to clinical bedside practice through cloud platform: implementation of a US excellence paradigm into Lombardia SSR";
		1 scholarship funded by the Istituto Universitario di Studi Superiori of Pavia (IUSS), to undertake research in "Computational Mechanics and Advanced Materials"
POSITIONS WITHOUT SCHOLARSHIP	2	
TOTAL POSITIONS	10	

ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A SCHOLARSHIP FROM THE "SEED" INTERNATIONAL MOBILITY PROGRAMME (Simulation in Engineering and Entrepreneurship Development): 1

Candidates applying for these positions will be selected through qualifications assessment only. The committee will draw up a specific report and a separate ranking list. The candidate selected for this position will receive a three-year research grant funded by the Educational, Audiovisual and Culture Executive Agency (EACEA) within the SEED programme.

**ADMISSION PROCEDURE: qualifications assessment and interview:** candidates are allowed to take the interview in English. Candidates resident abroad and, if they have a justifiable need, candidates living in Italy are allowed to take a web-based interview via video conference, provided a written e-mail request to <a href="mailto:concorso-dottorati@unipv.it">concorso-dottorati@unipv.it</a> is made at the same time as the application submission.

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

QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED 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 with the procedure indicated in art. 5, para. 2 of this call for applications.

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

The results of the qualifications assessment will be published online no later than October 3, 2014.

The results will be posted on the Department of Civil Engineering and Architecture noticeboard and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

**INTERVIEW: October 13, 2014, at 10:00 (Italian time)**, Aula MS1 of the Department of Civil Engineering and Architecture – Via Ferrata 3, Pavia

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

The interview by videoconference will start at 12:00 (Italian time) of **October 13, 2014**. The candidates will be asked to show a valid identification document. The University of Pavia does not accept any responsibility for a candidate's failure to take the interview due to technical difficulties.

INFORMATION: <a href="http://www.unipv.eu/site/en/home/research/phd-courses/articolo11787.html">http://www.unipv.eu/site/en/home/research/phd-courses/articolo11787.html</a>

The following programmes are scheduled:

- a) Building Engineering;
- b) Hydraulic, Environment & Energy Engineering;
- c) Structural;
- d) Computational Mechanics and Advanced Materials.

**PLEASE NOTE:** Candidates who are interested in the scholarship funded by the Department of Civil Engineering and Architecture, iCardio-Cloud funds, to undertake research in "Bringing cardiovascular virtual reality to clinical bedside practice through cloud platform: implementation of a US excellence paradigm into Lombardia SSR", or in the scholarship funded by the Istituto Universitario di Studi Superiori of Pavia (IUSS), to undertake research in "Computational Mechanics and Advanced Materials", must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up specific ranking lists.

# PHD IN ELECTRONICS, COMPUTER SCIENCE AND ELECTRICAL ENGINEERING

LOCATION: DEPARTMENT OF ELECTRICAL, COMPUTER AND BIOMEDICAL

**ENGINEERING** 

DIRECTOR: Prof. MARIA CARLA CALZAROSSA

**DURATION:** 3 years

RESEARCH TOPICS: Photonics and Space Communications Systems, Computer Engineering and

Automation, Electrical Engineering

SCHOLARSHIPS	8	6 scholarships funded by the University of Pavia; 1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Broadband communication systems by means of satellites for multiple users to the aim of safety, prevention and intervention in the case of natural disasters"; 1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "ICT and electronics"
POSITIONS WITHOUT SCHOLARSHIP	4	
TOTAL POSITIONS	12	

### ADDITIONAL POSITIONS RESERVED TO CANDIDATES WITH A SCHOLARSHIP FROM A FOREIGN COUNTRY: 5

# ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A DEGREE AWARDED ABROAD: 4

Should professors of the Department of Electrical, Computer and Biomedical Engineering have access to research funds, financial support may be made available for these positions.

Candidates applying for the "Additional positions reserved to candidates holding a degree awarded abroad" will be selected through qualifications assessment and interview in person or via videoconference/webcam. The Committee will draw up specific reports and a separate ranking list.

ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview): candidates are allowed to take the interview in English.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks;
- b) publications;



c) curriculum vitae.

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

WRITTEN TEST: October 30, 2014, at 9:30, at the Engineering Faculty - Via Ferrata n. 5 – Pavia (candidates are advised to refer to the Dean's secretary to find out the class room where the exam will take place)

**ORAL TEST:** October 31, 2014, at 9:30, at the Engineering Faculty - Via Ferrata n. 5 – Pavia (candidates are advised to refer to the Dean's secretary to find out the class room where the exam will take place)

INFORMATION: http://www-3.unipv.it/dottIEIE/index\_en.php?pag=English/welcome.html

The following programmes are scheduled:

- a) Photonics and Space Communications Systems;
- b) Computer Engineering and Automation;
- c) Electrical Engineering.

