DISCLAIMER: This document is a non-official version of the PhD Programmes – 40th cycle Call for Applications. Only the Italian version approved with Rectoral Decree shall prevail and be binding

CALL OF SELECTION FOR RESEARCH PHD COURSES
XL CYCLE

Academic Year 2024/2025

APPLICATION DEADLINE: 25th JULY 2024 AT 01 pm (Italian time)

Issued with Rector’s Decree 1449/2024 Prot. n. 158550 – 19.06.2024
Updated with Rector’s Decree 1556/2024 Prot. n. 0179767 - 02.07.2024
Updated with Rector’s Decree 1672/2024 Prot. n. 0198493 - 17.07.2024
Updated with Rector’s Decree 1710/2024 Prot. N. 0199724 - 19.07.2024

Art. 1
PhD PROGRAMMES

Public selections are held at the University of Parma, for qualifications and exams, for admission to the XL cycle – academic year 2024/2025 of the PhD courses of research listed below:

1. BIOTECHNOLOGY AND LIFE SCIENCE
2. ECONOMICS & MANAGEMENT OF INNOVATION AND SUSTAINABILITY - EMIS (in agreement with University of Ferrara and University Cattolica del Sacro Cuore)
3. PHYSICS
4. CIVIL ENGINEERING AND ARCHITECTURE
5. INDUSTRIAL ENGINEERING
6. MOLECULAR MEDICINE
7. MICROBIOTA AND HEALTH
8. NEUROSCIENCES
9. PSYCHOLOGY
10. MATERIALS SCIENCE AND TECHNOLOGY (in agreement with C.N.R. - The Italian National Research Council)
11. CHEMICAL SCIENCES
12. FOOD SCIENCE
13. DRUGS SCIENCES
14. EARTH SCIENCES
15. PHILOSOPHY, SOCIAL SCIENCES, CULTURAL AND ENVIRONMENTAL HERITAGE
16. JURIDICAL SCIENCES (in agreement with University Modena e Reggio Emilia)
17. TRANSLATIONAL MEDICAL AND SURGICAL SCIENCES
18. HISTORICAL AND TEXTUAL SCIENCES
19. VETERINARY SCIENCES
20. INFORMATION TECHNOLOGIES

1.1 Activation and Ministerial Accreditation

In accordance with Ministerial Decree no. 226/2021, the PhD programmes can be activated after being accredited by the MUR (Ministry of University and Research). The accreditation is renewed after a yearly revision of the mandated requirements.

In the event of non-accreditation and/or non-activation of one or more doctoral courses, any competition procedures already completed will be considered void.

The PhD Research programmes have a three-year duration starting from 1st November 2024.
1.2 PhD Programme Table
For each of the above-mentioned courses, research topics, vacancies, admission requirements, procedures and criteria for the selection and assessment of candidates are specified in the attached Forms. Forms are integral part of this announcement and are available on the University website.

The number of positions and scholarships may be incremented in case additional funding becomes available, notwithstanding the terms of the application process as detailed in Art. 3. Any amendment, update or integration of the Programme Table will be published only on the University website.

The increase in scholarships determine the increase in the number of place available globally.

1.3 Available PhD Positions
The present Call for Applications may offer the PhD positions detailed in the table below.

<table>
<thead>
<tr>
<th>PhD Positions with full scholarship</th>
<th>PhD candidates awarded with such PhD Positions shall carry out their research activities on a topic agreed with their PhD thesis Supervisor and officially approved by the PhD Academic Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positions with full scholarship funded by Next Generation EU – National Recovery and Resilience Plan (NRRP) ex M.D. 629/2024 and 630/2024</td>
<td>Such PhD Positions bind the applicants to carry out their doctoral research on a specific topic that is indicated in the relevant PhD Programme Table, that complements the Call for Applications and is available on the University website. Applicants awarded with such PhD scholarships shall fulfil specific obligations foreseen in the funding scheme and in the relevant regulations, as per Art. 1.4.</td>
</tr>
<tr>
<td>Positions with full scholarship funded by Emilia Romagna Region (DGR n. 154/2023 Pr fse+ 2021/2027)</td>
<td>Such PhD Positions bind the applicants to carry out their doctoral research on a specific topic that is indicated in the relevant PhD Programme Table, that complements the Call for Applications and is available on the University website. Applicants awarded with such PhD scholarships shall fulfil specific obligations foreseen in the funding scheme and in the relevant regulations.</td>
</tr>
<tr>
<td>PhD Positions with full scholarship Linked to a specific research topic</td>
<td>Such PhD Positions bind the applicants to carry out their doctoral research on a specific topic that is indicated in the relevant PhD Programme Table, that complements the Call for Applications and is available on the University website. Applicants awarded with such PhD scholarships shall fulfil specific obligations foreseen in the funding scheme and in the relevant regulations.</td>
</tr>
<tr>
<td>Reserved PhD Positions</td>
<td>The reserved positions (e.g. Executive PhD, Apprenticeship PhD, PhD positions reserved for applicants with a second-cycle degree awarded in a foreign country, PhD extra-quota positions) are open to applicants who fulfil specific requirements in addition to the general assessment carried out by the Admission Board. If such positions are available, the requirements are detailed in the relevant PhD Programme Table, that complements the Call for Applications and is available on the University website.</td>
</tr>
</tbody>
</table>
1.4 PhD scholarships funded by the National Recovery and Resilience Plan ex M.D. 629/2024 and M.D. 630/2024

The PNRR PhD scholarships - DD.MM. 629 and 630, are aimed at activating doctoral courses on defined topics and intend to promote interdisciplinarity, membership of international networks and inter-sectorality referred to in the PNRR.

To this end, all doctoral courses involve the involvement of companies in the definition of the training path, through the carrying out by the doctoral student of compulsory study and research periods in the company from a minimum of six (6) months to a maximum of twelve (12) months for grants pursuant to Ministerial Decree 629/2024, from a minimum of six (6) months to a maximum of eighteen (18) months for grants pursuant to Ministerial Decree 630/2024.

With reference to the scholarships activated pursuant to the Ministerial Decree 630/2024, the companies involved in the definition of the training project provide co-financing of the scholarship as established at ministerial level within the scope of this decree.

For each specific topic, a study and research period abroad of six (6) months is envisaged. The candidates will be declared winners and admitted to the courses "sub conditional”. This status will remain until the end of the eligibility verification process for PNRR support, carried out by the Ministry on the basis of the eligibility requirements identified respectively by the articles. 7, 8, 9 and 10 of the Ministerial Decree 629/2024 and art. 7 of the Ministerial Decree 630/2024. In the event that the verification procedure indicated above has a negative outcome, the scholarship will not be financed and the interested party will be promptly notified.

Art. 2

ADMISSION REQUIREMENTS

2.1 General Requirements

Regardless of age and citizenship status, applicants can be admitted to the selection procedure if they have been awarded at least one of the following degrees:

- a) Laurea Magistrale, Magistrale a ciclo unico or Laurea Specialistica (Italian Second-Cycle Degree);
- b) Laurea di Vecchio Ordinamento (pre-1999 reform);
- c) A Second-Cycle Degree awarded by academic institutions part of AFAM (Alta Formazione Artistica e Musicale);
- d) A non-Italian Degree awarded by an academic institution. The degree will have to be comparable to an Italian one that grants admission to the PhD programme, in terms of length, level and if possible of field of education. This degree must also be recognized as eligible even for the sole purpose of admission to the selection.

Applicants who are yet to obtain their Second-Cycle Degree are admitted to the selection procedure on condition that they obtain their degree no later than October 31st, 2024 (enrolment deadline).

The attached Forms, which are integral part of this announcement, specify for each PhD course the type of academic qualifications or additional requirements necessary for the admission in the selection.

Candidates that already hold a research doctoral degree may be admitted to attend, granted that the selection tests are sat and passed, another research doctorate program without any scholarship coverage.
2.2 Academic Degree obtained abroad
The eligibility of foreign academic degrees shall be verified by the Examination Board in charge of admission, in compliance with the applicable legislation in Italy and in the Country where the academic degree has been issued, as well as in compliance with any international agreements or treaties concerning the recognition of educational degrees for higher education.

Applying for admission entails an implicit request to assess the eligibility of the academic degree attained abroad. To this end, candidates must also attach the following documents to the online application, in addition to what is established in the following Art. 3.2:

a) a certificate of their academic degree listing the exams sat and passed with the relevant mark, specifying the minimum and maximum vote provided for in the educational system of your country. EU citizens may use a statutory declaration in lieu of the certificate, pursuant to Italian Presidential Decree No. 445/2000 as amended;

b) English translation of the certificate as per item a), signed by the candidate under their responsibility, only where this document is not originally in English;

c) any other documents useful to assess the academic degree eligibility (Diploma Supplement, etc.)

Art. 3
HOW TO APPLY

3.1 Application
The online application must be submitted by 25 July, 2024 at 1pm (Italian time, final deadline).

A € 30.00 application fee, non-refundable, is to be paid within the above mentioned deadline. Payment must be made by July 25, 2024

The application, including the documentation reported below, must be submitted exclusively through the Esse3 Portal application, available from 12.00 (local time) on 3 July, 2024.

Candidates already in possession of login credentials for the Esse3 Portal application, will have use the latter. In case of loss or prolonged inactivity of the access credentials, it is possible to proceed with the password recovery, following the procedure indicated. Please note that if you have previously participated, even once, in a selection procedure or attended a course at the University of Parma you are already in possession of the credentials and will not be able to register again with the same personal data. It will therefore be necessary to reactivate the credentials, in the manner described.

It is not possible to guarantee the fulfillment of requests to recover/duplicate the access credentials to our informatic system within 5 days of this call deadline. Candidates are strongly encouraged to complete their application well in advance of the deadline.

Italian candidates who have never been registered at the University of Parma will MUST register using their SPID credentials. For more information, consult https://www.unipr.it/registrazione.

In order to submit the application, applicants shall:

1. Access Esse3 Portal application;

2. Register by entering the required data (or login, if already registered);

3. Click on menu > REGISTRAR'S OFFICE > ADMISSION TEST > ADMISSION TO RESTRICTED DEGREE COURSES – DEGREE WITH ADMISSION IN CHRONOLOGICAL ORDER > select the desired PhD Course;
4. Proceed with completing the online application, submitting the required information and following the online procedure, at the end of which the payment of the admission fee for the selection is expected. The € 30,00 application fee is to be paid using the PagoPA system;

5. Upload the required documents, as detailed in the table below, exclusively in .pdf format (maximum size limit of 5Mb for each attachment; the file will have to state the name of the candidate for example: surname_namefile.pdf). At any time, within the call deadline, candidates shall be able to access their applications to integrate or edit the data and attachments inserted. Mandatory attachments cannot be deleted or modified. In the event of an attachment error, the document will have to be uploaded again.

6. After having entered all the information, attached the mandatory documents and the documents required by the PhD form, proceed with the confirmation;

7. Print the application, to keep. The submission of the application to the University shall be completed automatically at the end of the procedure. Therefore, candidates do not have to deliver or send any printed material to the office.

To properly upload the documents, please follow the instructions http://www.unipr.it/dottorati-iscrizione. Applications that at 1 pm (Italian time) of 25 July 2024 are incomplete and/or lack the required attachments, will be excluded. Applications that are incomplete, irregular or not submitted in the manner and within the terms specified in this article will not be accepted.

The deadline is peremptory, at its expiration the informatic system will no longer allow the submission or editing of any application. The informatic system will moreover work as means of certification for the time of submission and deadline expiration.

In any case, additions to the documentation attached to the application will not be admitted after the deadline of the call, with the exception of those requested by the University.

It is the candidates’ responsibility to verify the correct conclusion of the procedure and the correct loading of all the documents. No complains will be accepted for any malfunctions of the informatic system due to overload close to the deadline.

3.2 Required documents
In order to be admitted to any of the PhD Research Programme dealt with in this call, candidates shall submit the following mandatory documentation:

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<thead>
<tr>
<th></th>
<th>Scanned valid ID with photograph</th>
<th>Both sides</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Scanned valid ID with photograph</td>
<td>Both sides</td>
</tr>
</tbody>
</table>
| 2 | ANNEX A “ADMISSION TO RESEARCH DOCTORATE COURSES” | Mandatory uploaded during the online application procedure, PENALTY NOT EVALUATION, it must indicate:  
  • the exact name of the competition in which you intend to participate (not to be confused with the research topic);  
  • the chosen Research Area, selected among those indicated in the courses attached Forms and with relating research project, if required;  
  • the reserved position, if any, for which they intend to apply;  
  • the type of degree attained (or to be attained), the name of the University issuing the degree, the graduation date and the final mark. |
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>Curriculum Vitae et studiorum</strong>&lt;br&gt;Including a brief description of the degree thesis topic. It may also be written in English.&lt;br&gt;Check in the respective course Form if any specific action is required (language and/or format).</td>
</tr>
<tr>
<td>4</td>
<td><strong>Abstract of the second cycle Master’s degree thesis</strong>&lt;br&gt;Abstract of the second cycle Master’s degree thesis. Undergraduates applicants may submit the draft of the thesis approved by their supervisor (Abstract/draft: approximately 10,000 characters including spaces).</td>
</tr>
<tr>
<td>5</td>
<td><strong>Documents attesting that the applicant holds both the necessary first and second level degrees.</strong>&lt;br&gt;1. university that has awarded the degree&lt;br&gt;2. type of degree awarded, whether second level master degree/single cycle' second-level degrees/pre-reform degree&lt;br&gt;3. denomination of the degree awarded&lt;br&gt;4. “Classe di Laurea” (only for degree awarded in Italy)&lt;br&gt;5. date in which the degree has been awarded&lt;br&gt;6. final mark&lt;br&gt;7. academic transcript of records, including the full list of the exams taken and the related marks&lt;br&gt;<strong>Type of document for degree awarded by:</strong>&lt;br&gt;a) <strong>Italian Public Universities</strong>: self-certification dated and signed&lt;br&gt;b) <strong>EU/Non-EU Universities</strong>: the certificate and transcript of records of the Bachelor’s and Master's degree. (i.e. first and second level master’ degree), and the transcript of records. The latter must include the full list of the exams taken and the related marks. In case of documents drawn up in languages other than Italian or English, the official translation in Italian/English of both the documents is required. Only official translations issued by the University which has awarded the degree or by other competent authorities in the State in which the title has been awarded shall be accepted.&lt;br&gt;The certificate, transcript of records of the first and second level qualification or Diploma Supplement, if present; useful document for the purposes of the declaration of authenticity and equivalence of the qualification (e.g. Diploma Supplement, Declaration of Value on site issued by the Italian diplomatic authorities in the country in which the qualification was obtained, certificate of authenticity and comparability issued by centers such as ENIC-NARIC )&lt;br&gt;c) <strong>Italian Private Universities</strong>: the certificate or the self-certification, including all the information as detailed on the side, or in alternative the Diploma supplement, if available.</td>
</tr>
<tr>
<td>6</td>
<td><strong>For applicants who are yet to obtain their second cycle degree by the date they apply:</strong>&lt;br&gt;<strong>Academic transcript of</strong> records, including the full list of the exams taken and the related marks. Please also indicate the related CFU or ECTS (if provided by education system of the Country in which the degree will be awarded). The record must include the &quot;media ponderata dei voti degli esami&quot; (Weighted Average Mark WAM), only for graduate studentes enrolled in Italian Universities&lt;br&gt;To calculate the <strong>media ponderata</strong> (the weighted average mark, only for graduate studentes enrolled in Italian Universities):&lt;br&gt;1. Multiply the marks obtained by the number of CFUs (please, note that 30 with honours is regarded as 30);&lt;br&gt;2. Add all the obtained results;&lt;br&gt;3. Divide the result by the total of the CFUs.&lt;br&gt;<strong>Research Project</strong>&lt;br&gt;(when required by the course specific Form)&lt;br&gt;Preferably according to the format attached to this selection call. It can also be written in English.&lt;br&gt;Check in the Forms of the individual courses if there are any specific requirements (language and/or format).</td>
</tr>
</tbody>
</table>
Further supporting documents

As detailed in the PhD Programme Table, that complement the Call for Applications and is available on the University website.

<table>
<thead>
<tr>
<th>Additional documents that can be uploaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
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<tr>
<td>9</td>
</tr>
</tbody>
</table>

All documents written in a language other than Italian will have to be translated into English, otherwise they will not be evaluated. For identity documents and degrees issued in a language different from Italian or English, an official translation is required. The translation shall be drawn up by an authorized body or by the awarding University.

According to current legislation, the University must reject certifications issued by other Italian public administrations. Therefore, academic degrees must be attested only using self-certification if awarded by Italian public universities.

On the University website applicants may download a self-certification fac-simile to be used in the case the academic qualifications attained in other Italian public universities.

After verification, if the qualifications do not comply with the requirements, pursuant to art. 2, or the declarations produced are not truthful, the University may dispose for the exclusion from the selection or from the PhD course, with a provision of the Rector, at any time, even after enrolment and the beginning of the course.

3.2 Reserved Positions

Any reserved position is stated in the attached Forms of each PhD programme, which are an integral part of this call.

The candidates intending to apply for the reserved positions, in possession of the requirement corresponding to the type of reserved place, when provided for in the Forms of the courses, must attach, in addition to the mandatory documents and those indicated on the course sheet, the specific documentation and precisely:

- **Candidates with qualifications obtained abroad**: only if expressly provided for in the Form for the specific PhD programme, the candidacy of those entitled to compete is automatic. There is no need to submit any additional documentation, they shall attach a certificate stating that they are holders of a scholarship or of similar support.

- **Candidates holding scholarships funded by foreign Countries**: a certificate stating that they are holders of a scholarship or of similar support.

- **Candidates under specific international mobility programmes**: a certificate stating that they are holders of a scholarship or similar support provided as part of a specific international mobility programme.

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• **Candidates employed by companies or public institute and research centers engaged in highly qualified activities:** the documents giving evidence of their being employees of the company. This shall automatically entail their eligibility for the positions reserved for their category.

• **Candidates holding Research Scholarship** a self-certification stating that they hold a research fellow position, its duration and the granting institution or a document stating the awarding of such position. This shall automatically entail their eligibility for the positions reserved for their category. In the event that a certification of the hold position can not be presented, as the selection procedure has not yet been completed on the date of this announcement deadline, candidates shall be admitted under the condition of procuring said documentation before 31.10.2024.

If an incorrect application for a reserved position is found by office without the specific requirement, the candidate will be automatically admitted to the competition for the non-reserved positions.

For reserved positions, the Examination Board shall prepare a separate ranking in accordance with the category of the reserved positions. Should there be no winning candidates for positions reserved for graduates from foreign universities, the vacancies will be added to the general ranking of each research PhD course. For all other types of reserved positions left vacant, it will not be possible to proceed with the assignment to other candidates given the particular nature of the reserve.

### Art. 4

**SELECTION PROCEDURE**

Admission shall consist on a comparative selection based on qualifications and possibly a public oral test.

The examination dates, the selection procedures and the assessment criteria for the admission to the PhD Programmes are described in the PhD Programme Tables in attachment and are integral part of the present Call for applications and also available in the webpage of each PhD Programme on the [University website](#).

**The oral exam will take place in the presence.**

Within the limits and only and exclusively if provided for by the individual course Forms, the oral exam may, at the request of the candidate, be taken remotely using the [Microsoft Teams platform](#). Applicants are responsible for providing adequate audio and video equipment for the use this platform.

The publication of the oral exam calendar shall amount to a formal notification. Therefore, candidates shall present themselves, without any prior notice, call or communication regarding the admission exams, at the examination venue, on the day and at the time set forth in the Forms. Please note the candidates will have to exhibit a valid identification that has a photograph of the holder, issued by an official Public Administration and the receipt of the competition fee.

Only and exclusively, if provided for in the relative Form of the chosen PhD programme, the test may be held in a language other than Italian.

Examination results will be published on the [Esse3 Portal application](#). The publication of such results on the website is equivalent to receiving a notification. No notification will be sent to applicants via e-mail. The results of the qualifications assessment will be displayed a few days before the date scheduled for the oral test.
It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area in the days preceding the date of the Oral Exam.

4.1 Special provisions for remote oral test

*Only and exclusively if explicitly provided for* in the Form relating to the chosen PhD course, the applicants who reside abroad or temporarily abroad for study or work reasons can take the oral exam remotely *via the Microsoft Teams platform*. The link to connect to the virtual room for the examination will be sent by the Examination Board to the email address indicated in the "DISTANCE ORAL EXAMINATION REQUEST FORM", completed and signed and attached to the online application.

In order to take the examination, applicants shall connect to the Teams session via the mentioned link on the day set for the oral test. The Examination Board may choose together with the candidate a time for the beginning of the interview.

For identification purposes and *under penalty of exclusion from the selection procedure*, each candidate shall identify themselves, before the interview begins, by showing the same identification that has been attached to the selection application.

In the event a candidate fails to communicate their personal address, fails to connect, or is not available on the day and time agreed or fails to show a valid identification, pursuant to the previous paragraph, all these shall be ground to exclude them from the selection procedure.

These causes of exclusion do not apply if the candidate, with a valid identification, presents themselves on the day set for the interview in order to sit for the oral exam “in person”.

**Technical connection problems during the remote oral exam:**

a) in the event that the connection problem concerns one or more committee members, the interview is postponed ex-officio to another date of which will be given appropriate and adequate publicity;

b) in the event that the connection concerns the candidate admitted to the interview, the committee may reasonably postpone the interview to another date, in compliance with the principles of non-discrimination and equal treatment between the candidates that will be given appropriate and adequate communication.

The University of Parma shall not be responsible for any technical causes which prevent the oral interview from being carried out regularly.

The acceptance of any requests to take the oral exam at a distance received after the expiry of the competition will be judged discretionally by the Examination Board, taking into account the particular needs expressed by the candidate who may go to preclude the possibility of taking the oral examination in attendance.

**Art. 5**

EXAMINATION BOARD

Examination Boards shall be appointed by the Rector and composed in accordance with Article 5 of the Regulation concerning Research Doctorate degrees of the University of Parma.

The composition of the single Boards shall be published, by the deadline of this announcement on the University website.

The Examination Boards will not send any personal communication to the candidates regarding the outcome of the selection tests: it will be the exclusive responsibility of the candidates to inform themselves through the methods described in art. 4 and the subsequent art. 7 of this notice.
Art. 6
FINAL RANKING LIST

The Examination Board may award a total of 120 points. The attribution of points to qualifications and projects, including the minimum score required to be admitted to the oral test, is set forth in the Forms relating to the single PhD programme.

To qualify, a total score not lower than 70 points is required. The final score shall be the sum of the points obtained in the qualifications and in each oral test.

In case of scholarships linked to specific topics, during the oral test, the candidates will have the possibility to express their interest for one or more scholarships linked to the specific topics. The Examination Board will express a suitability assessment for the allocation of the scholarships linked to specific topics, taking into account specific skills, experiences and aptitudes of the candidates.

The expression of interest can be presented by filling in the dedicated section of Annex A and by confirming it during the oral test before the interview begins. This declaration does NOT preclude the possibility of applying for other ordinary scholarships.

Scholarships on specific topics are those financed under certain programmes, projects or agreements with external bodies which obligatorily provide for the performance of the activity on a specific research topic (indicated in the call Form) and which bind the assignees to carry out such research.

Due to their particular nature, scholarships dedicated to specific research topics can not be assigned on the basis of the general merit ranking but require an additional specific assessment. The Examination Board, possibly supplemented by an expert as referred to in the previous art. 5, shall express a suitability assessment for the assignment of scholarships linked to specific topics. In doing so they shall take into consideration specific competences, experiences and aptitudes of the candidates, as well as the type of profile sought, when indicated in the PhD programme Form.

In the modalities provided for by the PhD programme Form, each candidate can express their interest in the assignment of one or more scholarships with specific topics to the Examination Board. This expression of interest is not binding for the purpose of the suitability assessment.

All candidates, who apply for a specific topic PhD course, shall take part in the selection for the general positions as well.

At the end of the selection the Examination Board, will draw up a ranking for merit based on the final score obtained during the assessment of qualifications and oral test. The ranking shall be approved by Rector’s Decree.

The Examination Board shall be able to express a differentiated judgment for each individual position/scholarship also in relation to special skills required for conducting research on specific topics.

The Examination Board and the Academic Board are not bound by any options expressed by the candidates nor by any project presented at the time of the application.

Art. 7
ADMISSION TO THE PROGRAMS

Successful applicants will be admitted to the PhD programme, after the approval of selection deeds, in line with the ranking list until all positions available are covered, without prejudice to the specific procedures for the awarding of the positions set out in Arts. 3 and 6 of this call, concerning reserved positions and scholarships dedicated to specific research topics.
After the publication of the results of the last admission examination, the final ranking list will be published through a Rector Decree on the Esse3 Portal application, by logging in with the same methods used to register at the selection. For the purposes of admission to each PhD Programme, only the rankings published shall be valid.

In case of equality the following criteria will apply:

- for positions covered by scholarships, the assessment of the economic situation, determined in accordance with D.P.C.M. of 09.04.2001, published in the Official Gazette no. 172 of 26.07.2001, without prejudice to the specific procedures for the awarding of the position set out in Arts. 6 and 7 concerning reserved positions and scholarships dedicated to specific research topics;
- for positions not covered by scholarship precedes the youngest candidate.

The publication of the ranking on the website shall be the only official publications of the outcomes of the competitive selection and, therefore, no personal notifications shall be sent to the winning candidates.

In case a candidate ranks in a winning position in more than one short-list, he/she shall opt for only one Doctorate Program, concomitantly notifying his/her waiver of the other programs. The choice of the PhD program, carried out at the time of registration is final and you can not change it in any way.

The candidates that rank as winners in the final short-list, who are not over 29 years of age, may be selected in cooperation with any interested companies and based on each candidate’s specific skills, for a "high training and research internship contract" to cover any vacancies, where any are set forth in the forms attached hereto.

The beneficiaries of scholarships on the basis of specific topics, awarded by European and international institutions or other forms of financial support in which the University of Parma is a partner, may be admitted to the PhD courses. Provided they still perceive a scholarship or other form of financial support, they may participate in the selection procedures as described in the regulation of each programme.