#### PHD IN MICROELECTRONICS

LOCATION: DEPARTMENT OF ELECTRICAL, COMPUTER AND BIOMEDICAL

**ENGINEERING** 

**DIRECTOR: Prof. FRANCO MALOBERTI** 

**DURATION:** 3 years

**RESEARCH TOPICS:** Study and design of integrated circuits

SCHOLARSHIPS	4	2 scholarships funded by the University of Pavia; 1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Energy saving and distributed micro- generation"; 1 scholarship funded by Marvell Italia S.r.l. to undertake research in "RF transceivers in deeply scaled technologies for LTE systems"
POSITIONS WITHOUT SCHOLARSHIP	2	
TOTAL POSITIONS	6	

## ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A DEGREE AWARDED ABROAD: 4

Should professors of the Department of Electrical, Computer and Biomedical Engineering have access to research funds, financial support may be made available for these positions.

Candidates applying for the "Additional positions reserved to candidates holding a degree awarded abroad" will be selected through qualifications assessment and interview in person or via videoconference/webcam. The Committee will draw up specific reports and a separate ranking list.

ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview). Candidates are allowed to take the interview in English.

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

# QUALIFICATIONS ASSESSMENT: 20 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 10 points);
- b) publications (up to 5 points);
- c) other qualifications (up to 5 points).

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

**WRITTEN TEST: October 28, 2014, at 10:00 (Italian time)**, at the Engineering Faculty - Via Ferrata n. 1 - Pavia (candidates are advised to refer to the Dean's secretary to find out the class room where the exam will take place)



**ORAL TEST:** October 29, 2014, at 10:00 (Italian time), at the Engineering Faculty - Via Ferrata n. 1 – Pavia (candidates are advised to refer to the Dean's secretary to find out the class room where the exam will take place)

INFORMATION: <a href="http://www-3.unipv.it/dottMICR/index">http://www-3.unipv.it/dottMICR/index</a> en.php

**PLEASE NOTE:** Candidates who are interested in the scholarship funded by Marvell Italia S.r.l., to undertake research within the topic "RF transceivers in deeply scaled technologies for LTE systems" must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up a specific ranking list.

The following programmes are scheduled:

- a) Microwave integrated circuits and telecommunication systems;
- b) Analog and digitale integrated circuits, integrated sensors and microsystems, integrated electronic instrumentation and power electronics;
- c) Radio-frequency and millimeter-wave integrated circuits.

### MACRO-AREA OF LIFE SCIENCE

#### PHD IN GENETICS, MOLECULAR AND CELLULAR BIOLOGY

LOCATION: "LAZZARO SPALLANZANI" DEPARTMENT OF BIOLOGY AND

BIOTECHNOLOGIES

**DIRECTOR: Prof. ANTONIO TORRONI** 

**DURATION**: 3 years

**RESEARCH TOPICS**: Study of hereditary disorders using molecular and bioinformatics approaches. Genome instability mechanisms; identification and functional characterization of markers relevant for development and progression. Hemolymphoproliferative disorders: mechanisms lymphomagenesis and identification of biomolecular markers; pulmonary and head and neck neoplasms: study of prognostic and predictive molecular markers. Mechanisms of immunogenicity in drug-resistant cancer after treatment with high and low let radiation. Studies of the correlation between biological activity and oxygen dependent or independent action mechanism of natural or synthetic molecules for prevention and therapy of human diseases. Genome plasticity in evolution and cancerogenesis: centromeres, telomeres and transposable elements. Genetics and genomics of human and animal populations. Biotechnological and molecular approaches for the improvement of crop species. Functional and population genomics of harmful insects for tracking the invasion processes and for the development of control methods. Study of the symbiotic and pathogenic interactions between prokaryotes and eukaryotes using microscopy, genomics and bioinformatics. Replication and gene expression regulation in eukaryotic and prokaryotic cells. Cytochemical and ultrastructural studies of the nuclear processes of transcript maturation under different experimental conditions, and of the cell alterations induced by photosensitizing drugs and bioactive peptides. Molecular and cellular studies on the vulnerability of the central nervous system or neuronal cells in culture to platinum compounds. Morphological, cytochemical and molecular characterization of tissues and organs under normal, experimental and pathological conditions. Fluorescence analysis as a tool for investigating biological processes. Gene cloning, functional characterization and structural biology of enzymes, antibodies and proteins, potential targets of pharmacological drugs. Synthesis of new antiviral drugs; determination of the mechanisms of activity and resistance to new antitubercular drugs; identification of new compounds with antiproliferative and/or proapoptotic activity. Resistance mechanisms, persistence and clinical impact of emerging Gram negative pathogens; the environment as a potential reservoir of multi-drug resistant (MDR) isolates