**Art. 8**

**ENROLMENT**

**8.1 Enrolment procedure**

Successful applicants will have to complete a pre-enrolment procedure EXCLUSIVELY ON-LINE, accessing on the Esse3 Portal application from 12th September 2024, 12 pm (Italian time) to without exception until 17th September 2024, 12 pm (Italian time).

In order to pre-enrol, applicants shall:

1. Log in Esse3 Portal application with your credentials (with SPID for Italian citizens or for those who have it);
2. Click on Registrar’s office => ENROLMENT => ENROLMENT Online => STANDARD ENROLMENT and follow the procedure. In this phase, the winner are required to upload the scan of the personal identification document entered and of the tax code (foreign citizens without a tax code issued by the Italian Revenue Agency will be able to attach a declaration of the tax code created when registering for the competition);
3. At the end print the Enrolment Form;
4. Proceed with the payment of the Enrolment Tax as pursuant Article 10 below (REGISTRAR’S OFFICE => PAYMENT) trough the PagoPA system, according to the Italian Law;
5. Send to dottorati@unipr.it until 17th September 2024 the following scanned documents:
a) Valid ID or passport (both sides);
b) Enrolment Form filled and signed;
c) Payment receipt of the Enrolment Tax;
d) Declaration attesting the qualifications held (High School Diploma and Master's/Specialist Degree) for applicants outside the University of PARMA, according to the model downloadable at University website;
e) Declaration of ORCID profile (ORCID is a unique and permanent identification number attributed to the individual researcher and which, thanks to the integration with Web of Science and Scopus, allows you to easily populate your author profile with all future publications, also in order to keep track of the different affiliations of the researcher during his/her professional life. To register, visit the page https://orcid.org/register);
f) Scholarship forms (only for successful applicants with scholarship), downloadable at University website:
   • the Scholarship Acceptance Form or Withdrawal Form for the entire duration of the course (those attending a school of specialization will have to fill in the scholarship acceptance form reserved for them);
   • current account form for crediting the scholarship (enter the bank details also on Esse3 Portal application => PERSONAL DATA/CHANGE DATA/PAYMENTS AND REFUNDS/METHOD/IBAN);
   • declaration certifying the INPS (Social Security Insurance) status by using the form included among those of the scholarship acceptance;
   • Registration receipt for the separate management of contribution by INPS (Social Security Insurance) for the payment of the scholarship (if not available immediately, no later than 31.12.2024);

Enrolments and payments carried out in ways differ from the ones indicated above will not be accepted.

Applicants who do not complete the enrolment procedure shall be considered as having tacitly refused their PhD position and vacancies will be offered to the next available applicant as by final ranking. Enrolment will become effective only after the presentation of all the above-mentioned documents within the specific deadline.

Only at the start of the course will the enrollment be made final and an email will be sent from the enrollment confirmation system, containing the University credentials (i.e. student number and e-mail address). The University of Parma will officially communicate with its students only via the institutional email account for any administrative information regarding the PhD course.

At the moment of the enrolment, those who are yet to obtain the degree entitling them to enroll in a PhD programme (see Art. 2), will be registered with reserve. The qualification must however be obtained before the start of the course, no later than 31.10.2024. In order to complete the registration, candidates have to send to dottorati@unipr.it the following documents:
   a) Self-certification (or official certification, if the degree has been obtained either in EU or non-EU foreign countries, or if the degree has been awarded at an Italian Private University). The above mentioned certificates must indicate: University Name, graduation date, type of degree (in Italy laurea specialistica/magistrale, magistrale a ciclo unico, vecchio ordinamento or an equivalent degree as specified in Art. 2) and final mark;
   b) Scanned copy of a Valid ID with photo;

8.2 Replacement positions enrolment
Following a waiver by the winners of the selection, whether explicit or tacit, replacements will be made in line with the final ranking. A communication shall be sent to the applicant taking over the available position via e-mail with an indication of the enrollment deadlines assigned at the same time. Enrollment takes place according to the procedure described in the previous paragraph.
Candidates who received the notice of substitution, but intend to renounce the enrollment, must communicate their refusal without delay so that the available position can be offered to other applicants. The refusal must be notified via e-mail to dottorati@unipr.it, attaching the scanned front-back copy of a valid ID document.

Eligible applicants who do not enroll within the indicated deadline will be considered tacitly withdrawn.

8.3 Information for applicants in need of a VISA
The applicants who require a VISA to stay in Italy, after the completion of the University enrolment process, by submitting the forms for them referred to in the previous paragraph, must proceed immediately with registration on the UNIVERSITALY Portal and carry out the “pre-enrolment” to the PhD programme, following the indicated procedure to obtain the VISA. After that they must send a communication via e-mail to dottorati@unipr.it of successful pre-enrolment, in order to validate and confirm the information entered, necessary for the issuing of the VISA by the Italian Embassies abroad.

Moreover, on their arrival to Italy, applicants are also invited to promptly send the following documents to dottorati@unipr.it, also for the purposes of payment of the scholarship:

a) Valid Permit of Stay. Those who are not in possession of this document must apply within 8 days from their arrival in Italy, according to the Italian legislation on Immigration and send a copy of the receipt issued by “Questura”. They will also have to provide a document proving the insurance coverage for medical treatment and hospitalization;

b) Italian Tax Code issued by Italian Revenue Agency (Agenzia dell’Entrate).

8.4 Information for applicants with a non-Italian Degree
PhD candidates in posses of a foreign degree that have passed the selection, shall be admitted conditionally until they submit the “dichiarazione di valore in loco del titolo posseduto” [declaration of local value of the degree held] along with the certificate of the relative exams and marks, translated and certified by the Italian diplomatic representation in the Country where the degree was attained. The declaration of value shall certify that the held degree is valid, in the Country where it was issued, for admission to an academic programme similar to a PhD Research.

If the above declaration of value is not available at the time of enrolment, a document shall be provided giving evidence that the application for its issue has been submitted to the competent diplomatic representation and it shall be turned in as soon as possible. As an alternative to the declaration of value, a Diploma Supplement can be attached issued by higher education institutions belonging to the EU or a certificate of comparability issued by CIMEA Center (further information at https://www.cimea.it/EN/pagina-attestati-di-comparabilita-e-verifica-dei-titoli).

PhD candidates with a degree issued by non-EU institutions must provide a document attesting the validity and the comparability of the qualification awarded (e. g. Diploma Supplement, Declaration of Value - Dichiarazione di Valore in loco del titolo posseduto - of the second-cycle degree issued by the Italian Diplomatic authorities located in the country in which the qualification was awarded, recognition of foreign qualifications carried out by agencies like the ones of ENIC-NARIC network). Those who have not provided such documents during the application step shall submit them after the enrolment, within three months from the starting date of the PhD programme.

The University reserves the right to request the documents attesting the validity and comparability of the awarded qualifications also for those issued in EU countries.
The PhD Programme Form, which complement the present Call for Applications, provide the number of both the positions and the scholarships available.

The research topics relating to the open-theme and reserved scholarships will be assigned, during the planning of the activities of the first year of the course, by the Academic Board according to the order in the final ranking, taking into account the indications contained in the PhD programme Forms, regarding reserved positions, positions with scholarships linked to specific topics and the assessment of suitability expressed by the Examination Boards during the selection.

In the event of winning a useful position covered by a scholarship in the general ranking of merit, any expression of interest does not entail the automatic assignment of the scholarship for a restricted subject.

If there are no suitable candidates for the assignment of one or more Scholarships on specific topics, the places will be assigned without the scholarship being covered.

Successful candidates for a PhD position are required to begin training and research activities within the times indicated and in the manner established for them by the Teaching Board. If this does not happen, the Teaching Board may order their exclusion.

Candidates who are assigned scholarships with a predetermined research activity will be bound to carry out that activity.

9.2 Scholarship payment
Scholarships are paid to PhD candidates on a monthly basis (payment is usually processed on in the first ten days of the following month).

The annual amount of the scholarships, as defined by Ministerial Decree 23 February 2022 n. 247, is equal to €16,243.00 gross.

The scholarships are subject to the payment of the INPS social security contribution (gestione separata INPS) according to the relevant legislation in force. Such a contribution is paid as follow: two-thirds to be paid by the University and one-third to be paid by the scholarship holder. PhD candidates enjoy the related rights and tutelage.

In terms of taxes, the provisions of Article 4 of Italian Law No. 476, 13 August 1984 apply to scholarships for attendance to PhD programmes.

The scholarship shall not add to other research grants or other scholarships awarded on whatever ground, except for those awarded by Italian or foreign institution intended to integrate, with stays abroad, the training or research activities of the PhD Student.

The beneficiaries of research grants who are awarded scholarships as part of a PhD programme must irrevocably renounce their grant or scholarship by the start date of the course, 01.11.2024, by promptly contacting their administration.

Anyone who has already received a scholarship for a PhD course in Italy, even partially, cannot apply for a second one.

Art. 10
TUITION FEES
It is envisaged the total exemption from the payment of fees or grants to the University for the PhD students who have a scholarship and other forms of equivalent support under the D.M. 226/2021.

It is also envisaged, pursuant to Law 11 December 2016, no. 232, paragraph 262, the total exemption from paying taxes or grants to the University for PhD students who are not scholarship beneficiaries.

All doctoral students enrolled in the programs shall be required in any case to pay €16.00 per year as revenue stamp duty and €140.00 per year as the Regional tax for the right to study.

As a result of termination of studies the installment paid for the registration is not refundable.

The amounts of the tuition fee for enrollment in the following years and their deadlines are determined annually by the competent Academic Bodies and published on the University web page at: http://www.unipr.it/dottorati-iscrizione. The PhD students are required to view it through the University web site.

**Art. 11**

**DEGREE ATTAINMENT**

The research doctor title, also referred to as: "Ph.D." ("Dott. Ric." In Italian), shall be achieved upon sitting for and passing the final exam. For all information on the appointment of Examination Boards for the final exam and on the procedures and requirements relating to the PhD thesis, reference is made to the Regulations of the University of Parma concerning the Programmes for PhD Research Degrees.

**Art. 12**

**OWNERSHIP OF RESULTS AND CONFIDENTIALITY**

Intellectual and industrial property rights over any result achieved by PhD candidates (e.g. including software, industrial inventions - whether patentable or not - know-how, models, data and data collections, etc.) are disciplined by the relevant National Legislation into force, the University internal regulations, and other agreements signed between the University and third parties if any.

**ART. 13**

**COMPATIBILITY REGIME**

PhD students shall undertake to ensure attendance of the PhD programme based on the instructions given by the Academic Board.

Admission to PhD research programmes shall entail full-time and exclusive commitment.

The Academic Board shall have the power to include any extra-curricular activities to be performed along with the academic, educational and research activities of the programme.

The regimes of compatibility and incompatibility with the attendance of PhD courses are governed by Arts. 6 and 7 of the Regulations concerning PhD courses, to which reference is made.

Pursuant to and by effect of the Law of 12 April 2022, n. 33 and of the Ministerial Decree 29 July 2022, no. 930, simultaneous enrollment in a doctoral course and a first or second cycle degree course is permitted; pursuant to the same discipline, simultaneous enrollment in the doctoral course and in a non-medical specialization school is also permitted. Double enrollment is permitted subject to verification of the requirements established, in relation to the attendance obligations, by the general regulations referred to above.
Postgraduate students enrolled in a Medical School of Specialization at the University of Parma, who win the selection for a PhD programme, may be allowed to attend jointly both programmes. It shall be allowed granted that the students are in the last year of the School of Specialization at the time of enrolment in the PhD programme, in compliance with the deadlines set down in Article 10 below.

Joint attendance shall be allowed also if compatible with the activities and commitment required by the same School and proved by an authorization issued by the School Board, also in consideration of the distance between the locations.

The PhD Board shall resolve on any request for a reduction in the PhD programme, after assessing the research activities already carried out during the postgraduate medical career of the student, as certified by the postgraduate medical school of specialization and may grant enrolment directly to the second year of the PhD programme.

In the year of joint attendance, the postgraduate student cannot receive the PhD programme scholarship.

**Art. 14**

**APPLICABLE REGULATION**

For anything not expressly provided for herein, reference is made to the "Regolamento dei Corsi per il conseguimento del Dottorato di Ricerca dell'Università degli Studi di Parma" [Regulation of the University of Parma concerning the Programs for Research Doctorate degrees], issued by Rector’s Decree no. 2275 of the 27.06.2013, as amended.

**Art. 15**

**PERSON IN CHARGE OF THE PROCEEDING**

Pursuant to Italian Law No. 241 of 7 August 1990, as amended and integrated, the person in charge of the proceeding dealt with herein shall be Ms. Sonia Rizzoli – Head of the Postgraduate Training Sector] - P.le S. Francesco, 3 - 43121 Parma, Italy, phone +390521 – 034214 fax +390521/347042 and e-mail dottorati@unipr.it.

The provisions set down herein and intended to ensure transparency in all phases of the proceeding, the criteria and procedures for the appointment of examination boards and persons in charge of the proceeding implement Italian Law No. 241 of 7 August 1990, as amended.

**Art. 16**

**PERSONAL DATA PROTECTION**

Personal and sensitive data provided by candidates will be used for administrative purposes and for possible proceedings for the management of the academic career of the winners only. The treatment of the personal data according to art. 13 of EU art. 2016/679 – General Data Protection Regulation.

The communication regarding the request for personal data is obligatory in order to evaluate the prerequisites for participation, or exclusion of the candidate from the selection process. The personal data provided can be communicated to the Administration of the Università di Parma and to related external structures within the framework of the University of Parma authorised to manage personal data under the direct control of the Owner of the Service of the Data Protection officer, exclusively for the above-mentioned purposes.

The e-mail of Data Controller at the Università degli Studi di Parma, dpo@unipr.it or dpo@pec.unipr.it.

**Art. 17**

**OTHER INFORMATION**
This announcement of a competitive examination, written in Italian and in English, is published on the website of the University of Parma, http://www.unipr.it; the relating notice is available on the website of the Italian Ministry of Education, University and Research and on the EU Euraxess website.

Additional information and regulation details may be asked to the Postgraduate Training – Ph.D Office, P.le San Francesco, 3 - 43121 Parma, Italy Phone: +39 0521/034214 dottorati@unipr.it.

Prof. Paolo Martelli

Digitally signed pursuant to Legislative Decree no. 82/2005

<table>
<thead>
<tr>
<th>U.O.R. - Unità Organizzativa Responsabile (Relevant Organizational Unit)</th>
<th>Area Dirigenziale Didattica,Internazionalizzazione e Servizi agli Studenti (Relevant Organizational Management -Teaching Area and Students' Services)</th>
<th>Ms. Anna Maria Perta</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.P.A. Responsabile del Procedimento Amministrativo (Person in charge of the proceeding)</td>
<td>UO Formazione Post Lauream (Head in charge of the administrative proceeding of the Postgraduate Training)</td>
<td>Ms. Sonia Rizzoli</td>
</tr>
</tbody>
</table>
ANNEX A

“ADMISSION TO RESEARCH DOCTORATE COURSES”

(Articles 4, 19, 46 and 47 of Italian Presidential Decree No. 445 of 28 December 2000)

I, the undersigned
SURNAME ____________________________________________________________________
NAME ________________________________________________________________________
Birth Place ______________________________________________________________________
Date of birth (gg/mm/aaaa) ______________________________________________________
Tax ID _________________________________________________________________________
Citizenship ___________________________________________________________________
Phone number __________________________________________________________________
E-mail for correspondence _______________________________________________________

DECLARE to participate in the public competition for admission to the PhD cycle XL:

__________________________________________

(INdicate the CORRECT COURSE)

RESEARCH AREAS: ________________________________________________________________

(It must indicate the research topic if expressly provided for in the schedule for the chosen course of Ph.D.)

also DECLARE admission to a reserved position (if provide in the form attached to the notice of the course) for:

☐ Positions reserved for employed by companies or public institutes and research centers engaged in highly qualified activities
☐ Holders of Research Grant
☐ Holders of SCHOLARSHIP FUNDED BY FOREIGN STATES

aware of the forfeiture by any obtained benefits and penalties provided for by Articles 75 and 76 of Italian Presidential Decree No. 445 of December 28, 2000 for the alleged false declarations regarding education or use of false documents

DECLARE under my responsibility:

a) Possess a degree (fill in one):

☐ Master Degree (Ministerial Decree No. 270/04) in ______________________________ Class: ___
☐ Master Degree (Ministerial Decree No. 509/99) in ______________________________ Class: ___
☐ Degree (ante Ministerial Decree No. 509/99 – system previously in force to the one introduced by Ministerial Decree No. 509/99) in: ______________________________

obtained at the University of __________ on ______ on the final vote ______ (or to obtain it on __________ at the University of ___________________________)


UNIVERSITÀ DI PARMA
Via Università, 12 - 43121 Parma
www.unipr.it
Degree obtained abroad: __________________________________________ at the University of ________________________________________ on __________________ on the final vote __________

(also DECLARES, in order to allow the recognition of the only purpose of participating in the qualification to the PhD program, attach the necessary documents to enable the declaration of equivalence, as required by art. 3 of the announcement).

b) that I undertake to hand in a self-certification relating on my academic degree to the Chair of the Examination Board at the competitive examination, if possible, or later to the Office "Dottorati di Ricerca" (for candidates that do not have an academic degree);

c) that I undertake to attend, on a full-time basis, the doctorate program, in accordance with the procedures to be set by the Program Board;

d) that I undertake to promptly notify any change in my residence or contact details;

e) to know the following foreign languages: __________________________________________

f) that I am not enrolled in postgraduate Specialty Schools or in courses of studies for Laurea or Laurea Specialistica/Magistrale, in University Master’s Degree courses or, in case I am enrolled in the above courses, that I undertake to suspend attendance, or that I am enrolled in the ________ YEAR of the Postgraduate Medical Specialty School in ___________________________ with training center at _______________ (in the latter case, attaching a copy of the authorization issued by the School Board to enrol in the specific Doctorate Program);

g) that presently I do not hold any doctorate degree and that I have not been nor I am currently the recipient of any scholarship for doctorate programs, or that I hold a doctorate degree in ___________________________ obtained at the University of ______________________ on ____________.

EXPRESS
(not mandatory)

EXPRESSION OF INTEREST in the assignment of one or more "BOUND RESEARCH TOPIC" Scholarships (if applicable):

☐ __________________________

(SPECIFY THE TITLE OF THE RESEARCH THEME INDICATED IN THE FORM OF THE PHD COURSE)

☐ __________________________

(SPECIFY THE TITLE OF THE RESEARCH THEME INDICATED IN THE FORM OF THE PHD COURSE)

I, the undersigned ______________________ also declares to be aware that the aforementioned expression of interest does not involve the automatic assignment of the scholarship with a restricted topic (articles 7 and 11 of the call for applications)

I, the undersigned ______________________, also state that I am aware of the provisions of Article 7 of the announcement of the competitive examination, concerning the procedures to convene candidates for the relevant examinations, as well as of the relevant forms; I state also that I undertake, where applicable, to check whether I have been admitted to the oral exams.

I, the undersigned ______________________, state that I am aware of the date set for enrolment in the Doctorate Program.

finally DECLARE

which as indicated in the documents accompanying an application on-line admission is true in accordance with articles. 46 and 47 of Presidential Decree 445/2000.

Place and date, ________________

Signature
**SELECTION FOR ADMISSION TO THE PHD RESEARCH COURSE IN**

“_________________________”

**XL CYCLE**

**RESEARCH PROJECT**

<table>
<thead>
<tr>
<th>(NAME and SURNAME of the CANDIDATE)</th>
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<tbody>
<tr>
<td><strong>TITLE (potential) OF THE RESEARCH PROPOSAL</strong></td>
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<tr>
<td>MAX 10.000 character, bibliography and spacing included</td>
</tr>
<tr>
<td>brief description of the research proposed by the candidate thus structured: introduction of the problem in the international scientific context, relevance of the problem, method by which the problem will be addressed, objectives and expected results, bibliography.</td>
</tr>
</tbody>
</table>

**CHECK IN THE COURSE FORM IF A DIFFERENT AND SPECIFIC STRUCTURE OF THE PROJECT (LANGUAGE AND / OR FORMAT) IS REQUIRED**
Competitive examination for admission to Research Doctorate Programs

DISTANCE ORAL EXAMINATION REQUEST FORM
(Article 4 of the Announcement)

**NOTE**: filling in this document shall not amount on its own to registration for the competitive examination. This form shall be filled in, signed and attached, together with a photocopy of an identity document, to the application for admission to the competitive examination.

I, the undersigned

<table>
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<tr>
<th>Surname:</th>
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<tr>
<td>Name:</td>
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<th>Sex:</th>
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Residing in:

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<td>E-mail</td>
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Home for:

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<th>STUDY</th>
<th>WORK</th>
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<tr>
<td>(Mark)</td>
<td>Country</td>
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</table>

**ASK**

to be admitted to take the Oral Exam required for admission to the PhD in (name of the PhD course)

____________________  _____________________________
(place)                            (Candidate's signature)

electronically through the Microsoft Teams platform for the following **REASON** *(specify if expressly requested in the PhD course form)*: ____________________________ and, for this purpose, I communicate the following e-mail address: **E-mail**: __________________________________

to which the Examination Board will send the invitation, for the performance of the Oral Exam on the day and time established for the interview and indicated in the form relating to the above mentioned course, attached to the Competition Notice.

**HEREBY STATE**

- to be equipped with audio and video equipment suitable for the use of Microsoft Teams;
- to have read the rules contained in the Announcement of competitive examination, specifically, those set down in Article 4 "Admission exam".

____________________  _____________________________
(place)                            (date)                            (Candidate's signature)
BIOTECHNOLOGY AND LIFE SCIENCE

CYCLE | XL

COORDINATOR | Prof.ssa Elena MAESTRI  
email: elena.maestri@unipr.it  
Department of Chemistry, Life Sciences and Environmental Sustainability

DURATION | 3 years

STARTING DATE OF THE PHD PROGRAM | 01/11/2024

POSITIONS PUT OUT TO COMPETITION | 8 (Modified with Rector Decree n. 1556 of 02.07.2024)

ADMISSION PROCEDURES | Assessment of QUALIFICATIONS  
Oral Exam in PRESENCE or REMOTE

ADMISSION REQUIREMENTS | Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
− Laurea specialistica or Laurea magistrale (second cycle master’s degree)  
− Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
− Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES
The Ph.D. Course in Biotechnology and Life Sciences aims to train experts to carry out advanced research in the field of biological disciplines and biotechnology. The research topics of the Ph.D. Course are concerned with the study of the function, organization and expression of the genome of microbial, plant and animal organisms (including human beings), in order to deepen the basic knowledge, also with a view to possible applications in biotechnology. The methodologies used are mainly those of genomics, including functional genomics, genetics, molecular biology, biochemistry, applied biology and computational biology. Building on this common goal and a strongly cross-cutting advanced teaching activity, to train PhDs with highly qualifying skills in specific areas of Biotechnology and Life Sciences, three main areas of research have been identified as follows: 1) environmental biotechnologies; 2) genetic and evolutionary biotechnologies; and 3) molecular biotechnologies. PhD students will be involved full-time in a research project, to which they will also make critical and propositional contributions. In this way, they will acquire a marked scientific and managerial autonomy, also thanks to the numerous scientific collaborations, national and international, in which they will be involved.

RESEARCH AREAS
- Environmental biotechnologies
- Genetic and evolutionary biotechnologies
- Molecular biotechnologies

Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic</th>
</tr>
</thead>
</table>
| 2  | Scholarship funded by University of Parma (Ministerial funds) | • Environmental biotechnologies  
• Genetic and evolutionary biotechnologies |
<p>| 1  | Scholarship funded by University of Parma (University funds) | • Molecular biotechnologies |
| 1  | Scholarship co-funded by Fondazione Cariparma | • Environmental biotechnologies |</p>
<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J23000420006</td>
<td>Genetic and evolutionary biotechnologies: Genetic and evolutionary biotechnologies: Assessment of new biomarkers of exposure to urban atmospheric particulates in relation to the ongoing transition between fossil fuel vehicles and electric vehicles</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company preclinics S.r.l. CUP D92J24000210004</td>
<td>Molecular biotechnologies: Characterization of reduced-size antibodies (nano-body, pico-body) and development of an innovative platform for their selection for diagnostic and therapeutic purposes.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Chiesi Farmaceutici S.p.A.</td>
<td>Characterization of in vivo and ex vivo models of neonatal pathologies using multi-omics technologies to identify disease-linked cell populations and genes</td>
</tr>
</tbody>
</table>

**POSITION RESERVED**

Reserved to Holders of RESEARCH GRANT within the Project MARIE SKŁODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe (FutureData4EU)"

| 1  |

**ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 40 points  
(a minimum score of 18 points shall be required to be admitted to the Oral Exam)  
**ORAL EXAM:** up to 80 points  
Minimum score for ELIGIBILITY: 70/120

**ORAL EXAM PROGRAM**

The ORAL EXAM WILL BE HELD IN PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement)

The Oral Exam will focus on critical reading and discussion of a scientific article chosen by the candidate among those proposed by the Committee within the each of the three main research topics. Candidates will be asked by the Committee members to discuss and explain the contents of the scientific publication they have selected.

The choice of research topic must be indicated in the application form ANNEX A.

Foreign Language  
the fluency of which shall be assessed during the Oral Exam  
ENGLISH: The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

**SCHEDULE OF THE ADMISSION EXAMS**
It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

### ASSESSMENT OF QUALIFICATIONS

**ORAL EXAM**

<table>
<thead>
<tr>
<th>DATE</th>
<th>2nd September 2024 (with possible extension in the following days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME</td>
<td>09:00 am (Italian Time)</td>
</tr>
</tbody>
</table>
| PLACE        | ROOMS A + B
PODERE AMBOLANA (Cascina Ambolana)
Parco Area delle Scienze, 33/A - Campus Universitario
43124 PARMA - ITALY |

**FURTHER INFORMATION**

The choice of the research area to be expressed in Annex A is MANDATORY and determines the choice of the topic of discussion of the oral exam.

For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice.