SCHOLARSHIPS	10	9 scholarships funded by the University of Pavia; 1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "Human health (study and treatment of tumors and degenerative diseases with new approaches derived from the knowledge of the human genome)"
POSITIONS WITHOUT SCHOLARSHIPS	5	
TOTAL POSITIONS	15	



ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview). Candidates are allowed to take the interview in English.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- 1) presentation letter (no more than one) in Italian or English, sent directly by a university professor or instructor to <u>concorso-dottorati@unipv.it</u> no later than September 18, 2014 at 17:00 pm (Italian time). The subject field must bear the candidate's name, surname and the PhD course denomination (up to 1 point);
- 2) scientific publications (up to 1 point). Only publications from the last 5 years that are congruent with the research topics of the PhD course will be considered;
- 3) exams taken during the candidate's degree courses, bearing the marks (up to 8 points).

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

WRITTEN TEST: September 30, 2014, at 9:30 (Italian time), Aula "Arturo Falaschi" of the CNR Institute of Molecular Genetics - Via Ferrata n. 1 - Pavia

**INTERVIEW: October 2, 2014, at 9:30 (Italian time),** Aula "Arturo Falaschi" of the CNR Institute of Molecular Genetics - Via Ferrata n. 1 - Pavia

**INFORMATION**: <a href="http://phdsgb.unipv.eu/site/en/home.html">http://phdsgb.unipv.eu/site/en/home.html</a> - see the "Admission procedures" section.

The following programmes are foreseen:

- a) Cell biology;
- b) Medical and molecular genetics;
- c) Molecular microbiology and virology;
- d) Experimental pathology and pathological anatomy;
- e) Genetic and molecular sciences.

#### PHD IN EXPERIMENTAL MEDICINE

LOCATION: DEPARTMENT OF CLINICAL-SURGICAL, DIAGNOSTIC AND PEDIATRIC

**SCIENCES** 

**DIRECTOR: Prof. PAOLO DIONIGI** 

**DURATION:** 3 years

RESEARCH TOPICS: General Medicine, Medical Therapy, Experimental Surgery, Microsurgery,

Anesthesiology, Biomedical Technologies

SCHOLARSHIPS	5	4 scholarships funded by the University of Pavia; 1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "New technologies of biomedical industry"
POSITIONS WITHOUT SCHOLARSHIP	1	
TOTAL POSITIONS	6	

ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview). Ccandidates are allowed to take the interview in English.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) curriculum vitae (up to 2 points);
- b) exams taken during the candidate's degree courses, bearing the marks (up to 2 points);
- c) former periods of proven research activity at Italian or foreign scientific institutions (up to 3 points);
- d) published full papers in peer reviewed medical journals (up to 3 points).

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

**WRITTEN TEST: October 23, 2014, at 9:00 (Italian time),** Aula Campani – General Surgery branch – Department of Clinical-Surgical, Diagnostic and Pediatric Sciences – "S. Matteo" General Hospital (Surgery division) - Viale Golgi n. 19 – Pavia

INTERVIEW: October 24, 2014, at 9:00 (Italian time), Aula Campani – General Surgery branch – Department of Clinical-Surgical, Diagnostic and Pediatric Sciences – "S. Matteo" General Hospital (Surgery division) - Viale Golgi n. 19 – Pavia

INFORMATION: <a href="http://phdms.unipv.eu/site/en/home.html">http://phdms.unipv.eu/site/en/home.html</a>

The following programmes are foreseen:

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



### PHD IN PSYCHOLOGY, NEUROSCIENCE AND MEDICAL STATISTICS

LOCATION: DEPARTMENT OF BRAIN AND BEHAVIORAL SCIENCES

**DIRECTOR: Prof. TOMASO VECCHI** 

**DURATION:** 3 years

**RESEARCH TOPICS:** Psychology, Neuroscience, Biostatistics, Public Health

SCHOLARSHIPS	5	5 scholarships funded by the University of Pavia
RESEARCH GRANTS	1	1 research grant funded by the "Fondazione di Piacenza e Vigevano" to undertake research in "Epidemiology research in patients with dementia in the Lomellina area: psychological correlates". The research grant has a gross amount of € 19.367,00 per year. Candidates interested in these positions must select the appropriate administrative category during the application procedure.
POSITIONS WITHOUT SCHOLARSHIP	2	
TOTAL POSITIONS	8	

**ADDITIONAL PHD POSITIONS JOINTLY-SUPERVISED WITH COMPANIES:** 1 – Clap Cooperativa Sociale - Pavia. This position is activated provided a specific agreement between the University and the company is formalised no later than September 30, 2014. Only the company's employees can apply for this position.

**ADDITIONAL POSITIONS RESERVED FOR HIGHER-EDUCATION APPRENTICESHIPS:** 1 apprenticeship contract to be stipulated with Valos S.r.l - Genova, to undertake research in "Randomized Clinical Trials: methodological developments for data analysis and application to real data". A member of the company will take part in the selection procedure for these positions, which will be activated provided that the company identifies a candidate suitable for their needs. The Committee will examine, at the end of the interview, also the research topics related to the positions.

#### ADMISSION PROCEDURE: qualifications assessment and interview

Candidates resident abroad are allowed to take a web-based interview via video conference, provided a written e-mail request to <a href="mailto:concorso-dottorati@unipv.it">concorso-dottorati@unipv.it</a> is made at the same time as the application submission.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) motivation letter in Italian or English language (max 500 words) mentioning the name of two referees the Committee may contact for a presentation of the candidate (up to **2** points);
- b) research project in Italian or English (max. 3.000 words), related to PhD research themes. 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's objectives; description of the methods (procedure, data analysis); 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 marks (up to 3 points).



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

The candidates will take care to include their curriculum vitae.

#### 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 October 10, 2014.

The results will be posted on the "Dipartimento di Scienze del Sistema Nervoso e del Comportamento - Psicologia" noticeboard (P.zza Botta n. 11, Pavia) and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

**INTERVIEW: October 20, 2014, starting from 10:00 (Italian time)**, Sala Riunioni, Department of Brain and Behavioral Sciences (Psychology section), Piazza Botta n. 11, Pavia.

The interview will be held in Italian or English and will verify the candidate's knowledge of English. The interview will consist of a short presentation of the research project meant to verify the candidate's aptitude for PhD programme research topics, offering candidates the chance to develop it according with the disciplinary approach they prefer. The research project presented by the candidate will not, in any way, be binding if the candidate is admitted onto the PhD course.

The interview by videoconference will start at 14.00 pm (Italian time) of **October 20, 2014**. The candidates will be asked to show a valid identification document. The University of Pavia does not accept any responsibility for a candidate's failure to take the interview due to technical difficulties.

INFORMATION: contact prof. Vecchi at: psyco@unipv.it

The following programmes are foreseen:

- 1) Experimental Psychology and Cognitive Neuroscience;
- 2) Applied and Developmental Psychology;
- 3) Biostatistics, Public Health and Education.

**PLEASE NOTE:** Candidates who are interested in the research grant funded by the "Fondazione di Piacenza e Vigevano" to undertake research in "Epidemiology research in patients with dementia in the Lomellina area: psychological correlates" must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topic. The examining committee will draw up a specific ranking list.

#### PHD IN BIOMEDICAL SCIENCES

LOCATION: DEPARTMENT OF BRAIN AND BEHAVIORAL SCIENCES

**DIRECTOR: Prof. EGIDIO D'ANGELO** 

DURATION: 3 years
RESEARCH TOPICS:

#### BIOCHEMISTRY PROGRAMME:

Biochemical and immunologic characterization of Staphylococcus aureus proteins, their role in infective process and possible vaccinal use; Molecular bases of diseases associate to aging and amyloidosis; Analysis of connective matrix in normal and pathological conditions; Proteins of biomedical interest: functional and structural studies; Biochemical mechanisms of platelet function; Biochemical of human erythrocyte; Biochemical mechanisms of platelet production; Pathogenetic mechanisms of diseases related to protein-misfolding

#### PHARMACOLOGY PROGRAMME:

Receptor pathology, metabolism and cellular kinetic study.; Environmental toxicology; Gastrointestinal pharmacology; Clinical pharmacology of active drugs on central nervous system; Antineoplastic drugs pharmacology; Transplant pharmacology; Pharmacoepidemiology and pharmacoeconomics of active drugs on central nervous systems, on cardiovascular system and gastrointestinal system.