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

#### ANNEX A

(art. 3.2 of the Competition notice)

#### Identification Document

Scanned Copy of a valid identity document with photo (i.e. identity card, passport)

#### Curriculum Vitae et studiorum

No specific CV format is required (see art. 3.2 of the Competition notice)

#### Abstract of degree thesis

Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)

#### Academic Qualifications

Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).

**LIST OF EVALUABLE QUALIFICATIONS**

(only qualifications attested by a document drawn up in Italian or in English)

#### Curriculum Vitae et studiorum

Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation.

Up to 5 points

#### Graduation mark

Score related to the final mark:
- 110 with honours (magna cum laude): 20 points;
- 110: 18 points;
- From 103 to 109: points 4-16 (2 points for each mark unit);
- Until 102: 3 points.

Up to 20 points
### Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)

Score related to the average of the exam marks:
- 30/30: 18 points;
- From 22/30 to 29/30: points 2-16 (2 points for each unit average score)

### Graduation thesis

Consistency of the Master’s Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae)

### Scientific Publications

Publications in indexed international journals (WOS, Scopus): 2 points for each publication (for evaluation purposes it is mandatory to attach a pdf copy of each publication to the application)

### Communications to conferences, publication in indexed national journals, book chapters

1 point for each conference abstract, publication in indexed national journals or book chapters (for evaluation purposes it is mandatory to attach a pdf copy of each term to the application)

### EVALUATION ORAL EXAM

**Interview Program**

The ORAL EXAM is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

**Evaluation CRITERIA**

The candidates will be summoned individually by the Examination Board to discuss the contents of the scientific publication they have selected from the proposals relating to the research topic. During this test, knowledge of the English language will also be assessed.

The evaluation is based on the candidate's preparation and the critical sense demonstrated.

**POINTS**

Up to 80 points
## ECONOMICS & MANAGEMENT OF INNOVATION AND SUSTAINABILITY (EMIS)

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>XL</th>
</tr>
</thead>
</table>
| COORDINATOR | Prof.ssa Beatrice LUCERI  
email: beatrice.luceri@unipr.it  
Department of Economics and Management |
| DURATION | 3 years |
| STARTING DATE OF THE PHD PROGRAM | 01/11/2024 |
| PARTNER INSTITUTION | • University of Ferrara  
• University Cattolica del Sacro Cuore |
| POSITIONS PUT OUT TO COMPETITION | 12 |
| ADMISSION PROCEDURES | Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY |
| ADMISSION REQUIREMENTS | Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
− Laurea specialistica or Laurea magistrale (second cycle master’s degree)  
− Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
− Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024 |
| TRAINING OBJECTIVES | The PhD programme is structured to educate scholars who will be able to apply analytical and computational tools to functional data for making complex decisions in the fields of economics and management. Participants may approach the doctoral research project from either an economic theory perspective or a business theory perspective. This encompasses the rapidly evolving fields of study that form the theoretical framework of reference, including business administration, economics and business management, business organization, political economics, public economics, applied economics, corporate finance, and the economics of financial intermediaries. embracing the precipitous fields of study of the theoretical framework of reference: business administration, economics and business management, business organization, political economics, public economics, applied economics, corporate finance, and economics of financial intermediaries. Additionally, the programme incorporates the methods supporting the economic and business disciplines.  
The learning objectives are achieved by integrating economics, management and mathematical-statistical tools, as a particular specificity of the PhD programme. The knowledge and skills learned enable a fruitful employability in academia or in companies or public administrations and international institutions in high-skilled occupations in the regional, Italian and European job markets.  
The PhD programme offers both an interdisciplinary foundation and a cultural background suited to address the methodology of the research topic investigated, to identify an original research perspective and to develop an original PhD thesis that contributes to the advancement of knowledge. These outcomes are achieved by structuring the PhD program as follows:  
- Year 1, provide a foundation in scientific research and shaping of the PhD research project;  
- Year 2, development of the PhD thesis, by conducting research activities and eventually spending a period abroad at qualified universities/research institutes;  
- Year 3, completion of the PhD thesis by conducting research activities and presenting results to academic conferences.  
The first year of the Ph.D. aims to equip students with the requisite knowledge and skills to undertake appropriate research project design. The research foundation courses are structured around three core areas: Theories, Methods and Applications. The theoretical courses in micro-macroeconomics and management theories constitute the Theories pillar. The Methods pillar encompasses courses on literature analysis, research design, quantitative and qualitative research techniques, and qualitative and quantitative data analysis tools. The Applications pillar is structured according to the teaching needs of PhD students, with lectures and seminars provided on a topic-specific basis. Furthermore, other activities, including those designed to enhance soft skills, language proficiency, and computer literacy, are incorporated into the training programme. It is strongly recommended |
that students undertake a period of study abroad during the second year of their PhD programme. This will enable them to
develop advanced research techniques and to address emerging research issues with respect to the research topic under
investigation.

RESEARCH AREAS
(The candidate **MUST mandatorily** indicate one research topic in the form ANNEX A and submit a RESEARCH PROJECT in the
relevant field)

- Branding and value creation
- Consumer behavior and marketing management
- Determination and communication of value in businesses
- Knowledge economy, organization, human capital and labour
- Environmental and natural resources economics
- Economics and public management
- Economics and industrial policies: innovation, productivity, growth and convergence
- Finance and risk management
- Health care and health management
- Performance evaluation, balance analysis and business management auditing
- Entrepreneurship and business strategy
- Policies and economics for agri-food.
- Intangible resources and management systems, financial and non-financial assessment and reporting
- Economic decisions in uncertain contexts
- Other field of research

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma (University of Parma)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Scholarship funded by University of Ferrara</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by University Cattolica del Sacro Cuore</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
</table>
| 1   | Scholarship funded by EMILIA ROMAGNA REGION (PR.FSE + 2021/2027 – DGR n. 2111 del 04/12/2023) - CUP D92J240000100002 | **Forecasting of urban mobility flows and optimal management of local transport**  
City mobility is constantly at the center of urban policy choices in every city reality. Travel modes have changed in recent years, outlining a complex scenario that requires a highly specialized study to understand all the dynamics, in order to propose new approaches to sustainable mobility. The project must contain a proposal that deals with the real-time monitoring of the flow of users using "road" means of transport. Preference is given to proposals using modern techniques of automatic image identification. Further positive elements are projects that include solutions with:
- Proposals based on modern statistical methods.
- Multi-disciplinary proposals. |
<table>
<thead>
<tr>
<th>1</th>
<th>Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 9 “Public Administration”) CUP D92J24000160006</th>
</tr>
</thead>
</table>
| 1 | The role of management in promoting innovation and change in public healthcare companies
Good performances in terms of services’ quality among public healthcare organizations are strictly related to competences of people working within such organizations. Therefore, there’s a strong need to develop and incentivize good practices in order to promote innovation and change. The research project aims to define management competences as well as managerial tool for improving performance in public healthcare organizations in the forthcoming years. The PhD student will have the chance to improve his/her knowledge of the Italian public healthcare system, through empirical and in-depth case studies analyses. He/She will also collaborate with major public hospitals across the whole national territory. Results of his/her work will be presented at national and international conferences. |
| | A strong partnership with the Municipality of Parma and its subsidiaries is expected.
**Scientific supervisor:** Prof. Fabrizio Laurini, University of Parma

**ESG sustainability and impact evaluations in Public Administration and in publicly owned companies.**
The research project aims at investigating, with specific reference to the Public Administration and public-owned companies, the economic and social impact evaluations systems, as well as the non-financial and sustainability performance reporting models. The aim is to identify Italian and international best practices to define a sustainability reporting and impact evaluations path in the actions of the Public Administrations and in its publicly owned companies. Economic and social impact assessments enable public administrations, and in their linked publicly owned companies, to monitor and evaluate the effects of their activities on people and communities, health and the environment, as well as to identify any negative side effects. This enables them to improve their performance and more accurately account for their impacts on society and the environment. This is where the non-financial performance reporting models of institutions come in, with particular reference to ESG principles. The latter have become an increasingly important benchmark for companies and public administrations that want to demonstrate their commitment to sustainability and social responsibility. Non-financial reporting enables companies in general to communicate transparently and reliably about their goals and performance in this area, providing comprehensive and reliable information to their stakeholders.

The PhD student will have also the opportunity to study the management and organizational models of publicly owned companies through empirical analysis and the development of case studies, operating in close collaboration with publicly owned companies present on the local and national territory and the presentation of the results of the studies conducted at national and international scientific conferences. The PhD student has to spend a period of study and research abroad, in order to acquire new skills and get to know different realities.

**Scientific supervisors:** Proff. Pier Luigi Marchini and Veronica Tibiletti, University of Parma |
Furthermore, the PhD student will be entitled to spend a period of time abroad, in order to acquire new competencies and get to know new contexts.

*Scientific supervisors: Proff. Antonello Zangrandi and Simone Fanelli, University of Parma*

**TALENTO: what are the most in-demand skills on the labour market? New analytical approach, data mining and policy implications**

What skills do employers seek in new employees? This is a central question to understand and identify policy implications not only for industrial development, but also for the education system.

Employers increasingly reach job seekers through online job postings, particularly for jobs requiring a higher education qualification (OECD, 2020). Job postings available online provide a rich source of real-time and detailed data on the qualifications and skills sought by employers across industries, occupations, and locations.

For those reasons, the UNESCO Chair “Education, Growth and Equality” proposes the development of TALENTO, an original big-dataset of online Job Posting in Italy enabling new analytical approaches and data mining methods to understand what the most in-demand skills on the current labour market are.

The research aims to explore both the content of new-demanded professional profiles, and the geographical distribution of this demand across regions, counties and municipalities.

We believe that Job posting data may hold promise to complement existing labour market information systems and aid educators and policy makers in aligning labour demand and educational offerings. If analysed and disseminated effectively, such data could also assist students and workers in making learning and career decisions, for instance by identifying opportunities to build their own non-traditional path into high-demand occupations.

Following a macroeconomic point of view, the results of the research may have a strong impact in understanding structural change and economic dynamics, focusing on skills and competences for sustainable development.

*Scientific supervisors: Proff. Sandrine Labory e Patrizio Bianchi*

**ADMISSION PROCEDURES**

**Assessment of QUALIFICATIONS:** up to 75 points
(a minimum score of 50 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 45 points

Minimum score for ELIGIBILITY: 70/120
THE ORAL EXAM TAKES IN THE PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate’s aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

**Foreign Language**
The fluency of which shall be assessed during the Oral Exam.

**ENGLISH**
The evaluation of the knowledge of this language will be oral and will consist of carrying out part of the interview in English.

**SCHEDULE OF THE ADMISSION EXAMS**

<table>
<thead>
<tr>
<th>ASSESSMENT OF QUALIFICATIONS</th>
<th>DATE</th>
<th>TIME</th>
<th>PLACE</th>
</tr>
</thead>
</table>
|                             | 3rd September 2024 (with possible extension in the following days) | 09:00 am (Italian Time) | ROOM D – 1st Floor  
Department of Economics and Management  
Via J.F. Kennedy, 6  
43125 PARMA - ITALY |

**FURTHER INFORMATION**
The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

**THE INTERVIEW MAY BE HELD ALSO IN ENGLISH**
For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

**LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT**

<table>
<thead>
<tr>
<th>ANNEX A</th>
<th>(art. 3.2 of the Competition notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Document</td>
<td>Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Abstract of degree thesis</td>
<td>Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 3,000 characters including spaces)</td>
</tr>
<tr>
<td>Academic Qualifications</td>
<td>Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
</tbody>
</table>
**Research Project**

Written in Italian or in English, according to the format attached to the competition notice (max 8,000 characters including bibliography and spaces), it will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION). It should be noted that the Examination Board can use IT tools useful for verifying the originality of the submitted Project. It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.

**LIST OF EVALUABLE QUALIFICATIONS**

(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Score related to the final mark or to the average of the exam marks for graduands.</th>
<th>Up to 12 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>Score related to the final mark or to the average of the exam marks for graduands.</td>
<td>Up to 12 points</td>
</tr>
<tr>
<td>Graduation thesis</td>
<td>Congruence with the research topics of the PhD course and quality of the research methodology</td>
<td>Up to 15 points</td>
</tr>
<tr>
<td>Research Project</td>
<td>The project will be evaluated based on the scientific value, the originality of the proposal, the articulation, the feasibility of the proposal and the consistency with the themes of the doctorate.</td>
<td>Up to 24 points</td>
</tr>
<tr>
<td>Statement of Research Interest</td>
<td>Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests</td>
<td>Up to 6 points</td>
</tr>
<tr>
<td>Scientific Publications</td>
<td>Monographs, articles in scientific journals, chapters of books, convention papers. The assessment will be carried out with a view to accessing the PhD course and taking into account the degree of maturity required for the specific position. Only publications of which a copy has been included among the qualifications presented will be evaluated and not any publications cited exclusively in the curriculum and / or in the form of a list.</td>
<td>Up to 6 points</td>
</tr>
<tr>
<td>Other qualifications</td>
<td>Qualified professional experiences (in the case of professional experiences, continuous and lasting ones will be privileged - at least one semester - and will be evaluated only if they are recognized as functional to the acquisition of skills, experience and qualification in the research areas covered by the specific doctoral course); other academic qualifications (masters, advanced courses, at least two-monthly training courses provided by university-level training institutions or bodies); didactic, seminar or university training experiences.</td>
<td>Up to 12 points</td>
</tr>
</tbody>
</table>

**EVALUATION ORAL EXAM**

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
</table>
| The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | o knowledge of the foreign language: max 10 points  
  o research project presentation: max 35 points | Up to 45 points |
# PHYSICS

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>XL</th>
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</thead>
</table>
| COORDINATOR | Prof.ssa Raffaella BURIONI  
email: raffaella.burioni@unipr.it  
Department of Mathematical, Physical and Computer Sciences |
| DURATION | 3 years |
| STARTING DATE OF THE PHD PROGRAM | 01/11/2024 |
| POSITIONS PUT OUT TO COMPETITION | 11 |
| ADMISSION PROCEDURES | Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY |

**ADMISSION REQUIREMENTS**
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- Laurea specialistica or Laurea magistrale (second cycle master’s degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

**TRAINING OBJECTIVES**
The PhD programme in Physics, which lasts 3 years, is established as the unifying element of all third-level university education in the field of Physics. In addition to the predominant commitment to research activities, there is a significant teaching and study component consisting of advanced teaching courses and participation in national and international schools. Students are encouraged to spend part of their time abroad to participate in scientific collaborations in their areas of interest and to attend advanced courses relevant to their research programme. Over the three years, the teaching commitment tends to decrease in favour of a full commitment to independent research activities. At the end of each year, an open seminar is held to evaluate the progress made. Independent scientific research must result in peer-reviewed publications in international journals. The aim of the PhD in Physics is to provide high-level professional skills that can be used both in academia and in public and private research centres and laboratories. The PhD in Physics is divided into three tracks, corresponding to the main groups of physical science disciplines in which the research activities of the Department of Mathematical, Physical and Computer Sciences are carried out: Condensed Matter and Materials Physics, Theoretical Physics, Biophysics and Applied Physics.

**RESEARCH AREAS**
- Quantitative aspects of Single Molecule fluorescence Microscopy and Spectroscopy - (Bound research topic)
- Industrial applications of laser-induced graphene (Bound research topic)
- Application of artificial intelligence protocols to semiconductor oxides for the development of aroma sensors (Bound research topic)
- New aspects and applications of field theories (Bound research topic)
- Rotational domains in Ga$_2$O$_3$: identification of their origin and strategies to prevent them (Bound research topic)
- Learning Early Universe Physics with Galaxy Survey and Gravitational Wave Data (Bound research topic)
- Comparing feature learning in deep networks in and out of equilibrium: a statistical physics approach
- Reversible-binding aptamers for single-molecule imaging
- Emulsion Dynamics on Earth and in Microgravity
- Characterization and control of molecular qudits for quantum algorithms
- Solving superconformal field theories
<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Mathematical, Physical and Computer Sciences (funds Project PRIN 2022 PNRR codice CUP D53d23002180006 “UV-C Sensor based on Gallium Oxide (USE GAO))</td>
<td>Rotational domains in $\text{Ga}_2\text{O}_3$: identification of their origin and strategies to prevent them</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Mathematical, Physical and Computer Sciences (funds Project PRIN 2022 “Learning Early Universe Physics with Galaxy Survey and Gravitational Wave Data”)</td>
<td>Learning Early Universe Physics with Galaxy Survey and Gravitational Wave Data</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by INFN – The Italian National Institute for Nuclear Physics</td>
<td>New aspects and applications of field theories</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by IIT – Italian Institute of Technology</td>
<td>Quantitative aspects of Single Molecule fluorescence Microscopy and Spectroscopy</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company X_LAV S.r.l.s. CUP D92J24000220004</td>
<td>Industrial applications of laser-induced graphene</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company NANO SENSOR SYSTEM S.r.l. CUP D92J24000220004</td>
<td>Application of artificial intelligence protocols to semiconductor oxides for the development of aroma sensors</td>
</tr>
</tbody>
</table>

### POSITION RESERVED

Reserved to **Holders of RESEARCH GRANT** within the Project **MARIE SKLODOWSKA-CURIE ACTIONS – COFUND “Training Future Big Data Experts for Europe (FutureData4EU)”**
ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 50 points
(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 70 points
Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference
(Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

Foreign Language
the fluency of which shall be assessed

ENGLISH

The evaluation of the knowledge of this language will be oral and will consist of carrying out part of the interview in English

SCHEDULE OF THE ADMISSION EXAMS

ASSESSMENT OF QUALIFICATIONS

It is the candidate’s responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page http://unipr.esse3.cineca.it/Home.do in the days preceding the date of the Oral Exam

ORAL EXAM

DATE
28th August September 2024 (with possible extension in the following days)

TIME
09:30 am (Italian time)

PLACE
Department of Mathematical, Physical and Computer Sciences
PHYSICS BUILDING
Parco Area delle Scienze, 7/A – Campus
43124 PARMA – ITALY

FURTHER INFORMATION

The Oral Exam will focus on the description of the research work carried out to prepare the Graduation Thesis for the Laurea Magistrale/Specialistica, as well as on the research project that the candidate proposes to carry out within the research topics of the Research Doctorate Program in Physics at the Department of Mathematical, Physical and Computer Sciences of the University of Parma which are described at http://smfi.unipr.it/it

In the application to participate in the competitive examination, the candidate must choose and specify one research topic. The candidate may indicate a second priority choice.

For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

ANNEX A
(art. 3.2 of the Competition notice)

Identification Document
Scanned Copy of a valid identity document with photo (i.e. identity card, passport)

Curriculum Vitae et studiorum
No specific CV format is required (see art. 3.2 of the Competition notice)

Abstract of degree thesis
Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis countersigned by their supervisor.
### Academic Qualifications

Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):
- University that granted the degree
- Type of degree (first cycle/second cycle/single cycle)
- Name of the degree program
- Date of graduation
- Final mark
- List of exams and corresponding scores (academic transcript of records)
- Translation into Italian or English (only for degrees issued in languages other than Italian or English).

### Research Project and Statement of Research interest

A brief text (max 3 pages) in English. The candidates must describe their research interests and indicate the preferred topic among those listed above, possibly suggesting a second choice theme. For the first choice theme, candidates must outline an original research project including a concise state of the art, the relevance of the problem and the expected results. Candidates are warmly invited to contact the potential supervisors listed at [http://smfl.unipr.it/it](http://smfl.unipr.it/it)

The presented project does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board.

### LIST OF EVALUABLE QUALIFICATIONS

(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Evaluation Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.</td>
<td>Up to 25 points</td>
</tr>
<tr>
<td>Graduation thesis</td>
<td>Consistency of the Master’ Degree thesis with the doctoral program research topics. The assessment will make use of the information contained in the abstract (max 1 page) of the thesis (although not yet discussed, in this case countersigned by the thesis supervisor) and in the curriculum, where a brief description of the thesis work should be reported.</td>
<td>Up to 5 points</td>
</tr>
<tr>
<td>Research Project and Statement of Research Interest</td>
<td>The project will be evaluated in relation to its scientific value and originality. The motivation expressed by the candidate in relation to the themes of the research doctorate will be evaluated</td>
<td>Up to 10 points</td>
</tr>
<tr>
<td>Other qualifications</td>
<td>Publications, awards, presentations to scientific meeting, stages, fellowships, reference letters, etc</td>
<td>Up to 10 points</td>
</tr>
</tbody>
</table>

### EVALUATION ORAL EXAM

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation Criteria</th>
<th>Points</th>
</tr>
</thead>
</table>
| The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | - knowledge of the topics of the Master’s degree thesis
- research project presentation
- general knowledge of issues connected to the PhD course
- knowledge of the foreign language | Up to 70 points |
**CIVIL ENGINEERING AND ARCHITECTURE**

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>XL</th>
</tr>
</thead>
</table>
| COORDINATOR | Prof. Andrea SPAGNOLI  
email: andrea.spagnoli@unipr.it  
Dipartimento di Ingegneria e Architettura |
| DURATION | 3 anni |
| STARTING DATE OF THE PHD PROGRAM | 01/11/2024 |
| AVAILABLE POSITIONS | 13 |
| ADMISSION METHODS | Assessment of qualifications and research project  
Oral Examination in PRESENCE or REMOTELY |
| ADMISSION REQUIREMENTS | Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
− Laurea specialistica or Laurea magistrale (second cycle master’s degree)  
− Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
− Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024. |
| TRAINING OBJECTIVES | To develop specialized skills in the following fields:  
(1) Infrastructure and Environmental Engineering: civil infrastructures for transport; survey, management, and analysis of land data, control and monitoring of displacements and deformations at all scales; issues related to surface waters and groundwater;  
(2) Structural and Geotechnical Engineering: mechanical behaviour of materials, structural components and structures; behaviour of soils and geotechnical structures;  
(3) Architecture and Urban Planning: theoretical, formal, distributional and functional aspects in architecture; the problems related to methods for survey and to computer-graphics in architecture; issues related to the implementation and the development of urban settlements; historical, artistic, technical and aesthetic themes in the architecture of the past. |
| RESEARCH AREAS OF THE DOCTORAL COURSE | (the candidate MUST mandatorily select one research area in the ANNEX A and present a research project in the selected area) |
| • Infrastructure and Environmental Engineering  
• Structural and Geotechnical Engineering  
• Architecture and Urban Planning |

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**Posti con Borsa di Studio**

<table>
<thead>
<tr>
<th>N°</th>
<th>Position with Scholarship</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (University funds)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td></td>
</tr>
<tr>
<td>N°</td>
<td>Funding entity</td>
<td>BOUND RESEARCH TOPIC</td>
</tr>
<tr>
<td>----</td>
<td>----------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Department of Engineering and Architecture</td>
<td>Exploring the Role of Street Experiments in Promoting Active Mobility and Sustainable Urban Development</td>
</tr>
<tr>
<td>1</td>
<td>Financed by Eni S.p.A.</td>
<td>Enhancing maximum circularity in the asphalt world through the innovative re-use of recycled asphalt pavements</td>
</tr>
<tr>
<td>1</td>
<td>Financed by REGIONE EMILIA ROMAGNA (PR.FSE + 2021/2027 – DGR n. 2111 del 04/12/2023) - CUP D92I24000010002</td>
<td>Digital archives-platforms for architectural design. Innovative tools for teaching, dissemination, conservation and innovation with reduced environmental impact</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship financed by European Union – NextGenerationEU with funds under the PNRR – Mission 4 component 1, Investment 4.1 (D.M. 629/2024 art. 10 “Patrimonio Culturale”) CUP D92I24000200006</td>
<td>Cataloguing and analysing damage to churches in the Emilia-Romagna region following the 2012 earthquake for their preservation</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship financed by European Union – NextGenerationEU with funds under the PNRR – Mission 4 component 2, Investment 3.3 (D.M. 630/2024) e by EcoRevive S.r.l. CUP D92I24000230004</td>
<td>Re-use of plastics derived from multilayered food carton recycling processes as a modifier for asphalt mixtures</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship financed by European Union – NextGenerationEU with funds under the PNRR – Mission 4 component 2, Investment 3.3 (D.M. 630/2024) e by ASE S.r.l. CUP D92I24000230004</td>
<td>Development and application of algorithms based on Machine Learning for the analysis of the behavior of geotechnical structures</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship financed by European Union – NextGenerationEU with funds under the PNRR – Mission 4 component 2, Investment 3.3 (D.M. 630/2024) e by Fassa Bortolo S.r.l. CUP D92I24000230004</td>
<td>Effects and benefits of calcium oxide hydration reaction in cold recycling asphalt mixtures</td>
</tr>
</tbody>
</table>

**Position reserved to HOLDERS OF RESEARCH GRANT**

Reserved to holders of Research Grant of “China Scholarship Council”  
Reserved to holders of Research Grant within the project MARIE SKŁODOWSKA-CURIE ACTIONS – COFUND “Training Future Big Data Experts for Europe (FutureData4EU)”
ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 70 points
(a minimum score of 40 points shall be required to be admitted to the Oral Exam)
ORAL EXAM: up to 50 points
Minimum score for ELIGIBILITY: 70/120

ORAL EXAMINATION INDICATION

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL EXAMINATION includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of research areas related to the PhD course.

Foreign language

| English | The language for which the fluency must be assessed during the Oral Examination. The assessment of knowledge of this language will be oral and will consist in reading and translating a scientific text. |

SCHEDULE OF THE ADMISSION EXAMS

EVALUATION OF QUALIFICATIONS

It is the candidate’s responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page http://unipr.esse3.cineca.it/ in the days preceding the date of the Oral Exam.

ORAL EXAM

DATE 2 September 2024, with possible extension to the following day
TIME 09.30 AM (Italian Time)
PLACE Auditorium Centro S. Elisabetta
Parco Area delle Scienze, 95
43124 PARMA - ITALY

OTHER INFORMATION

The choice of the research area to be expressed in Appendix A is not binding on the assignment of the PhD research topic, but is intended to assess the candidates' skills during the admission examination. The PhD research topic will be assigned by the Board of Lecturers.