#### PHYSIOLOGY PROGRAMME:

Molecular and cellular physiology of nervous system; Cellular communication and plasticity in the cerebral circuits; Physiology and biophysics of sensory, motor and cognitive functions; Cellular communication in the cardiovascular system; Physiology of skeletal and cardiac muscle; Physiology of the gastrointestinal system

#### NEUROSCIENCE PROGRAMME:

Neurobiology, neuroendocrinology and functional neurology; Neurophysiopatology; Neuroepidemiology and research methodology; General neurology; Physiopathology, diagnosis and therapy of primary cephalalgia and adaptive disorders; Neurodegenerative disease, brain aging and dementia

SCHOLARSHIPS	10	8 scholarships funded by the University of Pavia;  1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research in "New technologies of biomedical industry";  1 scholarship funded by the Department of Molecular Medicine (donation of Dr. Mino Milani, with the contribution of AIPAMM Onlus) and dedicated to the memory of Dr. Antonella Jenny Griziotti Milani, to undertake research in "Pathogenic molecular mechanisms of chronic myeloproliferative diseases Ph-negative in the era of gene JAK-2 inhibitors"	
RESEARCH GRANTS	1	1 research grant funded by the "Fondazione di Piacenza e Vigevano" to undertake research in "Epidemiologic research in patients with dementia in the Lomellina land. Neurological correlates" The research grant has a gross amount of € 19.367,00 per year. Candidates interested in these positions must select the appropriate	

		administrative category during the application procedure.
POSITIONS WITHOUT SCHOLARSHIP	3	
TOTAL POSITIONS	14	

## ADDITIONAL POSITIONS RESERVED TO CANDIDATES HOLDING A SCHOLARSHIPS FROM INTERNATIONAL MOBILITY PROGRAMMES: 3

Candidates applying for the additional positions reserved to candidates holding a scholarships from international mobility programmes will be selected through qualifications assessment only. The committee will draw up a specific report and a separate ranking list.

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

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

## QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 4 points);
- b) curriculum vitae (up to 2 points);
- c) scientific publications (up to 2 points);
- d) research project in Italian or English (max 3.000 words), related to PhD research themes (up to 2 points). The project will have to be structured according with the specimen available at the following link: <a href="http://phdsb.unipv.eu/site/en/home/admission-procedures.html">http://phdsb.unipv.eu/site/en/home/admission-procedures.html</a>.

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

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

The results of the qualifications assessment will be published online no later than October 6, 2014.

The results will be posted on the "Dipartimento di Scienze del Sistema Nervoso e del Comportamento" noticeboard and in the Persona Area of the University website. This can be accessed using the login information provided during registration.

**INTERVIEW: October 13, 2014 at 9:00 (Italian time)** - Department of Brain and Behavioral Sciences – Room of the ex Institute of General Physiology – Via Forlanini n. 6 – Pavia

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

**INFORMATION**: <a href="http://www.unipv.eu/site/en/home/research/phd-courses/life-sciences/articolo8056.html">http://www.unipv.eu/site/en/home/research/phd-courses/life-sciences/articolo8056.html</a>

The following programmes are foreseen:

- c) Biochemistry;
- d) Pharmacology;
- e) Physiology;



#### f) Neuroscience.

**PLEASE NOTE:** Candidates who are interested in the scholarship funded by the Department of Molecular Medicine (donation of Dr. Mino Milani, with the contribution of AIPAMM Onlus) and dedicated to the memory of Dr. Antonella Jenny Griziotti Milani, to undertake research in "Pathogenic molecular mechanisms of chronic myeloproliferative diseases Ph-negative in the era of gene JAK-2 inhibitors", or in the research grant funded by the "Fondazione di Piacenza e Vigevano" to undertake research in "Epidemiologic research in patients with dementia in the Lomellina land. Neurological correlates" must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topic. The examining committee will draw up specific ranking lists.

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

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

LOCATION: DEPARTMENT OF LAW

DIRECTOR: Prof. DARIO MANTOVANI

**DURATION:** 3 years

RESEARCH TOPICS: Civil Law; Labour Law and Employment Relations; Intellectual Property and

Unfair Competition; Roman Law; European Legal Culture

SCHOLARSHIPS	5	5 scholarships funded by the University of Pavia
POSITIONS WITHOUT SCHOLARSHIP	1	
TOTAL POSITIONS	6	

# ADDITIONAL POSITIONS RESERVED TO CANDIDATES WITH A SCHOLARSHIP FROM A FOREIGN COUNTRY: 1;

Candidates applying for the "Additional positions reserved to candidates with a scholarship from a foreign country" will be selected through qualifications assessment and interview in person or via videoconference/webcam. The Committee will draw up specific reports and a separate ranking list.

**ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview):** candidates are allowed to take the tests in English or French. According to the choice of candidates, the written test will be focused on one of the following topics: Civil law; Labour law and employment relations; Intellectual property and unfair competition; Roman Law; Legal History.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 5 points);
- b) scientific publications, excluding the Master's degree thesis (up to 2 points);
- c) other relevant qualifications (up to 3 points).

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

**WRITTEN TEST: October 23, 2014 at 10:00 (Italian time)**, at the Department of Law – Corso Strada Nuova n. 65 – Pavia

INTERVIEW: October 24, 2014 at 14:00 pm (Italian time), at the Department of Law – Corso Strada Nuova n. 65 – Pavia

INFORMATION: contact prof. Mantovani at: dario.mantovani@unipv.it

The following programmes are scheduled:

- a) Private law, Labour Law and Intellectual Property;
- b) Roman Law and European legal culture.

### PHD IN PUBLIC LAW, CRIMINAL AND INTERNATIONAL JUSTICE

LOCATION: DEPARTMENT OF LAW

**DIRECTOR: Prof. CRISTINA CAMPIGLIO** 

**DURATION:** 3 years

**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

SCHOLARSHIPS	5	5 scholarships funded by the University of Pavia
POSITIONS WITHOUT SCHOLARSHIP	1	
TOTAL POSITIONS	6	

## ADDITIONAL POSITIONS RESERVED TO CANDIDATES WITH A SCHOLARSHIP FROM A FOREIGN COUNTRY: 1

Candidates applying for the "Additional positions reserved to candidates with a scholarship from a foreign country" will be selected through qualifications assessment and interview in person or via videoconference/webcam. The Committee will draw up specific reports and a separate ranking list.

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

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 6 points);
- b) scientific publications (up to 1 point);
- c) curriculum vitae (up to 3 points).

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

WRITTEN TEST: October 29, 2014 at 14:00 pm (Italian time), at the Department of Law – Sala Romagnosi - Corso Strada Nuova n. 65 – Pavia

INTERVIEW: October 31, 2014 at 9:00 (Italian time), at the Department of Law – Sala Romagnosi - Corso Strada Nuova n. 65 - Pavia

INFORMATION: <a href="http://dottorati.unipv.eu/on-dip/phddpgpi/Home.html">http://dottorati.unipv.eu/on-dip/phddpgpi/Home.html</a>

The following programmes are scheduled:

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

# PHD IN ECONOMICS AND MANAGEMENT OF TECHNOLOGY (DREAMT)

LOCATION: DEPARTMENT OF ECONOMICS AND MANAGEMENT

**DIRECTOR:** Prof. GIORGIO RAMPA

COOPERATING UNIVERSITY: University of Bergamo. The PhD degree will be jointly issued by the

University of Pavia and the University of Bergamo

**DURATION:** 3 years

**RESEARCH TOPICS:** Applied economics and management of technology and innovation: Data analysis, Business and entrepreneurship; Logistics; Production management; Innovation and patents; Mobility and infrastructures; Experimental design; Corporate strategy and governance; International business; Agri-food sectors; Production engineering

SCHOLARSHIPS	11	2 scholarships funded by the University of Pavia;
		1 scholarship funded by the Italian Ministry of Education, Universities and Research with funds made available by Ministerial Decree n. 198 of October 23, 2003 ("Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti") to undertake research on "Improvement of typical agri-food products and food security, through new characterization and quality-guarantee systems";
		1 scholarship funded by Eupolis Lombardia to undertake research on "Production activities, entrepreneurship, innovation";
		Scholarships provided by the University of Bergamo:
		3 scholarships funded by the University of Bergamo;
		1 scholarship funded by ABB S.p.A. to undertake research on "Product-Service Systems Engineering";
		1 scholarship funded by GDM S.p.A. to undertake research on "Management (transport and storage) of a polymeric articulate with pre-defined density and pattern: innovative solutions applicable to the production of mono-use sanitary items";
		1 scholarship funded by Warrant Group S.r.l. to undertake research on "Systemic innovation and patent research supporting product development and protection";
		1 scholarship funded by Eupolis Lombardia to undertake research on "Infrastructures and sustainable mobility"
POSITIONS WITHOUT SCHOLARSHIPS	3	
TOTAL POSITIONS	14	

**ADDITIONAL PHD POSITIONS JOINTLY-SUPERVISED WITH COMPANIES:** 1 (RDS & Company S.r.l. - Milano). This position is activated provided a specific agreement between the University and the company is formalised no later than September 30, 2014. Only the company's employees can apply for this position.