THE INTERVIEW MAY ALSO TAKE PLACE IN ENGLISH

For foreign candidates, it is possible to take the admission tests in English only. For Italian candidates, it is possible to take the admission tests in Italian or English, at the candidate's choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

ANNEX A (art. 3.2 of the Competition Notice)
Identification Document
Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae et studiorum
No specific CV format is required (see art. 3.2 of the Competition notice)
**Abstract of degree thesis**

Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)

**Academic Qualifications**

Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held (art. 3.2 of the Competition notice):

- University that granted the degree - Type of degree (first cycle/second cycle/single cycle)
- Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).

**Research Project**

The research project shall consist of a maximum of 3 pages, be written in Italian or in English, and it shall be structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results. The project must focus on an original research topic (unpublished, personally developed by the candidate) related to the topics listed in https://dia.unipr.it/it/node/6470. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project.

It does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board. Il Progetto di Ricerca non costituisce vincolo alla successiva scelta del tema di ricerca di dottorato, che sarà assegnato dal Collegio dei Docenti.

**Statement of Research Interest**

Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests

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**FURTHER QUALIFICATIONS THAT MAY BE ATTACHED TO THE APPLICATION, IF IN POSSESSION OF THE APPLICANT**

**Reference Letters**

A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities. The reference letters must sent directly by the signer to the address e-mail: spagnoli@unipr.it. Reference letters sent directly by the candidate or received in any other way will not be evaluated.

**Scientific Publications**

A maximum of 2 articles on national and international journals, papers presented at conferences or symposia, book chapters etc.

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**LIST OF EVALUABLE QUALIFICATIONS**

(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>Up to 30 points</td>
</tr>
<tr>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. Mandatory: <strong>Statement of Research Interest</strong> Not mandatory: <strong>Reference Letters</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Graduation mark</strong></td>
<td>Up to 5 points</td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Average of the exam marks</strong></td>
<td>Up to 5 points</td>
</tr>
<tr>
<td>(if the candidate will attain the degree no later than 31st October 2023)</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Graduation thesis</strong></td>
<td>Up to 6 points</td>
</tr>
<tr>
<td>Consistency of the Master’s Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae by attaching the abstract of the degree thesis or draft of the thesis approved by the supervisor)</td>
<td></td>
</tr>
<tr>
<td><strong>Research Project</strong></td>
<td>Up to 25 points</td>
</tr>
<tr>
<td><strong>Scientific Publications</strong></td>
<td>Up to 4 points</td>
</tr>
</tbody>
</table>

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**Universita di Parma**

Via Università, 12 - 43121 Parma

www.unipr.it
<table>
<thead>
<tr>
<th>LIST OF EVALUABLE QUALIFICATIONS</th>
<th>Reserved to holders of Research Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. Mandatory: <strong>Statement of Research Interest</strong> Not mandatory: <strong>Reference Letters</strong></td>
</tr>
<tr>
<td><strong>Graduation mark</strong></td>
<td>Up to 30 points</td>
</tr>
<tr>
<td><strong>Graduation thesis</strong></td>
<td>Up to 5 points</td>
</tr>
<tr>
<td><strong>Research Project</strong></td>
<td>Up to 25 points</td>
</tr>
<tr>
<td><strong>Scientific Publications</strong></td>
<td>Up to 4 points</td>
</tr>
<tr>
<td><strong>ORAL EXAM</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Interview program</strong></td>
<td><strong>Evaluation CRITERIA</strong></td>
</tr>
<tr>
<td></td>
<td>o knowledge of the foreign language</td>
</tr>
<tr>
<td></td>
<td>o research project presentation</td>
</tr>
<tr>
<td></td>
<td>o general knowledge of research areas related to the PhD course</td>
</tr>
<tr>
<td></td>
<td><strong>POINTS</strong></td>
</tr>
<tr>
<td></td>
<td>Up to 50 points</td>
</tr>
</tbody>
</table>
INDUSTRIAL ENGINEERING

CYCLE

XL

COORDINATOR

Prof. Gianni ROYER CARFAGNI
email: gianni.royer@unipr.it
Department of Engineering for Industrial systems and Technologies

DURATION

3 years

STARTING DATE OF THE PHD PROGRAM

November 1st 2024

POSITIONS PUT OUT TO COMPETITION

8

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS and Research Project
Oral Exam in PRESENCE or REMOTELY

ADMISSION REQUIREMENTS

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- Laurea specialistica or Laurea magistrale (second cycle master’s degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES

The Industrial Engineering PhD program aims at giving to the participants a deep knowledge in the main topics relevant to industrial engineering. The PhD course presents numerical, analytical and experimental techniques, in order to face any technical or scientific problem of the industrial engineering, with managerial skills, to provide autonomy in work and readiness of inclusion in a collaborative environment with other researchers and technicians. The internationalization phase, envisaged in the three-year curriculum, allows to forge links with other foreign realities by providing to the graduate student an additional tool to get into a scientific context, not just limited by national borders.

RESEARCH AREAS

- Theoretical and applied mechanics, mechanics of materials and structures, material technology, machine design, measurements and diagnostics;
- Economic, organizational, managerial, logistics, plants and legal aspects in the field of engineering;
- Energy systems, thermo-fluid dynamics, fluid machinery, applied physics;
- Industry 4.0 and future evolution

Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td></td>
</tr>
</tbody>
</table>

UNIVERSITÀ DI PARMA
Via Università, 12 - 43121 Parma
www.unipr.it
41
<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 8 “PNRR Research”) CUP D92J24000150006</td>
<td>Circular materials for green packaging</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4, Component 2, Inv. 3.3 (Ministerial Decree 630/2024) and co-financed by the Company GEA PROCOMAC S.r.l. CUP D92J24000240004</td>
<td>Big data analysis e modelling</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4, Component 2, Inv. 3.3 (Ministerial Decree 630/2024) and co-financed by the Company SpaceGlass S.r.l. CUP D92J24000240004</td>
<td>Innovative windows for special applications</td>
</tr>
</tbody>
</table>

**POSITIVE RESERVED**

Reserved to **Holders of RESEARCH GRANT for the scientific disciplinary sector BIO/09 in the research topic “Sustainability and resilience Assessment of agri food industry and Ho.Re.Ca sector in Italy”**

**ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 70 points  
(a minimum score of 40 points shall be required to be admitted to the Oral Exam)  
ORAL EXAM: up to 50 points  
Minimum score for ELIGIBILITY: 70/120

**ORAL EXAM PROGRAM**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference  
(Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)  

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate’s aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

**Foreign Language**  
the fluency of which shall be assessed during the Oral Exam  
ENGLISH  
The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text
**SCHEDULE OF THE ADMISSION EXAMS**

### ASSESSMENT OF QUALIFICATIONS

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

### ORAL EXAM

<table>
<thead>
<tr>
<th><strong>DATE</strong></th>
<th>2nd September 2024 (with possible extension in the following days)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TIME</strong></td>
<td>09:00 am (Italian Time)</td>
</tr>
<tr>
<td><strong>PLACE</strong></td>
<td>Master Room – Building 3 Department of Engineering for Industrial Systems and Technologies Parco Area delle Scienze, 181/A - Campus 43124 PARMA - ITALY</td>
</tr>
</tbody>
</table>

### FURTHER INFORMATION

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

The interview may be held also in English. For foreign candidates, the admission examinations may be held in English at the candidate's choice.

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**LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT**

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

**ANNEX A** (art. 3.2 of the Competition notice)

<table>
<thead>
<tr>
<th><strong>Identification Document</strong></th>
<th>Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td><strong>Abstract of degree thesis</strong></td>
<td>Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)</td>
</tr>
<tr>
<td><strong>Academic Qualifications</strong></td>
<td>Certificates and academic transcripts of records for both Bachelor and Master degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
<tr>
<td><strong>Research Project</strong></td>
<td>Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can make use of IT tools useful for verifying the originality of the submitted Project). It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board</td>
</tr>
</tbody>
</table>

**LIST OF EVALUABLE QUALIFICATIONS**

(only qualifications attested by a document drawn up in Italian or in English)

| **Curriculum Vitae et studiorum** | Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation. Up to 25 points |

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UNIVERSITÀ DI PARMA
Via Università, 12 - 43121 Parma
[www.unipr.it](http://www.unipr.it)
<table>
<thead>
<tr>
<th>Graduation thesis</th>
<th>Consistency of the Master’s Degree thesis with the doctoral program research topics</th>
<th>Up to 10 points</th>
</tr>
</thead>
</table>
| Research Project  | Points relating to the research project shall be allocated on the basis of the following criteria:  
|                   | o Scientific value and or originality of the proposal  
|                   | o description and structure of the proposal  
|                   | o proposal feasibility                                                             | Up to 15 points |
| Statement of Research Interest | Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests | Up to 5 points |
| Scientific Publications | Articles on national and international journals, papers presented at conferences or symposia, book chapters etc. | Up to 5 points |
| Reference Letters | A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities. They must be uploaded directly by the signatory to the **REFERENCE LETTER** folder. The file must be named "Candidate’s Surname and Name – Reference Letters - PhD in Industrial Engineering". The candidate, therefore, must not upload them through the procedure of online registration for the competition. | Up to 5 points |
| Other Academic qualifications | First or second level Master’s degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program | Up to 2 points |
| Other experiences (training, work, research, teaching, etc.) | – Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covered by research grant, and as a staff member of research units  
|                   | – Working activity  
|                   | – Professional and/or training internship  
|                   | – Language proficiency certificates  
|                   | – Periods of study abroad, outside the country of origin (e.g. Erasmus program or other similar mobility programs)  
|                   | – Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.) | Up to 3 points |

**EVALUATION ORAL EXAM**

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
</table>
| The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | o research project presentation  
|                   | o general knowledge of issues related to the PhD course  
|                   | o knowledge of foreign languages | Up to 50 points |
MOLECULAR MEDICINE

CYCLE XL

COORDINATOR
Prof. Prisco MIRANDOLA
email: prisco.mirandola@unipr.it
Department of Medicine and Surgery

DURATION
3 years

STARTING DATE OF THE PHD PROGRAM
01/11/2024

POSITIONS PUT OUT TO COMPETITION
9

ADMISSION PROCEDURES
Assessment of QUALIFICATIONS and Research Project
Oral Exam in PRESENCE

ADMISSION REQUIREMENTS
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- Laurea specialistica or Laurea magistrale (second cycle master's degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES
The Research Doctorate Course in Molecular Medicine aims to provide PhD students with the cultural and methodological skills necessary to carry out high-profile research in different scientific disciplines in the biomedical field, integrated in an interdisciplinary perspective. The acquired training will allow PhDoctors in Molecular Medicine to employ themselves in high level research and development activities in Universities, research centers and industries engaged in the medical, biological and biotechnological sectors.)

RESEARCH AREAS
- Methodological approach to torture in order to establish an appropriate classification of the subject in the request for political asylum.
- Molecular anatomy of human bone remodeling.
- STRESS LESS: Validation of a digital protocol for prevention, assessment and intervention on work-related stress, "tailored" according to the different professional categories.
- PKC isoforms as biomakers of cortical neuron degeneration in ALS.
- Gastrointestinal Hormone Release as a Promising Strategy for Metabolic Disorders.
- Microbiology and Clinical Microbiology.
- Pharmacology of lipid metabolism and associate disorders: focus on inflammation, senescence, and degeneration.
- New technologies in head and neck surgery.
- Clinical and laboratory evaluation systems of biomaterials in bone and mucosal regeneration in the oro-maxillo-facial district.

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td>• Gastrointestinal Hormone Release as a Promising Strategy for Metabolic Disorders.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by University of Parma (University funds)</td>
<td>• Microbiology and Clinical Microbiology.</td>
</tr>
</tbody>
</table>
- Pharmacology of lipid metabolism and associate disorders: focus on inflammation, senescence, and degeneration.
- New technologies in head and neck surgery.
- Clinical and laboratory evaluation systems of biomaterials in bone and mucosal regeneration in the oro-maxillo-facial district.

### Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Bound Research Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td>Methodological approach to torture in order to establish an appropriate classification of the subject in the request for political asylum.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (code Project 20224TAETP – CUP D53D23008460006; Code Project 20224TAETP– CUP D53D23017460001)</td>
<td>Molecular anatomy of human bone remodeling.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company NEOSIN S.r.l. CUP D92J24000026004.</td>
<td>STRESS LESS: Validation of a digital protocol for prevention, assessment and intervention on work-related stress, “tailored” according to the different professional categories.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company I.R.C.C.S. Ospedale San Raffaele S.r.l. CUP D92J24000026004</td>
<td>PKC isoforms as biomarkers of cortical neuron degeneration in ALS.</td>
</tr>
</tbody>
</table>

### ADMISSION PROCEDURES

**Assessment of QUALIFICATIONS:** up to 60 points  
(a minimum score of 10 points shall be required to be admitted to the Oral Exam)  
**ORAL EXAM:** up to 60 points  
**Minimum score for ELIGIBILITY:** 70/120

### ORAL EXAM PROGRAM

**THE ORAL EXAM TAKES PLACE IN THE PRESENCE.**

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate’s aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

**Foreign Language**  
the fluency of which shall be assessed during the Oral Exam  
**ENGLISH**  
The evaluation of the knowledge of this language will be by an oral examination and will consist in translating of a scientific text.
SCHEDULE OF THE ADMISSION EXAMS

<table>
<thead>
<tr>
<th>ASSESSMENT OF QUALIFICATIONS</th>
<th>It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORAL EXAM</td>
<td><strong>DATE</strong> 4th September 2024 <strong>TIME</strong> 10:30 am (Italian Time) <strong>PLACE</strong> Anatomical Room D - Institute of Human Anatomy and Forensic Medicine Department of Medicine and Surgery Via Gramsci, 14 43126 PARMA - ITALY</td>
</tr>
<tr>
<td>FURTHER INFORMATION</td>
<td>The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.</td>
</tr>
</tbody>
</table>

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

<table>
<thead>
<tr>
<th>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNEX A (art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Identification Document Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
<tr>
<td>Curriculum Vitae et studiorum No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Abstract of degree thesis Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)</td>
</tr>
<tr>
<td>Academic Qualifications Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
<tr>
<td>Research Project Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project). It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board</td>
</tr>
</tbody>
</table>

LIST OF EVALUABLE QUALIFICATIONS (only qualifications attested by a document drawn up in Italian or in English)

| Curriculum Vitae et studiorum Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark (up to 10 points). It will also be evaluated the exam marks and the graduation mark (up to 5 points). |

UNIVERSITÀ DI PARMA
Via Università, 12 - 43121 Parma
www.unipr.it
47
Score related to the final mark:
- 110 with honours (magna cum laude): 5 points;
- 110: 3 points;
- From 100 to 109: 0,2 point for each mark unit

Score related to the average of the exam marks (only for the candidate will attain the degree no later than 31 October 2023):
- > 28/30: 5 points
- > 27/30: 3 points
- > 25/30: 1 point

<table>
<thead>
<tr>
<th>Graduation thesis</th>
<th>Consistency with the research themes of the PhD course and quality of the research methodology</th>
<th>Up to 7 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Project</td>
<td>Points relating to the research project:</td>
<td>Up to 10 points</td>
</tr>
<tr>
<td></td>
<td>- Scientific value and originality of the proposal: max 2.5 points</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- articulation of the proposal: max 2.5 points</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- proposal feasibility: max 2.5 points</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- consistency with the research themes of the PhD course: max 2.5 points</td>
<td></td>
</tr>
<tr>
<td>Statement of Research Interest</td>
<td>Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests</td>
<td>Up to 8 points</td>
</tr>
<tr>
<td>Scientific Publications</td>
<td>Articles on national and international journals, papers presented at conferences or symposia, book chapters etc. Evaluation of the candidate's contribution and the editorial location of the product.</td>
<td>Up to 10 points</td>
</tr>
<tr>
<td>Reference Letters</td>
<td>A maximum of 3 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities. The candidate must uploading them through the procedure of the competition online registration</td>
<td>Up to 3 points</td>
</tr>
<tr>
<td>Other Academic qualifications</td>
<td>First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program</td>
<td>Up to 5 points</td>
</tr>
</tbody>
</table>
| Other experiences (training, work, research, teaching, etc.) | Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covered by research grant, and as a staff member of research units
- Working activity
- Professional and/or training internship
- Language proficiency certificates
- Periods of study abroad, outside the country of origin (e.g. Erasmus programme or other similar mobility programmes)
- Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.) | Up to 2 points |

**EVALUATION ORAL EXAM**

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
</table>
| The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | o knowledge of the foreign language: max 4 points
o ability to argument the project proposal: max 28 points
o knowledge of chosen topic: max 28 points | Up to 60 points |
MICROBIOTA AND HEALTH

COORDINATOR

Prof. Marco VENTURA
email: marco.ventura@unipr.it
Department of Chemistry, Life Sciences and Environmental Sustainability

DURATION
3 years

STARTING DATE OF THE PHD PROGRAM
01/11/2024

POSITIONS PUT OUT TO COMPETITION
5

ADMISSION PROCEDURES
Assessment of QUALIFICATIONS
Oral Exam in PRESENCE or REMOTELY

ADMISSION REQUIREMENTS
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
– Laurea specialistica or Laurea magistrale (second cycle master’s degree)
– Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
– Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES
The main aim of the PhD in "Microbiota and Health" is to train PhDs who are experts in the study of the microbiota in physiological and pathological conditions and of possible translational applications, which constitute a useful premise for carrying out innovative and advanced research in various fields of clinical medicine and basic and applied biology

RESEARCH AREAS
• investigation of the microbiota and its interactions with humans;
• investigation of the microbiota and its interactions with animals;
• investigation of the microbiota and its interactions with the environment

Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td>• investigation of the microbiota and its interactions with humans</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td></td>
</tr>
</tbody>
</table>

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company GenProbio S.r.l. CUP D92J24000250004</td>
<td>• Identification of structural and molecular markers of interaction between microbiota and innate immunity cells for the definition of immunomodulatory strategies based on microbial components</td>
</tr>
</tbody>
</table>
### ADMISSION PROCEDURES

**Assessment of QUALIFICATIONS:** up to 40 points  
(a minimum score of 14 points shall be required to be admitted to the Oral Exam)  
**ORAL EXAM:** up to 80 points  
Minimum score for ELIGIBILITY: 70/120

### ORAL EXAM PROGRAM

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference  
(Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The Oral Test will focus on the critical reading and discussion of a scientific article chosen from those proposed by the Examination Board within the research topic selected by the candidate. The candidates will be called individually by the Examination Board to discuss the contents of the scientific publication selected by them. During the oral exam he will come knowledge of the English language also assessed.

**Foreign Language**  
the fluency of which shall be assessed during the Oral Exam

<table>
<thead>
<tr>
<th>Language</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>The evaluation of the knowledge of this language will be oral and will consist in translating a scientific text</td>
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</tbody>
</table>

### SCHEDULE OF THE ADMISSION EXAMS

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</tr>
</thead>
<tbody>
<tr>
<td><strong>ORAL EXAM</strong></td>
<td><strong>DATE</strong> 29th August 2024 (with possible extension to the following day)</td>
</tr>
<tr>
<td></td>
<td><strong>TIME</strong> 09:30 am (CET)</td>
</tr>
</tbody>
</table>
|                             | **PLACE** ROMM 5  
BIOSCIENCES BUILDING  
Parco Area delle Scienze, 11/A – Campus  
43124 PARMA |
|                             | FURTHER INFORMATION                                                                             |
|                             | The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board. |
|                             | **THE INTERVIEW MAY BE HELD ALSO IN ENGLISH**                                                    |
|                             | For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice |

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

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<tr>
<th>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</th>
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<td>---------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
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<td><strong>Abstract of degree thesis</strong></td>
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**LIST OF EVALUABLE QUALIFICATIONS**  
(only qualifications attested by a document drawn up in Italian or in English)

| **Curriculum Vitae et studiorum** | Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation. | Up to 5 points |
| **Graduation mark**              | Score related to the final mark:  - 110 with honours (magna cum laude): 20 points;  - 110: 18 points;  - From 103 to 109: points 4-16 (2 points for each mark unit);  - Until 102: 3 points. | Up to 20 points |
| **Average of the exam marks**   | Score related to the average of the exam marks:  - 30/30: 18 points;  - From 22/30 to 29/30: points 2-16 (2 points for each unit average score) | Up to 18 points |
| **Graduation thesis**           | Consistency of the Master’s Degree thesis with the doctoral program research topics or consistency with the scientific disciplinary sectors represented in the doctoral teaching board (briefly describe the topics in the curriculum vitae) | Up to 6 points |
| **Scientific Publications**     | Publications in peer-reviewed international journals: 2 points for each publication (for evaluation purposes it is mandatory to attach a pdf copy of each publication to the application) | Up to 6 points |
| **Communications to conferences, publication in indexed national journals, book chapters** | 1 point for each conference abstract, publication in indexed national journals or book chapters (for evaluation purposes it is mandatory to attach a pdf copy of each term to the application) | Up to 3 points |

**EVALUATION ORAL EXAM**

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<tr>
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<td></td>
<td>Up to 80 points</td>
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</tbody>
</table>
**NEUROSCIENCES**

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>XL</th>
</tr>
</thead>
</table>
| COORDINATOR | Prof. Luca BONINI  
email: luca.bonini@unipr.it  
Department of Medicine and Surgery |
| DURATION    | 3 years     |
| STARTING DATE OF THE PHD PROGRAM | 01/11/2024 |
| CURRICULA   | 1. Neuroscience  
2. Behavioural Biology |
| POSITIONS PUT OUT TO COMPETITION | 11 |
| ADMISSION PROCEDURES | Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY |
| ADMISSION REQUIREMENTS |
  - Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
    - Laurea specialistica or Laurea magistrale (second cycle master's degree)
    - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
    - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
  - Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024
| TRAINING OBJECTIVES |
  - Provide a global and interdisciplinary view of the proposed research areas, ensuring a high degree of specialization in research within these fields;
  - Acquire skills and abilities for the autonomous use of at least one neuroscientific investigation technique;
  - Promote the development of national and international networks and exchanges aimed at sharing and deepening the research topic addressed.
| RESEARCH AREAS |
  - **Integrated Neurosciences**: comparative neurophysiology and neuroethology, cognitive and social neurosciences, cognitive psychology, psychology of perception and action, psychobiology, psychophysiology.
  - **Behavioral Biology**: biological bases of social, agonistic, and parental behavior, gene/environment interactions on behavioral development, cognitive and emotional ethology in animals and humans.

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
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</tr>
<tr>
<td>----</td>
<td>----------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds Project PRIN 2022 PNRR CUP D53D23009910006 Sector ERC SH4 “At origins of sound symbolism. A comparative investigation”)</td>
<td>Exploring sound symbolisms in the domestic dog</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (funds Project PRIN 2022 COMPAACT CUP D53D23023030001)</td>
<td>Application of imaging techniques for the comparative parcellation of the primate brain</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Department of Medicine and Surgery (funds Project ERC CoG “EMACTIVE”) and by the University Claude Bernard Lyon (France)</td>
<td>Computational neuroscience applied to the analysis and modeling of neural signals from extracellular recordings</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Higher Institute of Health (ISS)</td>
<td>Use of Prebiotics (Inulin) and Metformin as a Combined Therapy for Metabolic and Mental Disorders Associated with Insulin Dysfunction</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>The physiological mechanisms and neural bases of sustainable food consumption</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Blackrock Neurotech (USA) CUP D92J24000270004</td>
<td>Bioengineering Methods for Analyzing Multielectrode Recordings in Human and Non-Human Primate Cerebral Cortex</td>
</tr>
</tbody>
</table>

**POSITION RESERVED**

Reserved to Holders of RESEARCH GRANT for the scientific disciplinary sector BIO/09 in the research topic "Neural bases of the interaction between perception of space and social cognition" - C.N.R. Institute of Neurosciences

**ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 40 points
(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 80 points

Minimum score for ELIGIBILITY: 70/120

**ORAL EXAM PROGRAM**
THE ORAL EXAM TAKES IN THE PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study/work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.

The ORAL test includes: 1) the verification of the candidates’ general preparation on topics related to the research topics of the PhD course, 2) the presentation and discussion of the research project, 3) the verification of the knowledge of the English language.

Foreign Language
the fluency of which shall be assessed during the Oral Exam

<table>
<thead>
<tr>
<th>ENGLISH</th>
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<tbody>
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<td>The evaluation of the knowledge of this language will be oral and will consist in the discussion of the research project presented in English</td>
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SCHEDULE OF THE ADMISSION EXAMS

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</tr>
</tbody>
</table>

| ORAL EXAM |
| DATE |
| 2nd September 2024 (with possible extension to the following day) |
| TIME |
| 09:00 am (Italian Time) |
| PLACE |
| ROOM B |
| Department of Medicine and Surgery |
| Integrated Biotechnological Plexus |
| Via Volturno, 39/E – 43125 PARMA - ITALY |

FURTHER INFORMATION

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

THE INTERVIEW MAY ALSO TAKE PLACE ENTIRELY IN ENGLISH

For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

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<td>Curriculum Vitae et studiorum</td>
</tr>
<tr>
<td>No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Degree thesis</td>
</tr>
<tr>
<td>the full thesis in pdf format. Undergraduate applicants must submit the draft of the thesis approved by their supervisor. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)</td>
</tr>
</tbody>
</table>

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Via Università, 12 - 43121 Parma
[www.unipr.it](http://www.unipr.it)
### Academic Qualifications

Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):
- University that granted the degree
- Type of degree (first cycle/second cycle/single cycle)
- Name of the degree program
- Date of graduation
- Final mark
- List of exams and corresponding scores (academic transcript of records)
- Translation into Italian or English (only for degrees issued in languages other than Italian or English).

### Research Project

Written in English, 3 pages with single spacing in Times New Roman 12, including bibliography, it must focusing on an original research topic (unpublished, developed personally by the candidate. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project) and it shall be structured as follows: introduction of the problem in the scientific context, relevance of the problem, objectives, expected results. It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.

### List of Evaluable Qualifications

(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Up to 40 points</th>
<th>Up to 10 points</th>
<th>Up to 10 points</th>
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</tr>
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</table>
| **Curriculum Vitae et studiorum** | Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation. | **Graduation mark** | Score related to the final mark:  
- 110 with honours (magna cum laude): 10 points;  
- 110: 7 points  
- From 108 to 109: 5 points  
- From 106 to 107: 3 points  
- 104-105: 1 point  
- Under 104: 0 points | **Graduation thesis** | Congruence with the research topics of the PhD course and methodological quality of the experimental or bibliographic work.  
- Experimental thesis related to the PhD program of Neuroscience: 10 points  
- Non-experimental and relevant thesis: 5 points  
- Thesis not relevant: 0 points |
| **Curriculum Vitae et Studiorum** will be evaluated based on the following qualifications and scores: |  |  | **Average of the exam marks** (if the candidate will attain the degree no later than 31 October 2023) | Score related to the average of the exam marks:  
- From 29/30 to 30/30: 10 points  
- From 28/30 to 28.99/30: 7 points  
- From 27/30 to 27.99/30: 5 points  
- From 26/30 to 26.99/30: 3 points  
- From 25/30 to 25.99/30: 1 point  
- Under 25/30: 0 points |
| **Research Project** | Project evaluation score:  
- scientific value: 2.5 points  
- structure of the proposal: 2.5 points  
- proposal feasibility in relation to the specific research topics of the PhD course: 2.5 points  
- originality of the proposal: 2.5 points | **Statement of Research Interest** | Short text – maximum 1 page – in Italian or in English | **Scientific Publications** |  
- Each article in a peer-reviewed international journal: 1 point  
- Each book chapter: 0.4 points  
- abstracts/papers/posters presented at conferences or symposia: 0.3 points |

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www.unipr.it  
55
The same categories are half valued if in Italian. The points of the publications are normalized for post-graduate years, that is, divided by the numbers of post-graduate years.

| Other Academic qualifications | Other academic qualifications consistent with the research topics of this PhD program | Up to 3 points |

### EVALUATION ORAL EXAM

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ORAL examination includes:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A1) Neurosciences:** the oral report on 2 topics drawn at random (one from list 1 and one from list 2) among those indicated below:

1.1. Genesis and transmission of the nervous impulses
1.2. The synapses
1.3. The reflexes
1.4. Molecular and cellular bases of signal transduction
1.5. Neural bases of plasticity

2.1. The motor system
2.2. The visual system
2.3. The somatosensory system
2.4. The autonomic nervous system and emotions
2.5. Neurobiology of language

**A2) Behavioural Biology:** the oral report on 2 topics chosen by lot from those indicated in the list below:

1) Individual and social learning
2) Imprinting and development of behavior
3) Genetic and epigenetic of behavior
4) Parental effort and sexual selection
5) Social behavior, reproductive systems and parental care
6) Aggression, assault and social hierarchies
7) Hormones, neurotransmitters and behavior
8) Parental selection and altruism
9) Behavioral evolution
10) Communication and emotions emozioni

**B) The presentation and discussion of the research project,** aimed at verifying the candidate’s aptitude for scientific research.

- Up to 40 points for the oral report on one of the first 5 and one of the second 5 topics, extracted from the list alongside (up to 20 points per topic);
- Up to 20 points for the project presentation;
- Up to 20 points for knowledge of the foreign language

Up to 80 points
| The discussion will take in English to evaluate the knowledge and the fluency of the language |   |
PSYCHOLOGY

**CYCLE**  
XL

**COORDINATOR**  
Prof.ssa Ada CIGALA  
email: ada.cigala@unipr.it  
Department of Humanities, Social Sciences and Cultural Industries

**DURATION**  
3 years

**STARTING DATE OF THE PHD PROGRAM**  
01/11/2024

**POSITIONS PUT OUT TO COMPETITION**  
6

**ADMISSION PROCEDURES**  
Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY

**ADMISSION REQUIREMENTS**  
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
− Laurea specialistica or Laurea magistrale (second cycle master’s degree)  
− Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
− Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

**TRAINING OBJECTIVES**  
The main aim of the PhD course is to train qualified researchers capable of planning and carrying out basic research focused on the research topic of the course and studies applied to clinical, social, educational, health and organizational contexts

**RESEARCH AREAS**  
- Psychosocial processes in complex societies  
- Development and learning processes in typical and atypical contexts  
- Processes involved in clinical and social intervention  
- Work and organizational psychology

### Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td></td>
</tr>
</tbody>
</table>

### Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
</table>

**UNIVERSITÀ DI PARMA**  
Via Università, 12 - 43121 Parma  
www.unipr.it

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| 1 | Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Humanities, Social Sciences and Cultural Industries | Welcoming minors into the community and providing guidance on educational and life projects. A qualitative-quantitative study on representations, experiences and relationships |
| 1 | Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 *(Ministerial Decree 629/2024 art. 9 “Public Administration”)* CUP D92J24000170006 | Vertical educational continuity 0-10 years and developmental trajectories |
| 1 | Scholarship co-financed with funds under the PNRR - Mission 4, Component 2 *(Ministerial Decree 630/2024)* and co-financed by the Company TICE Cooperativa Sociale CUP D92J24000280004 | Neurodivergent voices: representations and stereotypes about neurodivergence |

**ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 60 points  
(a minimum score of 35 points shall be required to be admitted to the Oral Exam)  
ORAL EXAM: up to 60 points  
Minimum score for ELIGIBILITY: 70/120

**ORAL EXAM PROGRAM**

THE ORAL EXAM TAKES IN THE PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement).

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate’s aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

Foreign Language the fluency of which shall be assessed during the Oral Exam  
**ENGLISH** The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

**SCHEDULE OF THE ADMISSION EXAMS**

| ASSESSMENT OF QUALIFICATIONS | It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam |
| ORAL EXAM | DATE 2nd September 2024 |
| | TIME 02:30 pm (Italian Time) |
| | PLACE ROOM A POLO DIDATTICO Via del Prato – 43121 PARMA - ITALY |
## FURTHER INFORMATION

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

### THE INTERVIEW MAY BE HELD ALSO IN ENGLISH

For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

## LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

### MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

<table>
<thead>
<tr>
<th>ANNEX A</th>
<th>(art. 3.2 of the Competition notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Document</td>
<td>Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Abstract of degree thesis</td>
<td>Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)</td>
</tr>
<tr>
<td>Academic Qualifications</td>
<td>Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
<tr>
<td>Research Project</td>
<td>The research project shall consist of a maximum of 2500 words, be written in Italian or in English, and it must be an original research project (inedited, unpublished, personally developed by the candidate) and be structured as follows: theoretical introduction, relevance of the problem, research design and methodology, expected results and discussion, essential bibliography (maximum 5 bibliographic entries). The Research Project does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board.</td>
</tr>
</tbody>
</table>

## LIST OF EVALUABLE QUALIFICATIONS

(only qualifications attested by a document drawn up in Italian or in English)

| Graduation mark | Score related to the final mark:  
- 110 and 110 with honours (magna cum laude): 10 points;  
- From 100 to 109: 8 points  
- Under 99: 5 points |
| --- | --- |
| Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024) | Score related to the average of the exam marks:  
- 30/30: 10 points  
- From 27/30 to 29/30: 8 points;  
- Under 26/30: 5 points |
| Graduation thesis | Congruence with the research topics of the PhD course and quality of the research methodology | Up to 5 points |
The candidate’s Curriculum Vitae et Studiorum will be evaluated based on the following qualifications and scores:

<table>
<thead>
<tr>
<th>Scientific Publications</th>
<th>Articles on national and international journals, papers presented at conferences or symposia, book chapters etc</th>
<th>Up to 10 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Academic qualifications</td>
<td>First or second level master’s degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD programme</td>
<td>Up to 5 points</td>
</tr>
<tr>
<td>Other experiences (training, work, research, teaching, etc.)</td>
<td>Study or research experiences abroad, prizes, scholarships and research grants (documented)</td>
<td>Up to 2 points</td>
</tr>
</tbody>
</table>

### EVALUATION ORAL EXAM

<table>
<thead>
<tr>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ORAL EXAM focuses on the knowledge of the English language, on the discussion of the research project, on the knowledge related to the research themes of the PhD programme</td>
<td>Up to 60 points</td>
</tr>
<tr>
<td>o knowledge of foreign languages (English): 10 points</td>
<td></td>
</tr>
<tr>
<td>o discussion and argumentation of the project: 35 points</td>
<td></td>
</tr>
<tr>
<td>o knowledge on at least one of the themes of the PhD programme and motivations for scientific research: 15 points</td>
<td></td>
</tr>
</tbody>
</table>
### MATERIALS SCIENCE AND TECHNOLOGY

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>XL</th>
</tr>
</thead>
</table>
| COORDINATOR | Prof. Mauro RICCO’  
              | email: [mauro.ricco@unipr.it](mailto:mauro.ricco@unipr.it)  
              | Department of Mathematical, Physical and Computer Sciences |
| DURATION    | 3 years |
| STARTING DATE OF THE PHD PROGRAM | 01/11/2024 |
| PARTNER INSTITUTION | • The Italian National Research Council (C.N.R.) |
| POSITIONS PUT OUT TO COMPETITION | 13 |
| ADMISSION PROCEDURES | Assessment of QUALIFICATIONS  
                        | Oral Exam in PRESENCE ore REMOTELY |
| ADMISSION REQUIREMENTS | Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
                        | − Laurea specialista or Laurea magistrale (second cycle master's degree)  
                        | − Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
                        | − Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  
                        | Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024 |

### TRAINING OBJECTIVES
The Ph.D. in "Materials Science and Technology" aims to provide graduates in: Materials Science, Physics, Chemistry, Industrial Chemistry, Biological Sciences, Biotechnology and Engineering with the necessary skills to carry out research activities of high scientific and professional qualification in the field of Materials Science and Technology at Universities, Research Centers or private entities. The course offers a strong, interdisciplinary preparation with specific courses, as well as with research activities conducted also abroad within scientific collaborations.

### RESEARCH AREAS
- Materials for sensors and bioelectronics
- [Materials for electrochemical storage (batteries and supercapacitors)]
- Nanodiagnostic techniques
- Auxetic polymers
- Supramolecular sensors and devices
- Carbon nanostructures
- Low-dimensional semiconductor structures
- Self-repairing and self-diagnostic polymers
- Ceramic and composite materials
- Vitrimer
- Materials for [bionanotechnology](#) and [nanomedicine](#)
- Photocatalytic solid foams
- Semiconductor materials for applications in power electronics and UVC radiation detection
- Porous materials for chemical separation
- Molecular and nanostructured materials for energy, health and environment
- Multifunctional magnetic thin films and nanostructures
- Magnetic materials for energy transition ([permanent magnets](#), [shape memory magnetic materials](#), [magnetocaloric materials](#))
- Composite hydrogels for 3D printing of biomatrices for tissue engineering (BIO X 3D printer - CNR-ISSMC; Bio-Hybrid Composites for Regenerative Medicine - CNR-ISSMC)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td>The aim of the thesis is the development and study of innovative hard magnetic materials to develop new Green magnets with a reduced content of critical materials such as Rare Earth or Cobalt. In particular, we will study new types of ferrites, metal-ferrite nanocomposites and multi-element alloys based in the concept of &quot;high entropy alloys&quot;. The thesis will be developed within the activities of the European project Horizon Europe &quot;Beethoven&quot;.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by The Italian National Research Council C.N.R. - IMEM</td>
<td>Biomaterials in the form of injectable hydrogels that can be processed by means of 3D printing will be designed and developed to obtain nano-composite and multifunctional biomimetic porous matrices of bone and cartilage tissue for tissue engineering applications. The design of bioinspired materials will be linked to the development of customized medical devices for the regeneration of tissues, organs and deep wounds and being able to integrate cells, biomolecules, and drugs to deliver advanced therapies. In addition, the opportunity to design biomatrices will enable the engineering of 3D cellular models to investigate the properties of systems of different complexity and biological activity and for the drug-testing of new pharmacological therapies</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td></td>
</tr>
</tbody>
</table>

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)  
* Modified with Rector Decree n. 1556 of 02.07.2024

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds Project PNRR-M4C2- 11.1 - PRIN 2022 - Settore PES - Titolo Progetto: ALICE - light-Activated high-performance actuators by electrospinning of reversibly crosslinked LIquid CrystallinE networks - Codice Progetto 20224EBZ3Y - Codice CUP D53D23010120006)</td>
<td>Molecular receptors for the enrichment of modified peptides for ultra-sensitive proteomics</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR &quot;National Center for Gene Therapy and Drugs based on RNA Technology&quot;, codice identificativo MUR CN00000041 – CUP [E63C22000940007] del bando a cascata del Progetto &quot;MULTifunctional synthetc platforms for the precision delivery of NUcleic AcidS&quot; - MUNUS, codice CUP D53C2303990007)</td>
<td>Self-assembled materials for cell transfection and nanomedicine</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by The Italian National Research Council C.N.R. - IMEM</td>
<td>Materials and devices for flexible organic electrochemical sensing for biological fluid monitoring applications, aimed at wearable and highly integrated devices</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>Germanium oxide: a new ultrawide bandgap ambipolar semiconductor for power electronics. We aim to deposit (e.g., MOVPE) and characterize (e.g., XRD, Raman, van der Pauw-Hall) epitaxial thin films of germanium oxide in the rutile phase r-GeO2. For this purpose, different single crystalline substrates will be employed. The possibility to experimentally obtain and control n- as well as p-type conductivity in r-GeO2 will be investigated through the employment of proper extrinsic dopants during growth.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company A.L.S.I.A. Agenzia Lucana di Sviluppo e di Innovazione in Agricoltura CUP D92J24000290004</td>
<td>Implementation of a “bioristor”, a new sensor developed by CNR-IMEM, in the ALSIA station for plant phenotyping</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company NanoPhoenix S.r.l. CUP D92J24000290004</td>
<td>Fabrication and development of nanostructured sensor platforms, to be implemented in miniaturized lab-on-chip systems for molecular diagnostics based on DNA nanotechnologies.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Versalis S.p.A. CUP D92J24000290004</td>
<td>Study of vitrimeric EPDM elastomers, aiming at producing reprocessable and recyclable polyolefin-based elastomers produced by Versalis (ENI group). Specifically, the PhD scholarship concerns the study of new reversible cross-linking agents using dynamic covalent bonds and multiple hydrogen bonds.</td>
</tr>
</tbody>
</table>

**ADMISSION PROCEDURES**

**Assessment of QUALIFICATIONS:** up to 60 points (a minimum score of 30 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 60 points

**Minimum score for ELIGIBILITY:** 70/120

**ORAL EXAM PROGRAM**

*THE ORAL EXAM TAKES IN THE PRESENCE* and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.*
The ORAL EXAM will focus on the candidate's motivation to attend the PhD, on the description of his specific research interests and on a discussion of the qualifications presented by the candidate.

**Foreign Language**
The fluency of which shall be assessed during the Oral Exam

**ENGLISH**
The evaluation of the knowledge of this language will be oral and will consist in translating of a scientific text.

---

**SCHEDULE OF THE ADMISSION EXAMS**

**ASSESSMENT OF QUALIFICATIONS**

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

**ORAL EXAM**

<table>
<thead>
<tr>
<th>DATE</th>
<th>2nd September 2024 (with possible extension in the following days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME</td>
<td>09:00 am (Italian Time)</td>
</tr>
</tbody>
</table>
| PLACE | Department of Mathematical, Physical and Computer Sciences
PHYSICS BUILDING
Parco Area delle Scienze, 7/A – Campus
43124 PARMA - ITALY |

**FURTHER INFORMATION**

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

**THE INTERVIEW MAY BE HELD ALSO IN ENGLISH**

For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice.

---

**LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT**

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

**ANNEX A**

(art. 3.2 of the Competition notice)

**Identification Document**

Scanned Copy of a valid identity document with photo (i.e. identity card, passport)

**Curriculum Vitae et studiorum**

No specific CV format is required (see art. 3.2 of the Competition notice)

**Abstract of degree thesis**

Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)

**Academic Qualifications**

Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):

- University that granted the degree - Type of degree (first cycle/second cycle/single cycle)
<table>
<thead>
<tr>
<th>NAME OF THE DEGREE PROGRAM</th>
<th>DATE OF GRADUATION</th>
<th>FINAL MARK</th>
<th>LIST OF EXAMS AND CORRESPONDING SCORES (ACADEMIC TRANSCRIPT OF RECORDS)</th>
<th>TRANSLATION INTO ITALIAN OR ENGLISH (ONLY FOR DEGREES ISSUED IN LANGUAGES OTHER THAN ITALIAN OR ENGLISH).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIST OF EVALUABLE QUALIFICATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ONLY QUALIFICATIONS ATTESTED BY A DOCUMENT DRAWN UP IN ITALIAN OR IN ENGLISH)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.</td>
<td>Up to 20 points</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Graduation mark** | Score related to the final mark:  
- 110 with honors (magna cum laude): 20 points  
- 110: 16 points  
- From 105 to 109: 12 points  
- From 100 to 104: 8 points  
- From 95 to 99: 4 points  
- Under 95: 0 points | Up to 20 points |
| **Average of the exam marks** (IF THE CANDIDATE WILL ATTAIN THE DEGREE NO LATER THAN 31 OCTOBER 2024) | Score related to the average of the exam marks:  
- 30/30: 20 points  
- From 28/30 to 29/30: 16 points  
- From 26/30 to 27/30: 12 points  
- 25/30: 8 points  
- 24/30: 4 points  
- Under 24/30: 0 points | Up to 20 points |
| **Graduation thesis** | Consistency of the Master’s Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae) | Up to 10 points |
| **Statement of Research Interest** | Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests | Up to 5 points |
| **Scientific Publications** | Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings | Up to 5 points |

**EVALUATION ORAL EXAM**

<table>
<thead>
<tr>
<th>INTERVIEW PROGRAM</th>
<th>EVALUATION CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
</table>
| The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | o knowledge of foreign languages: 10 points  
o general knowledge of issue connected to the Master’s thesis: 25 points  
o general knowledge of issues connected to the PhD course: 25 points | Up to 60 points |
CHEMICAL SCIENCES

**COORDINATOR**
Prof Giovanni MAESTRI  
email: giovanni.maestri@unipr.it  
Department of Chemistry, Life Sciences and Environmental Sustainability

**DURATION**
3 years

**STARTING DATE OF THE PHD PROGRAM**
01/11/2024

**POSITIONS PUT OUT TO COMPETITION**
12

**ADMISSION PROCEDURES**
Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY

**ADMISSION REQUIREMENTS**
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
− Laurea specialistica or Laurea magistrale (second cycle master's degree)  
− Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
− Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

**TRAINING OBJECTIVES**
The training program aims to allow PhDs in Chemical Sciences to acquire the necessary skills to propose and manage research projects in the advanced sectors of Analytical Chemistry, General and Inorganic Chemistry, Physical Chemistry, Industrial Chemistry, and Organic Chemistry. The Doctorate in Chemical Sciences requires each doctoral student to work within one of the research groups active in the Chemistry Units of the Department of Chemistry, Life Sciences and Environmental Sustainability (SCVSA), and to follow a specific training path within the chosen sector also through the participation to research activities at qualified centers both in Italy and abroad, to national and international schools, to conferences and through the publication of the scientific results achieved in internationally distributed journals. Interdisciplinary training activities are also planned, aimed at developing in PhD students the ability to present, discuss and disseminate the subjects of their work both in an academic and in an industrial context and also, more generally, in the society at large.

**RESEARCH AREAS**
- Analytical Chemistry  
- General and Inorganic Chemistry  
- Physical Chemistry  
- Industrial Chemistry  
- Organic Chemistry

---

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Chemistry, Life Sciences and Environmental Sustainability (funds of &quot;Departments of Excellence&quot; program)</td>
<td>Separation of 4f transition metals via complexation and liquid-liquid extraction</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life</td>
<td>Photo- and Organo-catalytic radical cascades</td>
</tr>
<tr>
<td>Scholarship Type</td>
<td>Funders</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>Novel catalytic approaches for synthesis enabled by emerging technologies</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds University call for Research 2023 Action A CUP D93C24000580005)</td>
<td></td>
</tr>
<tr>
<td>Design of artificial redox metalloproteins using the SPY architecture</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M2C2 Investimento 3.5 PNRR ART-2-HYDROGEN “ARTIFICIAL ENZIMES FOR THE PHOTOCATALYTIC PRODUCTION OF HYDROGEN IN PHOTOSYNTHETIC BACTERIA” ID: RSH2A_000009, CUP F97G2200270006)</td>
<td></td>
</tr>
<tr>
<td>Catalytic and Photocatalytic strategies for CO₂ valorization</td>
<td>Scholarship funded by ENEA - Agency for new technologies, energy and sustainable economic development as part of the Operational Plan for Research and Development on hydrogen POR H2</td>
<td></td>
</tr>
<tr>
<td>Piattaforme analitiche integrate per la valutazione della qualità e della sicurezza alimentare - Integrated analytical platforms for food quality and safety assessment</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 3.1 PNRR METROFOOD-IT ID: IR0000033, CUP I83C22001040006)</td>
<td></td>
</tr>
<tr>
<td>- Design of chelating molecules for the development of antiviral and anticancer compounds</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 1.3 “MEDICINAL CHEMISTRY TECHNOLOGIES FOR THE DEVELOPMENT OF INNOVATIVE ANTIVIRAL AGENTS”, CUP B53C20040570005)</td>
<td></td>
</tr>
<tr>
<td>Crystal Engineering and solid-state reaction via mechanochemistry</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M2C2 Investimento 1.1 PRIN 2022 “Crystal Engineering for bees and environmental sustainability (X4BEEES)” Codice Cineca 20224NP42W, CUP D53D23010140001)</td>
<td></td>
</tr>
<tr>
<td>Reduction of the environmental impact in the synthesis of modified peptide nucleic acids</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 1.4 “NATIONAL CENTER FOR GENE THERAPY AND DRUGS BASED ON RNA TECHNOLOGY (CN</td>
<td></td>
</tr>
</tbody>
</table>
Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>Sustainable strategies in aquaculture: development of organic-inorganic hybrid materials with antimicrobial activity</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Maselli Misure S.p.A. CUP D92J24000300004</td>
<td>Preparation of coordination compounds and their use as optical sensors</td>
</tr>
</tbody>
</table>

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 40 points
(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 80 points

Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference
(Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

Foreign Language
the fluency of which shall be assessed during the Oral Exam

ENGLISH

The evaluation of the knowledge of this language will be oral and will consist in the discussion of part of the research topics in English.
### SCHEDULE OF THE ADMISSION EXAMS

<table>
<thead>
<tr>
<th>ASSESSMENT OF QUALIFICATIONS</th>
<th>DATE</th>
<th>3rd September 2024 (with possible extension in the following days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TIME</td>
<td>10:00 am (Italian Time)</td>
</tr>
<tr>
<td></td>
<td>PLACE</td>
<td>Department of Chemistry, Life Sciences and Environmental Sustainability CHEMISTRY BUILDING Parco Area delle Scienze, 17/A – Campus 43124 PARMA - ITALY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice</td>
</tr>
</tbody>
</table>

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

#### MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

<table>
<thead>
<tr>
<th>ANNEX A</th>
<th>(art. 3.2 of the Competition notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Document</td>
<td>Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Abstract of degree thesis</td>
<td>Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)</td>
</tr>
<tr>
<td>Academic Qualifications</td>
<td>Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
<tr>
<td>Research Project</td>
<td>Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project) It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board</td>
</tr>
</tbody>
</table>

#### LIST OF EVALUABLE QUALIFICATIONS

(only qualifications attested by a document drawn up in Italian or in English)
### Curriculum Vitae et studiorum
Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation. Relevance of the academic career as well as postgraduate experiences and other research activities related to Chemical Sciences.

<table>
<thead>
<tr>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>Up to 21</td>
</tr>
</tbody>
</table>

### Graduation thesis
Consistency of the Master’s Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae)

<table>
<thead>
<tr>
<th>Points</th>
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<tbody>
<tr>
<td>Up to 10</td>
</tr>
</tbody>
</table>

### Research Project
Points relating to the research project shall be allocated on the basis of the following criteria:
- Scientific value and originality of the proposal
- Description and structure of the proposal
- Proposal feasibility
- Consistency with the research themes of the PhD course

<table>
<thead>
<tr>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>Up to 2</td>
</tr>
</tbody>
</table>

### Statement of Research Interest
Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD programme; the description of specific research interests, with particular reference to the topics relating to the specific topics proposed; the skills possessed that can contribute to a research project in the field of Chemical Sciences.

<table>
<thead>
<tr>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>Up to 3</td>
</tr>
</tbody>
</table>

### Scientific Publications
Articles on national and international journals, papers presented at conferences or symposia, book chapters etc. Impact and relevance of the qualifications presented related to Chemical Sciences.

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 4</td>
</tr>
</tbody>
</table>

### EVALUATION ORAL EXAM

#### Interview Program
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

#### Evaluation CRITERIA
- Knowledge of the subject and skills of the candidate for the proposed research activities are assessed by a discussion on the qualifications submitted for evaluation
- Knowledge of English is assessed by discussion of topics of research and by understanding of scientific texts.