**ADMISSION PROCEDURE: qualifications assessment and interview:** candidates will have to take the interview in English.

Candidates resident abroad are allowed to take a web-based interview via video conference, provided a written e-mail request to <a href="mailto:concorso-dottorati@unipv.it">concorso-dottorati@unipv.it</a> is made at the same time as the application submission.

## QUALIFICATIONS ASSESSMENT: 30 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 5 points);
- b) "Europass CV", including possible list of scientific publications (up to 4 points);
- c) up to two presentation letters in English, issued by professors from the university where the degree was awarded or by other professors/researchers who have had direct contact with the applicant and submitted by the author to <a href="mailto:concorso-dottorati@unipv.it">concorso-dottorati@unipv.it</a> by September 18, 2014 at 17:00 pm (Italian time). The subject field must bear the candidate's name, surname and the PhD course denomination (up to 7 points);
- d) a research project written in English (max 5.000 characters including spaces) (up to **10** points). More information about the writing of the project can be found at <a href="http://phdemd.unipv.eu/site/en/home.html">http://phdemd.unipv.eu/site/en/home.html</a>;
- e) a motivation letter written in English (reasons for choosing this PhD course, expectations on future employment, readiness to spend research periods abroad, etc.) (up to 4 points).

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

Candidates must attach to their application a short abstract (max 2.000 characters including spaces) of their Masters thesis.

#### The minimum score necessary to be admitted to the interview is 21/30.

The results of the qualifications assessment will be published online no later than October 1, 2014.

The results will be posted on the "Dipartimento di Scienze Economiche e Aziendali" noticeboard and in the Personal Area of the University website. This can be accessed using the login information provided during registration.

**INTERVIEW:** starting from October 7, 2014, at 10:00 (Italian time), at the Department of Economics and Management, via San Felice 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.

The interview will take place in English. It will verify and assess the candidate's knowledge of the English language. The interview will deal with the research project (max 5 minutes), as well as with the contents of the PhD programme.

The interview by videoconference will start at 16.00 pm (Italian time) of **October 7, 2014**. The candidates will be asked to show a valid identification document. The University of Pavia does not accept any responsibility for a candidate's failure to take the interview due to technical difficulties.

INFORMATION: <a href="http://phdemd.unipv.eu/site/en/home.html">http://phdemd.unipv.eu/site/en/home.html</a>



**PLEASE NOTE:** Candidates who are interested in the following scholarships:

- 1 scholarship funded by ABB S.p.A. to undertake research on "Product-Service Systems Engineering"
- 1 scholarship funded by GDM S.p.A. to undertake research on "Management (transport and storage) of a polymeric articulate with pre-defined density and pattern: innovative solutions applicable to the production of mono-use sanitary items"
- 1 scholarship funded by Warrant Group S.r.L. to undertake research on "Systemic innovation and patent research supporting product development and protection"
- 1 scholarship funded by Eupolis Lombardia to undertake research on "Production activities, entrepreneurship, innovation"
- 1 scholarship funded by Eupolis Lombardia to undertake research on "Infrastructures and sustainable mobility"

must state their interest to the examining committee before the interview; these candidates' interviews will therefore also include a discussion of the project topics. The examining committee will draw up specific ranking lists.



#### PHD IN SCIENCES OF LITERARY AND MUSICAL TEXT

**LOCATION:** DEPARTMENT OF HUMANITIES

**DIRECTOR: Prof. CARLA RICCARDI** 

**DURATION:** 3 years

**RESEARCH TOPICS:** Genetic Criticism and textual Tradition; Critical Editions of Texts and literary Criticism from the origins to the 20<sup>th</sup> century; History of Italian Language; History of Theatre and Cinema, Modern Stranger Languages and Literatures, Musicology

SCHOLARSHIPS	5	4 scholarships funded by the University of Pavia; 1 scholarship funded by the "Maria Corti" Foundation
POSITIONS WITHOUT SCHOLARSHIP	1	
TOTAL POSITIONS	6	

## ADDITIONAL POSITIONS RESERVED TO CANDIDATES WITH A SCHOLARSHIP FROM A FOREIGN COUNTRY: 1

Candidates applying for the "Additional positions reserved to candidates with a scholarship from a foreign country" will be selected through qualifications assessment and interview in person or via videoconference/webcam. The Committee will draw up specific reports and a separate ranking list.

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

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

**RESEARCH PROJECT:** when enrolling, candidates must submit a research project either in Italian or in English (max. 3.000 words, bibliography not counted), related to research themes pertaining to the programmes 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.