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 80</td>
</tr>
</tbody>
</table>
FOOD SCIENCE

CYCLE XL

COORDINATOR Prof. Massimiliano RINALDI email: massimiliano.rinaldi@unipr.it Food and Drug Department

DURATION 3 years

STARTING DATE OF THE PHD PROGRAM 01/11/2024

CURRICULA
1. Food Science
2. Products for the food and health markets

POSITIONS PUT OUT TO COMPETITION 18 (Modified with Rector Decree n. 1672 of 17.07.2024)

ADMISSION PROCEDURES Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY

ADMISSION REQUIREMENTS Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
− Laurea specialistica or Laurea magistrale (second cycle master’s degree)
− Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations); 
− Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES
The Ph.D. Course in Food Science is offered by the Department of Food and Drug, University of Parma. The focus of the programme is the 3-years PhD research project (setting up, planning and performing research, then writing it up and presenting it), which leads to a thesis and associated publications. The research is done under the supervision of a member of the PhD Course Board.
The Ph.D Course in Food Science aims at organising the training of PhD candidates to become self-reliant, societal skilled researchers in the field of fundamental and applied research on food science. The Ph.D Course in Food Science is designed to cover all the step along the food supply chain, “from the farm to the fork”, to address cutting-edge topics (i.e. local food systems, circular bioeconomy, human microbiome, and dietary patterns), and to provide the candidates with the knowledge required to tackle the next-to-come challenges in food quality and safety.
The research portfolio, based on a strong interdisciplinary environment, is mainly composed of the work done within the Department of Food and Drug in the following areas: Food microbiology, Food technology and processing, Human nutrition, Plant production and animal science, Food chemistry and circular bioeconomy, Agro-economy, consumer’s science, and food systems, Computational Food Chemistry

RESEARCH AREAS
1. FOOD TECHNOLOGY – FOOD BIOCHEMISTRY: Modifying techno-functional properties and biological activity of plant proteins by technologies
2. FOOD TECHNOLOGY: Upcycling pea waste side streams for developing future food ingredients
3. PLANT PRODUCTION – FOOD MICROBIOLOGY – FOOD TECHNOLOGY – FOOD CHEMISTRY: Innovation in the elicitors production for the agricultural sector
4. PLANT PRODUCTION – FOOD TECHNOLOGY: Innovation in the utilisation and stabilisation of by-products from the agri-food chain
5. PLANT PRODUCTION – FOOD MICROBIOLOGY - FOOD CHEMISTRY: Green solutions from secondary metabolite extraction from vitro-derived plantlets
6. HUMAN NUTRITION: Unravelling metabolized and non metabolized flavan-3-ols at colonic level using multiple chromatographic tools
7. **HUMAN NUTRITION**: Integrating multiple datasets to guide the provision of effective strategies to promote cardiometabolic health through plant-based diets
8. **HUMAN NUTRITION** – Nutritional needs of lung cancer patients: assessment of nutritional status for planning new interventions of personalized nutrition
9. **HUMAN NUTRITION**: Sport nutrition - eating habits, nutritional status in different sport disciplines
10. **FOOD MICROBIOLOGY**: Exploiting lactic acid fermentation for the detoxification of products/by-products to employ in the food chain
11. **ANIMAL PRODUCTION**: The use of Fourier Transform Infrared Spectroscopy as a rapid and reliable tool to analyze milk quality and safety, improving the discriminatory capabilities of spectra through the implementation of innovative statistical models
12. **FOOD CHEMISTRY**: Extraction and characterization of biomolecules from insects reared on food by-products for food and feed applications
13. **FOOD CHEMISTRY**: Development and application of untargeted methods and omics approaches for the characterization of raw materials and semi-finished products in the confectionery industry
14. **FOOD CHEMISTRY**: Development of advanced analytical methodologies for the characterization of new fibre-based food ingredients
15. **ORGANIC CHEMISTRY – FOOD TECHNOLOGY**: Milk proteins in confectionary industry: study of the chemical-physical features and bio-functional properties

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td>• Food Technology / Biochemistry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Animal Production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Human nutrition</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma</td>
<td>• Food Microbiology</td>
</tr>
</tbody>
</table>

**Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)**

*Modified with Rector Decee n. 1672 of 17.07.2024*

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by Food and Drug Department (funds of &quot;Departments of Excellence&quot; program)</td>
<td>Unravelling metabolized and non metabolized flavan-3-ols at colonic level using multiple chromatographic tools</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Food and Drug Department (funds deriving from MASAF within the programs admitted to evaluations and presented pursuant to Notice no. 0182458 of 04.22.2022)</td>
<td>Application of circular economy principles in the brewing supply chain through a multidisciplinary approach to produce innovative food and beverages</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Food and Drug Department (funds Project MUR FARE CARE-DIET (CArdiometabolic REsponse to plant-based DIETs at individual level: deciphering the complexity of plant bioactives CUP D93C22000160001)</td>
<td>Integrating multiple datasets to guide the provision of effective strategies to promote cardiometabolic health through plant-based diets</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 PNRR “BIOfactive compounds from vitro-derived HOP plants: a green opportunity – BIOSHOP” CUP D53D2301168006)</td>
<td>A green approach to the synthesis and extraction of bioactive compounds from vitro-derived hop plantlets</td>
</tr>
<tr>
<td>No.</td>
<td>Scholarship Funding Details</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 “Upcycling pea waste side streams for developing future food ingredients (UPeal)” CUP D53D2301152006)</td>
<td>Upcycling pea waste side streams for developing future food ingredients</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by SITEIA Interdepartmental Center</td>
<td>Extraction and characterization of biomolecules from insects reared on food by-products for food and feed applications</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by SOREMARTEC Italia S.r.l.</td>
<td>Development and application of untargeted methods and omics approaches for the characterization of raw materials and semi-finished products in the confectionery industry</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>Processing and valorisation of agri-food by-products and their use as elicitors in agriculture (Acronym: Tra.Va.So.)</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company SOREMARTEC Italia S.r.l. CUP D92J24000310004</td>
<td>Milk proteins in confectionary industry: study of the chemical-physical features and bio-functional properties.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company SOREMARTEC Italia S.r.l. CUP D92J24000310004</td>
<td>Development of advanced analytical methodologies for the characterization of new fibre-based food ingredients</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Eni S.p.A.</td>
<td>Study on the variation of the physico-chemical soil parameters and of the vegeto-productive parameters of agriculturally relevant crops, after the use biochar as a soil improver</td>
</tr>
</tbody>
</table>

**POSITION RESERVED**

Reserved to **Holders of SCHOLARSHIP FUNDED BY FOREIGN STATES (Ethiopia)**

Reserved to **Holders of RESEARCH GRANT** within the Project MARIE SKŁODOWSKA-CURIE ACTIONS – COFUND “Training Future Big Data Experts for Europe (FutureData4EU)”
## ADMISSION PROCEDURES

**Assessment of QUALIFICATIONS:** up to 50 points
(a minimum score of 30 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 70 points

**Minimum score for ELIGIBILITY:** 70/120

## ORAL EXAM PROGRAM

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMTELY** for candidates residing abroad or temporarily abroad for study/work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.

The ORAL exam involves the presentation and discussion of the research project by the candidate without the aid of any Powerpoint presentation or other applications, and is aimed at verifying the candidate's aptitude for scientific research and his/her general preparation on topics relating to research topics of the doctoral course.

**Foreign Language**

<table>
<thead>
<tr>
<th>Language</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific test. For foreign candidates, basic knowledge of ITALIAN LANGUAGE will also be assessed.</td>
</tr>
</tbody>
</table>

## SCHEDULE OF THE ADMISSION EXAMS

| ASSESSMENT OF QUALIFICATIONS | It is the candidate’s responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page http://unipr.esse3.cineca.it/Home.do in the days preceding the date of the Oral Exam |
| ORAL EXAM                   | DATE 2nd September 2024 (with possible extension to 3rd September 2024) |
|                            | TIME 10:30 am (Italian Time) |
|                            | PLACE Food and Drug Department Parma Area della Scienze, 27/A - Campus 43124 PARMA - ITALY |
| FURTHER INFORMATION         | The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board. |
|                           | THE INTERVIEW MAY BE HELD ALSO IN ENGLISH For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice |

## LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

<table>
<thead>
<tr>
<th>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNEX A (art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Identification Document Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td><strong>Abstract of degree thesis</strong></td>
</tr>
<tr>
<td><strong>Academic Qualifications</strong></td>
</tr>
<tr>
<td><strong>Research Project</strong></td>
</tr>
</tbody>
</table>

**LIST OF EVALUABLE QUALIFICATIONS** (only qualifications attested by a document drawn up in Italian or in English)

<p>| <strong>Curriculum Vitae et studiorum</strong> | Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation. | Up to 20 points |
| <strong>Research Project</strong>             | Points relating to the research project shall be allocated on the basis of the following criteria: o Scientific value and or originality of the proposal: max 10 points o description and structure of the proposal: max 5 points o proposal feasibility: max 5 points | Up to 20 points |
| <strong>Statement of Research Interest</strong> | Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests | Up to 2 points |
| <strong>Scientific Publications</strong>      | Articles and/or reviews in scientific journals with peer reviewing, scientific book chapters with national or international circulation. The explicit indication of the candidate’s contribution to the works presented for evaluation is a necessary requirement. International peer-reviewed papers: up to 2 points National peer-reviewed papers: up to 1 point | Up to 3 points |
| <strong>Other Academic qualifications</strong> | First or second level Master’s degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program | Up to 2 points |
| <strong>Other experiences (training, work, research, teaching, etc.)</strong> | – Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covedere by research grant, and as a staff member of research units – Working activity – Professional and/or training internship – Language proficiency certificates | Up to 3 points |</p>
<table>
<thead>
<tr>
<th>LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positions reserved to holders of scholarship funded by Foreign States</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>Up to 20 points</td>
</tr>
<tr>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation.</td>
<td></td>
</tr>
<tr>
<td><strong>Research Project</strong></td>
<td>Up to 20 points</td>
</tr>
<tr>
<td>Congruence with the research topics of the PhD course. Clarity of objectives and definition of success indicators. Implementation and sustainability of the feasibility plan.</td>
<td></td>
</tr>
<tr>
<td><strong>Statement of Research Interest</strong></td>
<td>Up to 2 points</td>
</tr>
<tr>
<td>Originality and motivation to the research.</td>
<td></td>
</tr>
<tr>
<td><strong>Scientific Publications</strong></td>
<td>Up to 3 points</td>
</tr>
<tr>
<td>Articles and/or reviews in scientific journals with peer reviewing, scientific book chapters with national or international circulation. The explicit indication of the candidate's contribution to the works presented for evaluation is a necessary requirement. International peer-reviewed papers: up to 2 points National peer-reviewed papers: up to 1 point</td>
<td></td>
</tr>
<tr>
<td><strong>Other Academic qualifications</strong></td>
<td>Up to 2 points</td>
</tr>
<tr>
<td>First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program</td>
<td></td>
</tr>
<tr>
<td><strong>Other experiences</strong></td>
<td>Up to 3 points</td>
</tr>
</tbody>
</table>
| − Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covedere by research grant, and as a staff member of research units  
− Working activity  
− Professional and/or training internship  
− Language proficiency certificates  
− Periods of study abroad, outside th country of origin (e.g. Erasmus programme or other similar mobility programmes)  
Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.) |            |

<table>
<thead>
<tr>
<th>EVALUATION ORAL EXAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview Program</td>
</tr>
</tbody>
</table>
| The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | o English reading and speaking and for foreign candidates also Italian language: up to 10 points  
o research project presentation: max 40 points  
o general knowledge of issues connected to the PhD course: max 20 points | Up to 70 points |
DRUG SCIENCES

CYCLE

XL

COORDINATOR

Prof. Fabio SONVICO
email: fabio.sonvico@unipr.it
Food and Drug Department

DURATION

3 years

STARTING DATE OF THE PHD PROGRAM

01/11/2024

CURRICULA

1. Innovation in Pharmaceutical Sciences
2. Products for the food and health markets

POSITIONS PUT OUT TO COMPETITION

16 (Modified with Rector Decree n. 1556 of 02.07.2024)

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS and Research Project
Oral Exam in PRESENCE

ADMISSION REQUIREMENTS

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- Laurea specialistica or Laurea magistrale (second cycle Master’s degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES

The PhD Course in “Drug Sciences” has the objective to train PhDs with backgrounds and experiences suitable for entry the field of pharmaceutical research relatively to the design, discovery, development, production and control of medicinal and health products, and to understand pharmacologically active substances mechanisms of action at the biomolecular level.

The course provides teaching dedicated directly to PhD students in the scientific fields mentioned above, as well as in multidisciplinary and interdisciplinary fields. Multi- and interdisciplinarity are typical characteristics of the PhD course, which addresses the final practical objective (producing innovation in drug sciences) from different points of view and with different approaches.

RESEARCH AREAS

- Biochemistry and Molecular Biology
- Biopharmaceutics – Pharmacokinetics
- Bio-organic chemistry
- Experimental Pharmacology and Toxicology
- Drug Design and Synthesis

Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic</th>
</tr>
</thead>
</table>
| 3  | Scholarship funded by University of Parma (Ministerial funds) | • Biochemistry and Molecular Biology  
• Biopharmaceutics – Pharmacokinetics  
• Drug Design and Synthesis |
<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by Food and Drug Department (funds “Departments of Excellence 2023-2027” program)</td>
<td>Characterization and valorization of complex natural matrices for the generation of components with high pharmaceutical, nutritional and cosmetic value and design of advanced formulations capable of maximizing the effectiveness and reducing the environmental impact of the production, use and disposal of active ingredients</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 PNRR -M4C2- “Dynamics of recruitment of macromolecular complexes active on the mycobacterial orisome: mechanistic details and target validation” CUP D53D23010750001)</td>
<td>Design and synthesis of peptides and peptidomimetics as inhibitors of DNA replication in mycobacterium tuberculosis</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>Identification of natural products as gene repressors towards a new paradigm to fight antibacterial resistance</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company VisoStatics S.r.l. CUP D92J24000320004</td>
<td>Design and synthesis of new antiviral molecules with a broad spectrum of action for the treatment of acute infections caused by emerging and re-emerging viruses</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Chiesi Farmaceutici S.p.A. CUP D92J24000320004</td>
<td>Peptides and proteins for inhalation</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Chiesi Farmaceutici S.p.A.</td>
<td>Integration of ex vivo/in vivo imaging approaches focused on the investigation of the pharmacokinetics of inhaled drugs</td>
</tr>
</tbody>
</table>

**POSITION RESERVED**

Reserved for **EMPLOYEES of Company “Chiesi Farmaceutici S.p.A.”** (with salary maintenance) 1

Reserved for **EMPLOYEES of Company “Azienda Unità Sanitaria Locale di Piacenza”** (with salary maintenance) 1

Reserved for **EMPLOYEES of Company “ERBC Group S.r.l.”** (with salary maintenance) 1
ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 50 points
(a minimum score of 30 points shall be required to be admitted to the Oral Exam)
ORAL EXAM: up to 70 points
Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

THE ORAL EXAM TAKES PLACE IN THE PRESENCE.

The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

Foreign Language
the fluency of which shall be assessed during the Oral Exam

ENGLISH
The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

SCHEDULE OF THE ADMISSION EXAMS

ASSESSMENT OF QUALIFICATIONS

It is the candidate’s responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page http://unipr.esse3.cineca.it/Home.do in the days preceding the date of the Oral Exam

ORAL EXAM

DATE
2nd September 2024 (with possible extension to 3rd September 2024)
TIME
08.30 am (Italian Time)
PLACE
Food and Drug Department
Parco Area delle Scienze, 27/A
43124 PARMA - ITALY

FURTHER INFORMATION

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

THE INTERVIEW MAY BE HELD ALSO IN ENGLISH

For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT
**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

<table>
<thead>
<tr>
<th>ANNEX A</th>
<th>(art. 3.2 of the Competition notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Document</td>
<td>Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
<tr>
<td>Curriculum Vitæ et studiorum</td>
<td>No specific CV format is required (see art. 3.2 of the Competition notice)</td>
</tr>
<tr>
<td>Abstract of degree thesis</td>
<td>Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)</td>
</tr>
<tr>
<td>Academic Qualifications</td>
<td>Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
<tr>
<td>Research Project</td>
<td>The research project shall consist of a maximum of 3 pages, be written in Italian or in English, focused on an original research topic and it shall be structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results. It should be noted that the Examination Board can use tools useful for verifying the originality of the submitted Project. The research project does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board.</td>
</tr>
</tbody>
</table>

**LIST OF EVALUABLE QUALIFICATIONS**

*(only qualifications attested by a document drawn up in Italian or in English)*

| Curriculum Vitæ et studiorum | Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. Up to 20 points |
| Graduation thesis | Consistency of the Master’s Degree thesis with the doctoral program research topics Up to 10 points |
| Research Project | Points relating to the research project shall be allocated on the basis of the following criteria:  
| | o Scientific value and ground-breaking nature of the proposal: 5 points  
| | o description and structure of the proposal: 5 points  
| | o consistency with the themes of the doctorate: doctorate proposal feasibility: 5 points Up to 15 points |
| Scientific Publications | Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings. Up to 5 points |

**EVALUATION ORAL EXAM**

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
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</thead>
</table>
| The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course | o knowledge of the foreign language: max 10 points  
| | o research project argumentation: max 30 points  
| | o general knowledge of scientific aspects related to the PhD course: max 30 points Up to 70 points |
# Earth Sciences

## Cycle

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<tr>
<th>Cycle</th>
<th>XL</th>
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</table>

## Coordinator

Prof. Fabrizio BALSAMO  
email: fabrizio.balsamo@unipr.it  
Department of Chemistry, Life Sciences and Environmental Sustainability

## Duration

3 years

## Starting Date of the PhD Program

01/11/2024

## Positions Put Out to Competition

6

## Admission Procedures

Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY

## Admission Requirements

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:

1. "Laurea Magistrale" LM-11 Science for the conservation of cultural heritage  
2. "Laurea Magistrale" LM-35 Environmental Engineering  
3. "Laurea Magistrale" LM-60 Natural Sciences  
4. "Laurea Magistrale" LM-74 Geology  
5. "Laurea Magistrale" LM-75 Environmental and land sciences  
6. "Laurea Magistrale" LM-79 Geophysics  
7. Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programs  
8. Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

## Training Objectives

The main objective of the Doctorate Course in Earth Sciences is to provide highly qualified teaching and research paths within numerous scientific disciplinary sectors of the Geosciences, also from an interdisciplinary perspective.

## Research Areas

- Palaeontology and Palaeoecology  
- Stratigraphy and Sedimentology  
- Structural Geology  
- Physical Geography and Geomorphology  
- Applied Geology  
- Mineralogy  
- Petrology and Petrography  
- Geochemistry and Volcanology  
- Geophysics and Applied Geophysics
<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
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</thead>
</table>
| 3  | Scholarship funded by University of Parma (Ministerial funds) | • Hydrogeological role of carbonate fault zones on regional flow system  
• Study of innovative methods for extracting Critical Raw Materials (CRMs) from natural and anthropogenic sources  
• Reconstructing the isotopic signal of precipitation in the Alps and the Northern Apennines through isotope dendrochronology and ice core analysis  
• The role of the evaporites in gas storage: seals or reservoirs?  
• High resolution quantitative biostratigraphy and paleoecology of planktonic foraminiferal assemblages at the Oligocene-Miocene transition in low latitude oceanic successions  
• The back-arc basalt systematics: the case of the young intracontinental Tyrrhenian back-arc basin (Western Mediterranean Sea)  
• Probabilistic earthquake-risk assessment in Italy via geodynamic models constrained by geodetic data and prior structural-geology information  
• Scenarios of Mediterranean geodynamics since the Late Miocene constrained by sedimentary record of vertical lithospheric motions  
• The search for sustainable critical raw materials along the margin of the mountain chains: looking for the most suitable and favourable geological contexts for different type of materials |
| 1  | Scholarship co-funded by Fondazione Cariparma |  |
| 1  | Scholarship funded by Department of Chemistry, Life Sciences and Environmental Sustainability (funds of "Departments of Excellence" program) |  |

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company GEOSEC S.r.l. CUP D92J24000330004</td>
<td>• Integrated geophysical measurements to support geotechnical characterization of surface soil deposits</td>
</tr>
</tbody>
</table>

**ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 50 points  
(a minimum score of 30 points shall be required to be admitted to the Oral Exam)  
ORAL EXAM: up to 70 points  
Minimum score for ELIGIBILITY: 70/120
### ORAL EXAM PROGRAM

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL EXAM includes the presentation and discussion of the research project by the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

**Foreign Language**

the fluency of which shall be assessed during the Oral Exam

<table>
<thead>
<tr>
<th>Language</th>
<th>ENGLISH</th>
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<tbody>
<tr>
<td>The assessment of knowledge of this language will be oral and will consist in reading and translating a paragraph of scientific text.</td>
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</tbody>
</table>

### SCHEDULE OF THE ADMISSION EXAMS

<table>
<thead>
<tr>
<th>ASSESSMENT OF QUALIFICATIONS</th>
<th>It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>ORAL EXAM</strong></th>
<th>DATE</th>
<th>2nd September 2024 (with possible extension in the following day)</th>
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</thead>
<tbody>
<tr>
<td>TIME</td>
<td>09:00 am (Italian Time)</td>
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<tr>
<td>PLACE</td>
<td>Department of Chemistry, Life Sciences and Environmental Sustainability \ EARTH SCIENCES BUILDING \ Parco Area delle Scienze, 157/A – Campus \ 43124 PARMA - ITALY</td>
<td></td>
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</tbody>
</table>

**FURTHER INFORMATION**

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates' skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

| THE INTERVIEW MAY BE HELD ALSO IN ENGLISH | For foreign candidates, the admission examinations may be held in English at the candidate’s choice. |

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

| ANNEX A | (art. 3.2 of the Competition notice) |
| Identification Document | Scanned Copy of a valid identity document with photo (i.e. identity card, passport) |
| Curriculum Vitae et studiorum | No specific CV format is required (see art. 3.2 of the Competition notice) |
| Abstract of degree thesis | Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces) |
| Academic Qualifications | Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) |
### Research Project

Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION). It should be noted that the Examination Board can use IT tools useful for verifying the originality of the submitted Project. It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.

### LIST OF EVALUABLE QUALIFICATIONS

(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Up to 6 points</th>
<th>Up to 8 points</th>
<th>Up to 22 points</th>
<th>Up to 1 point</th>
<th>Up to 5 points</th>
<th>Up to 5 points</th>
<th>Up to 5 points</th>
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<td><strong>Curriculum Vitae et studiorum</strong></td>
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<td>Including academic career and postgraduate experience, accompanied by a</td>
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<td>the relevant marks, as well as the final graduation mark. The marks of the</td>
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<td>exams and the graduation mark will be the most relevant element of the</td>
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<td>evaluation.</td>
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<td>Congruence with the research topics of the PhD course and quality of the</td>
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<td><strong>Research Project</strong></td>
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<td>Points relating to the research project shall be allocated on the basis of</td>
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<td>- Scientific value and or originality of the proposal: max 8 points</td>
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<td>- description and structure of the proposal: max 3 points</td>
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<td>- proposal feasibility: max 3 points</td>
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<td>- consistency with the research themes of the PhD course: max 8 points</td>
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<td><strong>Statement of Research Interest</strong></td>
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<td>Short text – maximum 1 page – in Italian or in English, aimed at explaining</td>
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<td>the candidate's reasons to attend the PhD program and at describing her/his</td>
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<td>specific research interests</td>
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<td><strong>Scientific Publications</strong></td>
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<td>o Abstract presented at a national or international congress: 0,5 point</td>
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<td>o Articles on scientific journals (ISI/SCOPUS): 2 points</td>
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<td>o Other publication (related to the topics of PhD program: 1 point</td>
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<td><strong>Graduation mark</strong></td>
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<td>Score related to the final mark:</td>
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<td>- 110 and 110 with honours (magna cum laude): 5 points</td>
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<td>- from 107 to 109: 4.5 points</td>
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<td>- under 95: 0.5 points</td>
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<td><strong>Average of the exam marks</strong></td>
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<td>(if the candidate will attain the degree no later than 31 October 2024)</td>
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<td>Score related to the average of the exam marks:</td>
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<tr>
<td>- from 28 to 30: 5 points</td>
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<td>- from 27 to 27.99: 4.5 points</td>
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<td>- from 26.5 to 26.99: 3.5 points</td>
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<tr>
<td>- from 26 to 26.49: 2.5 points</td>
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<tr>
<td>- from 25 to 25.99: 1 point</td>
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<td>- under 25: 0.5 points</td>
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<td><strong>Other Academic qualifications</strong></td>
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<tr>
<td>First or second level Master’s degree obtained in Italy and/or specialization</td>
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<tr>
<td>degree in subjects consistent with the research topics of this PhD program</td>
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<tr>
<td><strong>Other experiences (training, work, research, teaching, etc.)</strong></td>
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<td>o Periods of study abroad: 1 point</td>
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<td>Scholarships, scientific associations awards: 1 point</td>
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</tbody>
</table>

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**UNIVERSITÀ DI PARMA**
Via Università, 12 - 43121 Parma
www.unipr.it
85
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>o knowledge of foreign languages: 5 points</td>
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<tr>
<td></td>
<td>o research project presentation: 50 points</td>
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<tr>
<td></td>
<td>o general knowledge of issues connected to the PhD course: 15 points</td>
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<td></td>
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<td>Up to 70 points</td>
</tr>
</tbody>
</table>
# PHILOSOPHY, SOCIAL SCIENCES, CULTURAL AND ENVIRONMENTAL HERITAGE

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>XL</th>
</tr>
</thead>
</table>

## COORDINATOR
Prof.ssa Federica VERATELLI  
email: [federica.veratelli@unipr.it](mailto:federica.veratelli@unipr.it)  
Department of Humanities, Social Sciences and Cultural Industries

## DURATION
3 years

## STARTING DATE OF THE PHD PROGRAM
01/11/2024

## CURRICULA
1. Philosophical Sciences  
2. Socio-Anthropological Sciences  
3. Educational Sciences  
4. Art History, Music and Performing Arts

## POSITIONS PUT OUT TO COMPETITION
7

## ADMISSION PROCEDURES
Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY VIA VIDEO CONFERENCE (only if special requirements are fulfilled, see below)

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
- Laurea specialistica or Laurea magistrale (second cycle master’s degree)  
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program

The qualifications must be included in the classes listed below:  
- LM-1 Cultural anthropology and ethnology  
- LM-2 Archaeology  
- LM-3 Landscape Architecture  
- LM-5 Archival and library science  
- LM-10 Conservation of architectural and environmental heritage  
- LM-11 Sciences for the conservation of cultural heritage  
- LM-12 Design  
- LM-14 Modern philology  
- LM-15 Philology, literature and history of antiquity  
- LM-19 Information and editorial systems  
- LM-36 Languages and literatures of Africa and Asia  
- LM-37 Modern European and American languages and literatures  
- LM-38 Modern languages for communication and international cooperation  
- LM-39 Linguistics  
- LM-43 IT methodologies for the humanities  
- LM-45 Musicology and musical heritage  
- LM-47 Organization and management of services for sport and physical activities  
- LM-48 Urban, environmental and territorial planning  
- LM-49 Design and management of tourism systems  
- LM-50 Planning and management of educational services  
- LM-51 Psychology  
- LM-55 Cognitive Sciences  
- LM-57 Adult education and continuing training sciences  
- LM-59 Public, corporate and advertising communication sciences  
- LM-62 Political sciences  
- LM-63 Public Administration Sciences  
- LM-64 Sciences of religions  
- LM-65 Entertainment sciences and multimedia production  
- LM-70 Food science and technology
<table>
<thead>
<tr>
<th>Discipline</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM-73 Forestry and environmental sciences and technologies</td>
<td></td>
</tr>
<tr>
<td>LM-75 Sciences and technologies for the environment and territory</td>
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<tr>
<td>LM-76 Economic sciences for the environment and culture</td>
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<tr>
<td>LM-77 Economic and business sciences</td>
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<tr>
<td>LM-78 Philosophical Sciences</td>
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<tr>
<td>LM-80 Geographical Sciences</td>
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<tr>
<td>LM-81 Sciences for development cooperation</td>
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<tr>
<td>LM-84 Historical Sciences</td>
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<tr>
<td>LM-85 Pedagogical sciences</td>
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<tr>
<td>LM-87 Social work and social policies</td>
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<tr>
<td>LM-88 Sociology and social research</td>
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<tr>
<td>LM-89 Art History</td>
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<tr>
<td>LM-90 European Studies</td>
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<tr>
<td>LM-91 Techniques and methods for the information society</td>
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<tr>
<td>LM-92 Communication Theories</td>
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<tr>
<td>LM-93 Theories and methodologies of e-learning and media education</td>
<td></td>
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<tr>
<td>LMR/02 Conservation and restoration of cultural heritage</td>
<td></td>
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<tr>
<td>LM-85 bis Primary education sciences</td>
<td></td>
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<tr>
<td>LM/GASTR Economic and social sciences of gastronomy</td>
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</tbody>
</table>

Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024.

### TRAINING OBJECTIVES

The objectives of the doctoral course in Philosophy, Social Sciences, Cultural and Environmental Heritage, according to Dublin descriptors for the third cycle, concur to achieve a set of skills and competencies necessary for the final degree:

- full understanding of the disciplinary field of research, as represented by the relevant curriculum, and skill in the research and analytical methods associated with it;
- ability to design, implement and adapt a research process taking into account ethical issues related to knowledge production;
- design and implement original research that can expand the frontiers of knowledge;
- develop skills in critical analysis, evaluation and synthesis of new and complex ideas;
- achieve a level of dissemination and communication appropriate to their field of research;
- engage in activities to promote, in academic and professional contexts, their results through participation in conferences and scientific publications;
- write a research thesis and support it with the prospect of discussing it before a committee at the conclusion of the three years.

The objectives are aimed, first and foremost, at offering students a training project consistent with the outgoing professional profiles (guaranteed by the different curricula) and the knowledge and skills (both disciplinary and interdisciplinary) associated with them. The training project is composed of a series of enabling elements, among which we highlight:

- the financial and structural resources available and the specificities offered by the University, including links with the territory in which it is embedded, i.e., relations with research institutions, the business world, various cultural and social organizations, sensitive to the themes of the doctoral course, open and available to different forms of collaboration;
- the network of relationships, both national and international, developed by the University and the members of the Teaching Board, which allow a constant alignment with the cultural and scientific evolution of the disciplines of reference of the Doctorate and a sustainable, effective and consistent mobility with the research developed, and offer prospects for cooperation at various levels for doctoral students, who will benefit from economic support consistent with current regulations;
- the centrality of the doctoral students, whose growth as an integral part of the scientific community is promoted and fostered, both through the organization of aggregating and common activities between the various curricula, and through disciplinary activities characterizing the curriculum of reference, including participation, also as speakers, in congresses, workshops and/or training schools both national and international;
- the strong interdisciplinary character of the doctoral course, based on a previous and consolidated interaction among the various members of the College pertaining to the different curricula, involved in common research projects and teaching activities, which guarantee different possibilities of collaboration to the advantage of a multifaceted training not limited to one's own disciplinary field.
RESEARCH AREAS

- **Philosophical Sciences.** In the area of Philosophy, doctoral students’ critical and logical-argumentative skills as well as their knowledge of the history of philosophy will be deepened, while enhancing the interdisciplinary character of knowledge and considering the thematic intersections with the other doctoral curricula. Doctoral students in Philosophical Sciences will be enabled to carry out original research—which requires skills of conceptual analysis, argumentation, historical and philological documentation—in the fields of theoretical philosophy, moral philosophy, political and social philosophy, philosophy of language, aesthetics, history of medieval, modern and contemporary philosophy.

- **Socio-Anthropological Sciences.** As part of the Ph.D. program, the curriculum in socio-anthropological disciplines aims to explore the transformations of contemporary society considering ongoing social, cultural and environmental processes, nationally and internationally. Privileging qualitative methodologies, the curriculum promotes diverse and interconnected perspectives and themes, including mobility and migration, sustainability, social and affective relations, cosmologies, religions and consciousness, social movements, gender, borders and frontiers, educational practices and pathways, and processes of patrimonialisation and (de)colonization.

- **Educational Sciences.** The curriculum in Educational Sciences aims to initiate research in all pedagogical areas (GSD 11/PAED-01, 11/PAED-02), also in relation to the area of cultural geography (GEOG-01/A), with special attention to methodological aspects and interdisciplinary connections with the other doctoral curricula, customizing the training based on the students’ research project. Specifically, training on education theory and epistemology will dialogue with the philosophical disciplines; on the history and cultures of education with the PhD in Historical and Textual Sciences; training in didactics and special pedagogy with the artistic area (museum education) and with the socio-anthropological area for the themes of school and social inclusion, mediation and marginality and deviance; training on research methodology and social statistics will be able to relate with all curricula for the appropriate definition of research design and the analysis of the data collected. The themes of educational spaces, landscape and environmental education will constitute other aspects of the interdisciplinary vocation of the curriculum. Disciplinary teaching will be complemented by transversal modules, offered to the entire doctoral school, related to scientific communication, participation in conferences and competitive calls, and training in innovative teaching in school and university.

- **Art History, Music and Performing Arts.** The curriculum in Art History, Music and Performing Arts aims to train doctoral students in the areas of cultural and creative expressions, through disciplines aimed at the study, protection and enhancement of cultural heritage, both tangible and intangible. Through the study and research in the history of art, theater, cinema, television, photography, new media and musicology, museology and the history of collecting, librarianship and archives, aesthetics, and the legislation of cultural heritage, and also thanks to the interaction with the other curricula of the PhD program, doctoral students will be able to carry out original research with a strong interdisciplinary character, which will allow them to deepen their understanding of artistic and cultural production, expanding the horizons of knowledge towards a more cohesive and sustainable future.

### Positions with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic</th>
</tr>
</thead>
</table>
| 3  | Scholarship funded by University of Parma (Ministerial funds) | • Philosophical Sciences  
• Socio-Anthropological Sciences  
• Educational Sciences |
| 1  | Scholarship funded by University of Parma (University funds) | • Art History, Music and Performing Arts |

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**Positions with Scholarship LINKED TO SPECIFIC TOPICS** (art. 6 of the Competition notice)

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[www.unipr.it](http://www.unipr.it)  
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<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>The movie theater and the territory. A social and environmental history of cinema venues and the movie-going experience in the Emilia-Romagna region (1980-2020).</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 9 “Public Administration”) CUP D92J24000180006</td>
<td>The concept of explainability in concrete Public Administration contexts: ethical and social implications (applied component in collaboration with EFSA data analysis department).</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company DAVINES S.p.A. CUP D92J24000340004</td>
<td>Business archives and corporate memory. Reorganization of the Davines s.p.a. historical Archive and development of digital solutions for its implementation, cataloging and enhancement.</td>
</tr>
</tbody>
</table>

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 80 points (a minimum score of 40 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 40 points

Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

THE ORAL EXAM IS IN PRESENCE. If the candidate is residing abroad or temporarily abroad for study / work reasons the interview can be carried out REMOTELY, prior to filling the justification FORM attached to the call for applications.

The ORAL test involves the presentation and discussion of the research project by the candidate and is intended to verify the candidate’s aptitude for scientific research and his/her general preparation on topics related to the doctoral course.

Foreign Language
the fluency of which shall be assessed during the Oral Exam

FRENCH, ENGLISH, GERMANY (AT THE CANDIDATE’S CHOICE) The evaluation of the knowledge will be oral and will consist in reading and translating of a scientific text

SCHEDULE OF THE ADMISSION EXAMS

ASSESSMENT OF QUALIFICATIONS
It is the candidate’s responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area at: http://unipr.esse3.cineca.it/Home.do in the preceding day the date of the Oral Exam

ORAL EXAM

DATE 28th August 2024 (with possible extension to the following day)

TIME 10:00 am (Italian Time)

PLACE ROOM A
Department of Humanities, Social Sciences and Cultural Industries
Borgo Carissimi, 10
43121 PARMA - ITALY
FURTHER INFORMATION

The choice of curriculum, indicated during the online application procedure by the candidate, is not mandatory for the purposes of possible award of the scholarship by the Examination Board.

THE INTERVIEW MAY BE HELD ALSO IN ENGLISH

For foreign candidates, the admission examinations may be held in Italian or in English at the candidate’s choice.

For foreign candidates, knowledge of the Italian language level B2 is required.

<table>
<thead>
<tr>
<th>LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT</th>
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</thead>
<tbody>
<tr>
<td>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</td>
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<tr>
<td>ANNEX A</td>
</tr>
<tr>
<td>Identification Document</td>
</tr>
<tr>
<td>Curriculum Vitae et studiorum</td>
</tr>
<tr>
<td>Abstract of degree thesis</td>
</tr>
<tr>
<td>Academic Qualifications</td>
</tr>
<tr>
<td>Research Project</td>
</tr>
</tbody>
</table>

LIST OF EVALUABLE QUALIFICATIONS
(only qualifications attested by a document drawn up in Italian or in English)

<p>| Curriculum Vitae et studiorum | Including a university career, accompanied by a declaration in lieu of certification of the profit examinations taken and the relative marks, as well as post-graduate experience, including stays abroad, if they were carried out in an academic or research context. Any master’s, postgraduate or specialization qualifications and research grants will be assessed under 'other qualifications'. Up to 7 points |
| Graduation thesis | Congruence with the research topics of the PhD course and quality of the research methodology Up to 25 points |</p>
<table>
<thead>
<tr>
<th>Research Project</th>
<th>Points relating to the research project shall be allocated on the basis of the following criteria:</th>
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<tbody>
<tr>
<td></td>
<td>o Scientific value and originality of the proposal</td>
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<td></td>
<td>o description and structure of the proposal</td>
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<td></td>
<td>o proposal feasibility</td>
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<tr>
<td></td>
<td>o consistency with the research themes of the PhD course</td>
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<td>Up to 28 points</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Scientific Publications</th>
<th>Monographs, articles in scientific journals, chapters of books, convention papers, reviews, catalog entries.</th>
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<td></td>
<td>Up to 12 points</td>
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</table>

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<thead>
<tr>
<th>Other Academic or professional qualifications</th>
<th>First or second level Master’s degree obtained in Italy and/or specialization degree in subjects consistent with the curricula of this PhD program, postgraduate scholarships, professional activity consistent with the field of research.</th>
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<td>Up to 8 points</td>
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</table>

### EVALUATION ORAL EXAM

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
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<tbody>
<tr>
<td></td>
<td>The ORAL EXAM includes the presentation and discussion of the candidate's research project and aims to test the candidate's aptitude for scientific research and general preparation on topics related to the research themes of the PhD course</td>
<td>Up to 40 points</td>
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</tbody>
</table>
The doctoral course in Legal Sciences provides for the performance of a plurality of higher education activities, throughout the three-year period, variously articulated. First of all, the doctoral course intends to enhance - from the first year - interdisciplinary/multidisciplinary/transdisciplinary activities, through the delivery of various teachings, dealing with topics of general legal interest or, in any case, transversal for the training of doctoral students. The related courses (some delivered exclusively in English) will be taught by university professors, including foreign ones, and by experts in the various scientific-disciplinary fields involved, so as to foster the acquisition of skills and professionalism really suited to the training objectives of the course, at the level of methodology, reasoning and analysis in the legal field, in relation to the in-depth knowledge required for professional outlets. In addition to these courses, there will be teaching aimed at perfecting the language skills of doctoral students in the legal field. These teaching activities will take place - particularly although not exclusively - in the first year of the doctoral program, so as to enable doctoral students, on the one hand, to acquire a solid and interdisciplinary “initial” training, including on the methodological profiles and tools necessary for research; on the other hand, to leave them the opportunity in the following years to refine their skills in specific disciplinary areas, including through periods of residence abroad, with a view, then, to writing the doctoral thesis.

The doctoral course also plans to strengthen the theoretical skills of doctoral students through the conduct of lectures (including in foreign languages) on legal issues related to individual disciplinary scientific areas attributable to Area 12, held by university professors or researchers, including those from outside the College of Teachers, Italian or foreign, as well as by experts in the field, including foreigners.

The doctoral course, starting from the second year, then intends to promote the gradual maturation and empowerment of doctoral students in the performance of teaching activities in favor of the same students enrolled in the doctoral course, realized through the organization - left to the autonomous initiative of the doctoral students, under the supervision of the coordinator and their tutors - of seminar cycles on topics of interdisciplinary or transversal interest. In such contexts, doctoral students will be called upon to give papers and interventions, which will be followed by discussion among all those enrolled in the course.
RESEARCH AREAS

- IUS/01 – Private law
- IUS/07 - Labour Law
- IUS/08 - Constitutional Law
- IUS/15 – Civil Procedure Law
- IUS/17 – Criminal Law
- IUS/19 – History of Medieval and Modern Law
- IUS/21 – Comparative Public Law

Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic</th>
</tr>
</thead>
</table>
| 3  | Scholarship funded by University of Parma (Ministerial funds) | • IUS/01 – Private law  
• IUS/15 – Civil Procedure Law  
• IUS/21 – Comparative Public Law |
| 3  | Scholarship funded by University of Modena e Reggio Emilia | • IUS/07 - Labour Law  
• IUS/08 - Constitutional Law  
• IUS/17 – Criminal Law |
| 1  | Scholarship co-funded by Fondazione Cariparma | • IUS/17 – Criminal Law |

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
</table>
| 1  | Scholarship funded by Department of Department of Law, Politics and International Studies (funds Project ERC “Delivering justice on a transnational scale in Europe. The Roman Rota and the enforcement of a legal culture of negotiation (ROTAROM17)”) | IUS/19 - History of medieval and modern law  
Bound Research Topic: «Delivering justice on a transnational scale in Europe. The Roman Rota and the enforcement of a legal culture of negotiation (c. 1560-1700)»  
Scientific supervisor: prof. Andrea Errera |
| 1  | Scholarship co-financed with funds under the PNRR - Mission 4 component 1, Investment 4.1 (Ministerial Decree 629/2024 art. 9 “Public Administration”) CUP D92J24000190006 | IUS/08 - Constitutional Law  
Bound Research Topic: «AI Act in Action: what we have to aspect into the next years after the first European reform bill about artificial intelligence»  
Scientific supervisore prof. Antonio D’Aloia |

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 70 points  
(a minimum score of 35 points shall be required to be admitted to the Oral Exam)  
ORAL EXAM: up to 50 points  
Minimum score for ELIGIBILITY: 70/120
THE ORAL EXAM TAKES IN THE PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study/work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.

The ORAL EXAM includes the presentation and discussion of the research project by the candidate and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

Foreign Language
the fluency of which shall be assessed during the Oral Exam

| ENGLISH | The evaluation of the knowledge of this language will be oral and will consist in translating a scientific text |

**SCHEDULE OF THE ADMISSION EXAMS**

**ASSESSMENT OF QUALIFICATIONS**

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

**ORAL EXAM**

- **DATE**: 28th August 2024 (with possible extension in the following days)
- **TIME**: 10:00 am (Italian Time)
- **PLACE**: "BANDIERA" CLASSROOM
  University of Parma - CENTRAL PALACE – 1st FLOOR
  Via Università, 12
  43121 PARMA - ITALY

**FURTHER INFORMATION**

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates' skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

THE INTERVIEW MAY BE HELD ALSO IN ENGLISH for foreign candidates.

For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

**LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT**

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

<table>
<thead>
<tr>
<th>ANNEX A</th>
<th>(art. 3.2 of the Competition notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Document</td>
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<td>Abstract of degree thesis</td>
<td>Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)</td>
</tr>
<tr>
<td>Academic Qualifications</td>
<td>Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</td>
</tr>
</tbody>
</table>
Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project. It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.

**LIST OF EVALUABLE QUALIFICATIONS**
(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Project</td>
<td>Up to 18 points</td>
</tr>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>Up to 40 points</td>
</tr>
<tr>
<td>Graduation thesis</td>
<td>Up to 2 points</td>
</tr>
<tr>
<td>Scientific Publications</td>
<td>Up to 5 points</td>
</tr>
<tr>
<td>Other Academic qualifications</td>
<td>Up to 3 points</td>
</tr>
<tr>
<td>Other experiences (training, work, research, teaching, etc.)</td>
<td>Up to 2 points</td>
</tr>
</tbody>
</table>

**EVALUATION ORAL EXAM**

<table>
<thead>
<tr>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>presentation of the project: max 30 points</td>
<td>Up to 50 points</td>
</tr>
<tr>
<td>preparation on the topics of the scientific disciplinary sector of reference for the project: max 20 points</td>
<td>Up to 50 points</td>
</tr>
</tbody>
</table>
TRASLATIONAL MEDICAL AND SURGICAL SCIENCES

CYCLE | XL
--- | ---
COORDINATOR | Prof. Nicola SVERZELLATI  
email: nicola.sverzellati@unipr.it  
Department of Medicine and Surgery
DURATION | 3 years
STARTING DATE OF THE PHD PROGRAM | 01/11/2024
POSITIONS PUT OUT TO COMPETITION | 11

ADMISSION PROCEDURES | Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE

ADMISSION REQUIREMENTS | Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- Laurea specialistica or Laurea magistrale (second cycle master's degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program

Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES

The PhD Program in Translational Medical and Surgical Sciences is a multidisciplinary program, in which the common denominator of the various research activities conducted by the PhD students is represented by the application of the acquired knowledge to clinical practice. In fact, the close link between preclinical and clinical research will allow discoveries and methodological skills acquired through experimental studies to be transferred into medical practice. Such a link will enable PhD students to deal with real problems, ranging from diagnosis to therapy and from prevention to rehabilitation, all of which deeply connected with human diseases and patient care.

The bidirectional exchange between lab and clinical research will bring back to the lab the results of clinical and epidemiological observations, and at the same time it will anchor experimental research to issues that originate from real-world inputs and tests carried out directly on humans.

Therefore, the final goal of the PhD Program in Translational Medical and Surgical Sciences is to provide a highly qualifying training to the PhD students, offering them opportunities, skills and technological resources necessary to practice translational research at a high level in either public or private Institutions, national or international, including, but not limited to, Universities, Research Institutes and PharmaMed Industries.

RESEARCH AREAS

1. Stem cells in the diagnosis and treatment of neoplasms, chronic and degenerative disorders, cardiovascular diseases and musculoskeletal diseases;
2. Translational medicine and immunologic dysregulation of gastrointestinal, respiratory, infective, haematological, oncological, endocrinological, nephrological and dermatological diseases, and of vasculitis;
3. Plasticity, function and diagnostic-therapeutic use of genomic, transcriptomic, proteomic and metabolomic platforms of cells, organs and tissues to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;
4. Development and “theragnostic” function of imaging and technologically advanced phenotyping platforms to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;
5. Development and application of technologically advanced devices (i.e. biological devices), to measure and support and/or replace the function of cells, tissues or organs in medical and/or surgical diseases;

6. Advanced and innovative strategies for recovery and functional rehabilitation to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;

7. Role of governance and organization of healthcare systems and services in the prevention and care of disorders with a potentially high social and economic impact, including, but not limited to, environmental and professional diseases;

8. Role of microbiota and microbiome in translational medicine and surgery;

9. Retrieval and role of “big data” in translational medicine and surgery;

10. Role of advanced technologies, including robotics, in translational surgery;

11. Role of qualitative and quantitative imaging in the diagnosis of neoplasms, infections and chronic degenerative diseases.

---

### Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td></td>
</tr>
</tbody>
</table>

### Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice) *Modified with Rector Decree n. 1710 of 19/07/2027*

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
</table>
| 2  | Scholarship funded by Department of Medicine and Surgery (funds Project Human Technopole Foundation Convention – ECF) | • Molecular characterisation of interaction partners of distal cholesterol biosynthesis genes  
• Identification of interaction partners of cholesterol biosynthesis intermediates with data mining and machine learning approaches |
| 1  | Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (funds Project “MFAG AIRC Storti”) | Study of the bone microenvironment in monoclonal gammopathies progression |
| 1  | Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (funds “ROTI_2022_AIRC”) | Targeting the Atypical Kinome in T-Cell Acute Lymphoblastic Leukemia |
| 1  | Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company ViroStatics S.r.l. CUP D92J24000350004 | Effects of myrtleciclib, a cycline-dependent kinases inhibitor, in malignant pleural mesothelioma models |

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### POSITION RESERVED

Reserved to **Holders of SCHOLARSHIP FUNDED BY FOREIGN STATES (Germany)**

Reserved to **Holders of RESEARCH GRANT** within the Project **MARIE SKLODOWSKA-CURIE ACTIONS – COFUND “Training Future Big Data Experts for Europe (FutureData4EU)”**
### ADMISSION PROCEDURES

**Assessment of QUALIFICATIONS:** up to 45 points  
**ORAL EXAM:** up to 75 points  
**Minimum score for ELIGIBILITY:** 70/120

### ADMISSION PROCEDURES for positions reserved to holders of scholarship funded by foreign States

**Assessment of QUALIFICATIONS:** up to 120 points  
**Minimum score for ELIGIBILITY:** 70/120

### ORAL EXAM PROGRAM

**THE ORAL EXAM TAKES IN PRESENCE** and with the possibility of carrying out the interview **REMTELY** only for candidates unable to take the exam in person for valid personal and/or health reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement.

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

**Foreign Language**  
the fluency of which shall be assessed during the Oral Exam  

**ENGLISH**  
The knowledge of the English language will be assessed orally and will consist in reading and translating a scientific text.

### SCHEDULE OF THE ADMISSION EXAMS

**ASSESSMENT OF QUALIFICATIONS**  
It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

**ORAL EXAM**  
**DATE:** 29th August 2024 (with possible extension to the following day)  
**TIME:** 09:00 am (Italian Time)  
**PLACE:** ROOM A (ROOM B in case of extension to August 30th)  
INTEGRATED BIOTECHNOLOGICAL PLEXUS  
Via Volturno, 39 – 43125 PARMA - ITALY

**FURTHER INFORMATION**  
The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

THE INTERVIEW MAY BE HELD ALSO IN ENGLISH

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

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<td>Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)</td>
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<tr>
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</tr>
</tbody>
</table>

### LIST OF EVALUABLE QUALIFICATIONS (only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Curriculum Vitae et studiorum</th>
<th>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation.</th>
<th>Up to 9 points</th>
</tr>
</thead>
</table>
| Graduation mark             | Score assignable for the final mark:  
- 110 with honours (magna cum laude): 5 points  
- 110: 3 points  
- From 106 to 109: 2 points  
- From 102 to 105: 1 point | Up to 5 points |
| Average of the exam marks (if the applicant will attain the degree no later than 31st October 2024) | Score assignable for the average of the exam marks:  
- 30/30: 5 points  
- From 28/30 to 29/30: 3 points  
- From 26/30 to 27/30: 2 points  
- From 24/30 to 25/30: 1 point | Up to 5 points |
| Graduation thesis           | Congruence with the research topics of the PhD course and quality of the research methodology | Up to 2 points |
| Research Project            | Score assignable for the research project:  
o Scientific value and ground-breaking nature of the proposal: max 8 points  
o Description and structure of the proposal: max 2 points  
o Proposal feasibility: 1 point  
o Congruence with the training objectives of the PhD program: 1 point | Up to 10 points |
| Statement of Research Interest | Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests | Up to 1 point |
| Scientific Publications     | Articles on national and international journals, papers presented at conferences or symposia, book chapters etc. | Up to 9 points |
### Reference Letters
A maximum of 2 letters, written by Professors or Researchers from the applicant’s University or from other Universities or from experts in the research field working in public or private research facilities. 
The reference letters must be produced on the letterhead of the University/Operating Unit/Structure of the Referee and attached to the online application by the applicant.  

### Other Academic qualifications
- Second level Master's degree and Specialization: 3 points  
- First level Master's degree and/or Advanced training and/or specialization and/or Higher Education course: 1 point  

### Other experiences (training, work, research, teaching, etc.)
- Research activities (basic, applied, translational, etc.) carried out in any way, including those covered by research grant, and conducted as a staff member of research units  
- Working activity  
- Activities at accredited laboratories  
- Professional and/or training internship  
- Language proficiency certificates  
- Periods of study abroad, outside the country of origin (e.g. Erasmus or similar programmes)  
Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)  

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT 
Positions reserved to holders of scholarship funded by Foreign States  

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>Up to 20 points</td>
</tr>
<tr>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.</td>
<td></td>
</tr>
<tr>
<td>No specific CV format is required</td>
<td></td>
</tr>
<tr>
<td><strong>Graduation thesis</strong></td>
<td>Up to 8 points</td>
</tr>
<tr>
<td>Congruence with the research topics of the PhD course and quality of the research methodology</td>
<td></td>
</tr>
<tr>
<td><strong>Research Project</strong></td>
<td>Up to 60 points</td>
</tr>
<tr>
<td>Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project). It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.</td>
<td></td>
</tr>
<tr>
<td>Score assignable for the research project:</td>
<td></td>
</tr>
<tr>
<td>- Scientific value and ground-breaking nature of the proposal: 30 points</td>
<td></td>
</tr>
<tr>
<td>- Description and structure of the proposal: 20 points</td>
<td></td>
</tr>
<tr>
<td>- Proposal feasibility: 10 points</td>
<td></td>
</tr>
<tr>
<td><strong>Statement of Research Interest</strong></td>
<td>Up to 4 points</td>
</tr>
<tr>
<td>Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate’s reasons to attend the PhD program and at describing her/his specific research interests</td>
<td></td>
</tr>
<tr>
<td><strong>Scientific Publications</strong></td>
<td>Up to 10 points</td>
</tr>
<tr>
<td>Articles and/or reviews published on peer-reviewed scientific journals, abstracts of papers or posters presented at conventions or meetings; book chapters, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Reference Letters</strong></td>
<td>Up to 6 points</td>
</tr>
<tr>
<td>A maximum of 2 letters, written by Professors or Researchers from the applicant’s University or from other Universities or from experts in the research field working in public or private research facilities.</td>
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The reference letters must be produced on the letterhead of the University/Operating Unit/Structure of the Referee and attached to the online application by the applicant.