# QUALIFICATIONS ASSESSMENT: 6 POINTS ARE ASSIGNED TO THE ASSESSMENT OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) synthesis of the degree thesis in Italian or English (max. 1.000 words) (up to 2 points);
- b) exams taken during the candidate's degree courses, bearing the marks (up to 2 points);
- c) curriculum vitae, including possible list of scientific publications (up to 2 points).

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

WRITTEN TEST: October 9, 2014, at 14:00 pm (Italian time) in Aula L2, Palazzo San Tommaso, Piazza del Lino n. 2, Pavia

The written test will consist of:

- 1. for the Modern Philology programme: discussion of philological issues referred to crucial critical editions or stylistic analysis (linguistic, syntactic, metrical) of a poetic text;
- 2. for the Foreign Languages and Literatures programme: 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 comment of a text;

3. for the Musicology programme: historical, analytical and stylistic discussion of at least two musical pieces chosen among three different periods and genres proposed by the committee.

The list of candidates selected for the oral exam will be published according to a procedure that will be communicated the day of the written exam.

**INTERVIEW: October 21, 2014, at 9:00 (Italian time),** Department of Humanities, Literature section – Corso Strada Nuova n. 65 – Pavia

The oral test will be in either Italian or the foreign language chosen by the candidate and will concern:

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

### INFORMATION: carla.riccardi@unipv.it

The following programmes are foreseen:

#### 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. Mass literatures;
- 5. Italian linguistics;
- 6. Theatre texts and spaces. Film language: analysis and criticism;
- 7. Metrical theory and analysis;
- 8. Art history, also in connection with literary themes;
- 9. Greek and Latin textual criticism;
- 10. Greek and Latin textual tradition;
- 11. Exegesis and historical-literary analysis of Greek and Latin texts;
- 12. Reception of Greek and Latin texts.

#### MODERN FOREIGN LANGUAGES AND LITERATURES

#### Research areas:

The programme covers 6 areas, interacting also on a comparative basis: English studies; Germanic Philology; French studies; German studies; Spanish and Portuguese 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 and American novel;



- 4. Textual analysis and criticism (theory and practice);
- 5. Literary translation;
- 6. History of the language;
- 7. Film studies (transcriptions/re-writings/screen-adaptations of literary texts/cinema language and subtitles);
- 8. History of theatre and drama (script and performance).

#### **MUSICOLOGY**

#### Research areas:

- 1. Critical edition of scores from the Middle Ages to the 21st century;
- 2. Music theories and analyses 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. Contemporary popular music.

#### PHD IN HISTORY

LOCATION: DEPARTMENT OF POLITICAL AND SOCIAL SCIENCES

**DIRECTOR: Prof. MARINA TESORO** 

**DURATION:** 3 years

**RESEARCH TOPICS:** Pre-classical ancient Near East; Ancient history and historiography; Greek, Etruscan 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 of Africa

SCHOLARSHIPS	5	5 scholarships funded by the University of Pavia
POSITIONS WITHOUT SCHOLARSHIPS	1	
TOTAL POSITIONS	6	

ADMISSION PROCEDURE: qualifications assessment and tests (written test and interview): candidates are allowed to take the interview in English.

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

# QUALIFICATIONS ASSESSMENT: 10 POINTS ARE ASSIGNED TO THE EVALUATION OF CANDIDATES' QUALIFICATION, DIVIDED AS FOLLOWS:

- a) exams taken during the candidate's degree courses, bearing the marks (up to 2 points);
- b) post lauream diplomas, apprenticeships, language certifications, participation in archaeological excavations (up to 2 points);
- c) certified publications and conference papers dealing with the subjects of the PhD course (up to 2 points);
- d) research project in Italian or English (min. 8.000 characters, max 16.000 spaces included; bibliography and sources not counted), related to one of the above-mentioned PhD research themes (up to 4 points).

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

WRITTEN TEST: October 24, 2014, at 10:00 (Italian time), Department of Humanities – Palazzo S. Tommaso, Piazza del Lino n. 2, Pavia. The written examination will consist of an essay dealing with subjects related to one of the PhD course programmes.

INTERVIEW: October 27, 2014, at 10:00 (Italian time), Department of Humanities – Palazzo S. Tommaso, Piazza del Lino n. 2, Pavia

The interview will take place in Italian or English. It will verify and assess the candidate's knowledge of the English language. The interview will deal with the research project in order to verify the candidate's aptitude towards research and his/her background in the research project field of studies. The research project will not be binding if the candidate is admitted onto the PhD course.

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The following programmes are foreseen:

- Civilizations of the Mediterranean in Pre-Classic, Classic and Medieval Ages;
- Society, Politics and Institutions in Modern and Contemporary Ages.