<table>
<thead>
<tr>
<th>Other Academic qualifications</th>
<th>First or second level Master’s degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program</th>
<th>Up to 6 points</th>
</tr>
</thead>
</table>
| Other experiences              | • Research activities (basic, applied, translational, etc.) carried out in any way, including those covered by research grant, and conducted as a staff member of research units  
• Working activity  
• Activities at accredited laboratories  
• Professional and/or training internship  
• Language proficiency certificates  
• Periods of study abroad, outside the country of origin (e.g. Erasmus or similar programmes)  
• Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.) | Up to 6 points |

### EVALUATION ORAL EXAM

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• Ability to argument the project proposal: up to 28 points  
• Discussion of the critical points of the project: up to 18 points  
• Ability to provide an adequate scientific context to the project proposal: up to 12 points  
• Ability to mitigate risks deriving from unexpected results: up to 10 points  
• Knowledge of the English language: up to 7 points | Up to 75 points |
**VETERINARY SCIENCES**

**CYCLE**

XL

**COORDINATOR**

Prof. Gaetano DONOFRIO  
email: gaetano.donofrio@unipr.it  
Department of Veterinary Science

**DURATION**

3 years

**STARTING DATE OF THE PHD PROGRAM**

01/11/2024

**POSITIONS PUT OUT TO COMPETITION**

10

**ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE

**ADMISSION REQUIREMENTS**

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- "Laurea Magistrale" LM-42 Veterinary Medicine  
- "Laurea Magistrale" LM-6 Biology  
- "Laurea Magistrale" LM-9 Medical Biotechnology, Veterinary and Pharmaceutica  
- "Laurea Magistrale" LM-86 Zootechnical Sciences and Animal Technologies  
- as well as the equivalent "laurea specialistica" or "laurea" achieved based on the university system in force before the entry into force of Italian Ministerial Decree No. 509/99  
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programs

Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

**TRAINING OBJECTIVES**

Veterinary Science Doctoral course aims at training PhD-students about research topics on basic, pre-clinical, clinical and nonclinical areas (animal production and food inspection) by novel methodology and technology. PhD student chooses to develop his/her own research project under the supervision of a Tutor and to produce scientific outcomes in the following area: VET, AGR and BIO.

**RESEARCH AREAS**

- Biopathology  
- Clinical Sciences  
- Basic Sciences  
- Animal Production Sciences and Technologies  
- Food Inspection and Public Health

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**Position with Scholarship**

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-funded by Fondazione Cariparma “CARLO GABBI”</td>
<td></td>
</tr>
</tbody>
</table>
Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Veterinary Science.</td>
<td>Innovation and sustainability in therapeutic protocols for bacterial infections in the veterinary medical field with reference to reproductive pathologies in pets and livestock</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Veterinary Science.</td>
<td>A comprehensive study on <em>Equus asinus</em> from biodiversity management to milk nutraceutical and technological properties</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002</td>
<td>Evaluation of inbreeding in local and cosmopolitan breeds as a tool for monitoring the sustainability of dairy cattle herds</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Chiesi Farmaceutici S.p.A. CUP D92J2400360004</td>
<td>Generation of tools with a sustainable approach to be used in vitro and in vivo to study inflammation and consequent pulmonary fibrosis with the aid of viral vectors</td>
</tr>
</tbody>
</table>

POSITION RESERVED

Reserved for EMPLOYEES of Istituto Zooprofilattico Sperimentale della Lombardia e dell’Emilia Romagna “Bruno Ubertini” (with salary maintenance)

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 40 points
ORAL EXAM: up to 80 points
Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

THE ORAL EXAM TAKES PLACE IN THE PRESENCE.

The ORAL EXAM includes the presentation and discussion of the research project by of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

Foreign Language the fluency of which shall be assessed during the Oral Exam

**ENGLISH** Reading, translation and comprehension of a part of an English scientific paper.

SCHEDULE OF THE ADMISSION EXAMS
**ASSESSMENT OF QUALIFICATIONS**

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

**ORAL EXAM**

<table>
<thead>
<tr>
<th><strong>DATE</strong></th>
<th>29th August 2024 with possible extension in the following days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TIME</strong></td>
<td>09:00 AM (Italian Time)</td>
</tr>
<tr>
<td><strong>PLACE</strong></td>
<td>ROOM &quot;D&quot; &lt;br&gt;Department of Veterinary Science &lt;br&gt;Via del Taglio, 10 &lt;br&gt;43126 PARMA - ITALY</td>
</tr>
</tbody>
</table>

**FURTHER INFORMATION**

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates' skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

The interview may be held also in English. For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

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**LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT**

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

**ANNEX A** (art. 3.2 of the Competition notice)

**Identification Document**

Scanned Copy of a valid identity document with photo (i.e. identity card, passport)

**Curriculum Vitae et studiorum**

No specific CV format is required (see art. 3.2 of the Competition notice)

**Abstract of degree thesis**

Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)

**Academic Qualifications**

Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):
- University that granted the degree - Type of degree (first cycle/second cycle/single cycle)
- Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).

**Research Project**

Written in Italian or in English, according to the format attached to the competition notice.
- It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)
- It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board

**LIST OF EVALUABLE QUALIFICATIONS**

(only qualifications attested by a document drawn up in Italian or in English)
| **Curriculum Vitae et studiorum** | Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The marks of the exams and the graduation mark will be the most relevant element of the evaluation. | Up to 2 points |
| **Graduation mark** | Score related to the final mark:  
- 110 with honours (magna cum laude): 3 points;  
- 110: 2 points;  
- From 100 to 109: 0.1 points for each mark unit | Up to 3 points |
| **Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)** | Score related to the average of the exam marks:  
- 30/30: 3 points;  
- From 26/30 to 29/30: 2 points;  
- From 22/30 to 25/30: 1 point;  
- From 18/30 to 21/30: 0.5 points | Up to 3 points |
| **Graduation thesis** | Congruence with the research topics of the PhD course and quality of the research methodology | Up to 3 points |
| **Research Project** | Points relating to the research project shall be allocated on the basis of the following criteria:  
- Scientific value and or originality of the proposal  
- description and structure of the proposal  
- proposal feasibility  
- consistency with the research themes of the PhD course | Up to 5 points |
| **Statement of Research Interest** | Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests | Up to 5 points |
| **Scientific Publications** | Articles published in journals indexed in databases Wos and Scopus | Up to 5 points |
| **Reference Letters** | A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities. They must be sent directly by the signer to the address e-mail: gaetano.donofrio@unipr.it (The candidate, therefore, must not uploading them through the procedure of the competition online registration) | Up to 5 points |
| **Other qualifications** | Other qualifications certifying the candidate's training and skills (scholarships, prizes, etc.) relevant to the PhD topics:  
- Scientific research, of any type (basic, oriented, finalized, translational, applied, etc.) and carried out with different level of qualification, including the ownership of research grants and participation in research projects  
- Working activity  
- Professional and/or training internship  
- Language proficiency certificates  
- Periods of study abroad, outside the country of origin (e.g. Erasmus program or other similar mobility programs)  
Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.) | Up to 5 points |
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Up to 80 points</td>
</tr>
</tbody>
</table>
## HISTORICAL AND TEXTUAL SCIENCES

### CYCLE
XL

### COORDINATOR
Prof. Giulio IACOLI  
email: giulio.iacoli@unipr.it  
Department of Humanities, Social Sciences and Cultural Industries

### DURATION
3 years

### STARTING DATE OF THE PHD PROGRAM
01/11/2024

### CURRICULA
1. Italian Studies  
2. Foreign Languages and Literatures  
3. Classical Studies  
4. Historical Sciences

### POSITIONS PUT OUT TO COMPETITION
5

### ADMISSION PROCEDURES
Assessment of QUALIFICATIONS and Research Project  
Oral Exam in PRESENCE or REMOTELY VIA VIDEO CONFERENCE (only if special requirements are fulfilled, see below)

### ADMISSION REQUIREMENTS
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  
- Laurea specialistica or Laurea magistrale (second cycle master’s degree)  
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program

The qualifications must be included in the classes listed below:

- LM-1 Cultural anthropology and ethnology  
- LM-2 Archaeology  
- LM-3 Landscape Architecture  
- LM-5 Archival and library science  
- LM-10 Conservation of architectural and environmental heritage  
- LM-11 Sciences for the conservation of cultural heritage  
- LM-12 Design  
- LM-14 Modern philology  
- LM-15 Philology, literature and history of antiquity  
- LM-19 Information and editorial systems  
- LM-36 Languages and literatures of Africa and Asia  
- LM-37 Modern European and American languages and literatures  
- LM-38 Modern languages for communication and international cooperation  
- LM-39 Linguistics  
- LM-43 IT methodologies for the humanities  
- LM-45 Musicology and musical heritage  
- LM-48 Urban, environmental and territorial planning  
- LM-49 Design and management of tourism systems  
- LM-52 International Relations  
- LM-55 Cognitive Sciences  
- LM-56 Economic Sciences  
- LM-59 Public, corporate and advertising communication sciences  
- LM-62 Political sciences  
- LM-63 Public Administration Sciences  
- LM-64 Sciences of religions  
- LM-65 Entertainment sciences and multimedia production  
- LM-75 Sciences and technologies for the environment and territory  
- LM-76 Economic sciences for the environment and culture
TRAINING OBJECTIVES

The objectives of the doctoral course in Historic and Textual Sciences, according to Dublin descriptors for the third cycle, concur to achieve a set of skills and competencies necessary for the final degree:

- full understanding of the disciplinary field of research, as represented by the relevant curriculum, and skills in the research and analytical methods associated with it;
- ability to design, implement and adapt a research process taking into account ethical issues related to knowledge production;
- design and implement original research that can expand the frontiers of knowledge;
- develop skills in critical analysis, evaluation and synthesis of new and complex ideas;
- achieve a level of dissemination and communication appropriate to their field of research;
- engage in activities to promote, in academic and professional contexts, their results through participation in conferences and scientific publications;
- write a research thesis and support it with the prospect of discussing it before a committee at the conclusion of the three years.

The objectives are aimed, first and foremost, at offering students a training project consistent with the outgoing professional profiles (guaranteed by the different curricula) and the knowledge and skills (both disciplinary and interdisciplinary) associated with them. The training project consists of a series of enabling elements, among which we highlight:

- the financial and structural resources available and the specificities offered by the University, including links with the territory in which it is embedded, i.e., relations with research institutions, the business world, various cultural and social organizations, sensitive to the themes of the doctoral course, open and available to different forms of collaboration;
- the network of relationships, both national and international, developed by the University and the members of the Teaching Board, which allow a constant alignment with the cultural and scientific evolution of the disciplines of reference of the Doctorate and a sustainable, effective and consistent mobility with the research developed, and offer prospects for cooperation at various levels for doctoral students, who will benefit from economic support consistent with current regulations;
- the centrality of the doctoral students, whose growth as an integral part of the scientific community is promoted and fostered, both through the organization of aggregating and common activities between the various curricula, and through disciplinary activities characterizing the curriculum of reference, including participation, also as speakers, in congresses, workshops and/or training schools both national and international;
- the strong interdisciplinary character of the doctoral course, based on a previous and consolidated interaction among the various members of the College pertaining to the different curricula, involved in common research projects and teaching activities, which guarantee different possibilities of collaboration to the advantage of a multifaceted training not limited to one’s own disciplinary field.

CURRICULA AND RESEARCH AREAS

ITALIAN STUDIES

The curriculum aims at developing specialistic formations in a wide historical and methodological spectrum, in a variety of disciplines, comprising romance philology to the history and hermeneutics of medieval, modern, and contemporary literature; philology of Italian Literature and linguistics and History of Italian language; the relationship between publishing and literature; literary theory and comparative literature. The curriculum aims at forming researchers who are at ease with both linguistic and philological notions and theoretical ones. They will be able to create critical and
annotated editions of texts belonging to the romance or Italian tradition, as well as to innovative analyses in the fields of literary history, educative linguistics, didactics of language and literature, cultural and thematic studies.

- **FOREIGN LANGUAGES AND LITERATURES**
  The curriculum revolves around the study of foreign languages and literatures (English, French, Spanish, German, Russian, Portuguese, Chinese) as well as on their postcolonial expressions. The constant search for original and innovative trajectories favors the connection with most recent theories and methodologies of linguistic disciplines (translation, discourse analysis, corpora studies, lexicography), as well as the theoretical and historical critical analysis of different literary and cultural expression, from Early Modern to the Contemporary Age.

- **CLASSICAL STUDIES**
  The curriculum aims at expanding, in the enrolled students, knowledge and competences about classical studies, and especially in the fields of linguistics, classical philology and literature, archaeology, Medieval and Humanistic tradition of Greek and Latin language and culture. Students will be brought to create a critical edition, a commentary, or an essay, concerning texts written in Greek or Latin, or the edition of archaeological sources or contexts, considering the entire timeframe of their tradition, or prolonged life.

- **HISTORICAL SCIENCES**
  The curriculum aims at forming young scholars in the critical analysis of the past, from Antiquity to Contemporary age, with a specific focus on socio-economic, institutional-juridical, political-religious, and cultural dimensions of human communities. The curriculum will also involve the history of historiography, intellectual history, the history of political thought, historical geography, and economic history. In this light, the curriculum will promote research paths based on most recent theoretical-disciplinary methods, that will allow students to confront themselves with sources, as well as reconstructing the contexts, as well as classic interpretations and traditions, fostering an original research project, as well as the capacity to look at and reproduce the complexity of the past. In terms of formation, students will acquire solid critical methodologies, among which the capacity to establish a dialogue with archival disciplines, social sciences, and Digital Humanities.

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### Positions with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
</table>
| 3  | Scholarship funded by University of Parma (Ministerial funds) | • Foreign Languages and Literatures  
• Classical Studies  
• Historical Sciences |
| 1  | Scholarship co-funded by Fondazione Cariparma | • Italian Studies |

### Positions with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
</table>
| 1  | Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 3.4 ([Ministerial Decree 629/2024 art. 7 “Digital and environmental transitions”) CUP D92J4000140006 | **A Virtual Reconstruction of Ugo Foscolo’s Library**  
The project aims at digitally reproducing the entire library owned by Foscolo, including some precious annotated books, now dispersed in libraries and private collections in Italy and abroad, as well at collecting documents, memories and relics from the whole corpus. |
### ADMISSION PROCEDURES

**Assessment of QUALIFICATIONS:** up to 80 points  
(a minimum score of 40 points shall be required to be admitted to the Oral Exam)  
**ORAL EXAM:** up to 40 points  
**Minimum score for ELIGIBILITY:** 70/120  

### ORAL EXAM PROGRAM

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMTOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate’s aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

**Foreign Language**  
the fluency of which shall be assessed during the Oral Exam  

<table>
<thead>
<tr>
<th>Language</th>
<th>The evaluation of the knowledge will be oral and will consist in reading and translating of a scientific text</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH, FRENCH, SPANISH, GERMANY (AT THE CANDIDATE’S CHOICE)</td>
<td></td>
</tr>
</tbody>
</table>

### SCHEDULE OF THE ADMISSION EXAMS

**ASSESSMENT OF QUALIFICATIONS**  
It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page [http://unipr.esse3.cineca.it/Home.do](http://unipr.esse3.cineca.it/Home.do) in the days preceding the date of the Oral Exam.

**ORAL EXAM**  
**DATE:** 3rd September 2024 (with possible extension to 4th September 2024)  
**TIME:** 09:00 am (Italian Time)  
**PLACE:**  
Department of Humanities, Social Sciences and Cultural Industries  
Via D'Azeglio, 85  
43125 PARMA - ITALY

### FURTHER INFORMATION

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

**THE INTERVIEW MAY BE HELD ALSO IN ENGLISH**  
For foreign candidates, the admission examinations may be held in Italian or in English at the candidate’s choice.

For foreign candidates, knowledge of the Italian language level B2 is required.

### LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

**MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION**

<table>
<thead>
<tr>
<th>ANNEX A</th>
<th>(art. 3.2 of the Competition notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Document</td>
<td>Scanned Copy of a valid identity document with photo (i.e. identity card, passport)</td>
</tr>
</tbody>
</table>
Curriculum Vitae et studiorum  
No specific CV format is required (see art. 3.2 of the Competition notice)

Abstract of degree thesis  
Abstract of the second cycle master’s degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10,000 characters including spaces)

Academic Qualifications  
Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  
- University that granted the degree  
- Type of degree (first cycle/second cycle/single cycle)  
- Name of the degree program  
- Date of graduation  
- Final mark  
- List of exams and corresponding scores (academic transcript of records)  
- Translation into Italian or English (only for degrees issued in languages other than Italian or English).

Research Project  
Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use IT tools useful for verifying the originality of the submitted Project)  
It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board

LIST OF EVALUABLE QUALIFICATIONS  
(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Evaluation Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Vitae et studiorum</td>
<td>Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.</td>
<td>Up to 7 points</td>
</tr>
</tbody>
</table>
| Graduation mark (or alternatively average of the exam marks) | Score related to the final mark:  
- 110 with honours (magna cum laude). Alternatively, where this is not yet present: score relating to the average of the exam marks | Up to 1 point |
| Graduation thesis                     | Consistency of the Master’s Degree thesis with the doctoral program research topics, methodological rigor, knowledge of critical literature | Up to 25 points |
| Research Project                      | Points relating to the research project (originality, articulation, feasibility of the proposal) | Up to 28 points |
| Scientific Publications               | Monographs, articles in national and international scientific journals, book chapters, conference proceedings, reviews | Up to 11 points |
| Other qualifications                  | Post lauream scholarship, experience abroad, award | Up to 8 points |

EVALUATION ORAL EXAM

<table>
<thead>
<tr>
<th>Interview Program</th>
<th>Evaluation Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- knowledge of foreign language: **max 5 points**  
- knowledge and methodology necessary for the realization of the project: **max 35 points** | Up to 40 points |
INFORMATION TECHNOLOGIES

CYCLE
XL

COORDINATOR
Prof. Marco LOCATELLI
email: marco.locatelli@unipr.it
Department of Engineering and Architecture

DURATION
3 years

STARTING DATE OF THE PHD PROGRAM
01/11/2024

POSITIONS PUT OUT TO COMPETITION
18 (Modified with Rector Decree n. 1710 of 19.07.2024)

ADMISSION PROCEDURES
Assessment of QUALIFICATIONS and Research Project
Oral Exam in PRESENCE or REMOTELY

ADMISSION REQUIREMENTS
Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:
- Laurea specialistica or Laurea magistrale (second cycle master’s degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master’s degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program
Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

TRAINING OBJECTIVES
The course aims at educating the future Ph.D.’s so that they will enter the research world with an active role, within both universities and industries

RESEARCH AREAS
- Electronics instrumentation and electrical drives
- Computer systems and automatic control
- Telecommunications and electromagnetic fields

Position with Scholarship

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>Research Topic, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Scholarship funded by University of Parma (Ministerial funds)</td>
<td></td>
</tr>
</tbody>
</table>

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)
*Modified with Rector Decree n. 1710 of 19.07.2024

<table>
<thead>
<tr>
<th>N°</th>
<th>Funding entity</th>
<th>BOUND RESEARCH TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Engineering and Architecture (funds Project EmilAmbiente)</td>
<td>Study and development of data collection and analysis models for optimized management of water distribution networks</td>
</tr>
<tr>
<td>#</td>
<td>Scholarship Funded/Partly Financed</td>
<td>Project Description</td>
</tr>
<tr>
<td>---</td>
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<td>---------------------</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Engineering and Architecture (funds Project KOSME)</td>
<td>Study and development of simulation methods for complex systems based on Artificial Intelligence (AI) techniques</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Engineering and Architecture</td>
<td>Study of path planning strategies for Autonomous Vehicles by means of imitation or reinforcement learning techniques</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Engineering and Architecture</td>
<td>Study and development of IoT systems for data collection and analysis in smart agriculture applications</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Engineering and Architecture</td>
<td>Artificial intelligence algorithms for optimal efficiency control of electric machines.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by EMILIA ROMAGNA REGION (PR.FSE + 2021/2027 – DGR n. 2111 del 04/12/2023) - CUP D92J24000010002</td>
<td>Methods for knowledge verification and update in Large Language Models: towards a reliable and adaptable artificial intelligence</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Sygest S.r.l. CUP D92J24000370004</td>
<td>Design and implementation of multi-interface IoT gateways with embedded intelligence</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company things2i S.r.l. CUP D92J24000370004</td>
<td>(Study of) innovative methodologies and experimental evaluation for efficient and robust recommender systems based on Machine Learning techniques. Main application will be to B2B after-sales services.</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Vislab S.r.l. CUP D92J24000370004</td>
<td>Study of techniques for sensor fusion using cameras, radars, or lidars exploiting AI for ADAS and Autonomous driving systems</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company OCME S.r.l. CUP D92J24000370004</td>
<td>Development of algorithms for motion planning and coordination of a fleet of autonomous vehicles</td>
</tr>
<tr>
<td>1</td>
<td>Scholarship funded by Department of Engineering and Architecture and by FTLab Center</td>
<td>Design and implementation of an open-source framework for benchmark performance evaluation of low-power ML algorithms on IoT devices</td>
</tr>
</tbody>
</table>

**POSITION RESERVED**

Reserved for **EMPLOYEES of Company “Crédit Agricole Group Solutions Scpa”** (with salary maintenance)  
Reserved to **Holders of RESEARCH GRANT** within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND “Training Future Big Data Experts for Europe (FutureData4EU)”
ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 70 points
(a minimum score of 40 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 50 points

Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

THE ORAL EXAM TAKES IN THE PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement.

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

Foreign Language
the fluency of which shall be assessed during the Oral Exam

ENGLISH

The evaluation of the knowledge of this language will be oral and will consist of a brief interview on a technical topic (for example a translation of a scientific text).

SCHEDULE OF THE ADMISSION EXAMS

ASSESSMENT OF QUALIFICATIONS

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page http://unipr.esse3.cineca.it/Home.do in the days preceding the date of the Oral Exam.

ORAL EXAM

DATE
4th September 2024 (with possible extension in the following days)

TIME
10:00 am (Italian Time)

PLACE
Department of Engineering and Architecture
Scientific Engineering Headquarters
Parco Area delle Scienze, 181/A – Campus Universitario
43124 PARMA - ITALY

FURTHER INFORMATION

The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

For foreign candidates all documents written in a language other than Italian will have to be translated into English, otherwise they will not be evaluated.

THE INTERVIEW MAY BE HELD ALSO IN ENGLISH
For foreign candidates, the admission examinations may be held in English at the candidate’s choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

ANNEX A
(art. 3.2 of the Competition notice)

Identification Document
Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
### Curriculum Vitae et studiorum
No specific CV format is required (see art. 3.2 of the Competition notice).

### Abstract of degree thesis
**Abstract of the second cycle master’s degree thesis.** Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces).

### Academic Qualifications
Certificates and academic transcript of records for both Bachelor’ and Master’ degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):
- University that granted the degree
- Type of degree (first cycle/second cycle/single cycle)
- Name of the degree program
- Date of graduation
- Final mark
- List of exams and corresponding scores (academic transcript of records)
- Translation into Italian or English (only for degrees issued in languages other than Italian or English).

### Research Project
Max 10.000 characters, written in English, it will have to focus on an original research topic and structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results, argumentation.
It does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board. However, this project must be prepared after having contacted and consulted one of the research groups related to the PhD course in Information Technologies (information on the research groups and their contacts can be found at [https://dia.unipr.it/en/node/3080](https://dia.unipr.it/en/node/3080)).

Failure to submit the project will result in exclusion from procedure for admission to the course.

### LIST OF EVALUABLE QUALIFICATIONS
(only qualifications attested by a document drawn up in Italian or in English)

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum Vitae et studiorum</strong></td>
<td>Evaluation of the marks of the exams and of the master’s degree mark (if available). The candidate is required to provide the average of the marks of all the exams of the master’s degree, in addition to the details of the same. It will also be evaluated the congruence of the degree obtained with the PhD themes.</td>
<td>Up to 25 points</td>
</tr>
<tr>
<td><strong>Graduation thesis</strong></td>
<td>It will be evaluated the congruence of the Master’s Degree thesis with the doctoral program research topics</td>
<td>Up to 5 points</td>
</tr>
</tbody>
</table>
| **Research Project** | Points relating to the research project shall be allocated on the basis of the following criteria:  
  - Scientific value and originality of the proposal: max 10 points  
  - Description and structure of the proposal: max 10 points  
  - Proposal feasibility: max 10 points | Up to 30 points |
| **Scientific Publications** | Articles on national and international journals, papers presented at conferences or symposia, book chapters etc. Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years. | Up to 5 points |
### Reference Letters

Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.

It must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it

(The candidate, therefore, must not upload them through the procedure of the competition online registration).

Evaluation of the judgments reported in the reference letters.

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2 points</td>
</tr>
</tbody>
</table>

### Other experiences (training, work, research, teaching, etc.)

Duration evaluation (for scholarships and internships), score (for the GRE test), prestige (for awards)

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 3 points</td>
</tr>
</tbody>
</table>

### EVALUATION ORAL EXAM

The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

<table>
<thead>
<tr>
<th>Evaluation CRITERIA</th>
<th>POINTS</th>
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</thead>
<tbody>
<tr>
<td>o knowledge of the foreign language: max 5 points</td>
<td></td>
</tr>
<tr>
<td>o research project presentation: max 25 points</td>
<td></td>
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<tr>
<td>o general knowledge of issues connected to the PhD course: max 20 points</td>
<td></td>
</tr>
</tbody>
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<th>Up to 50 points</th>
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