



Rector Decree n. 2280

THE RECTOR

- CONSIDERING the Statute of the University of Bari Aldo Moro;
- CONSIDERING the Law of 3 July 1998, No. 210, in particular Art. 4;
- CONSIDERING the Legislative Decree of April 11, 2006, No. 198 “Code of Equal Opportunities between men and women”;
- CONSIDERING the Law of December 30, 2010, No. 240 and in particular Art. 19;
- CONSIDERING the D.M. No. 226 of 14 December 2021 “Rules on accreditation of doctoral venues and programmes and criteria for the institution of doctoral programmes by accredited bodies”;
- CONSIDERING the Ethical Code of this University;
- CONSIDERING the Regulations of the University of Bari on PhDs, issued by D.R. No. 1867 of 17 May 2022;
- CONSIDERING the Didactic Regulations of the University of Bari Aldo Moro;
- CONSIDERING the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Regulation on Data Protection);
- CONSIDERING the Italian Ministerial Decree No. 247 dated 23 February 2022, which set at € 16.243,00 the annual amount of the doctoral scholarship, starting from 1 July 2022;
- CONSIDERING note no. 301 of 22 March 2022 by which the Ministry transmitted the new Guidelines for the Accreditation of doctoral programmes;
- HAVING REGARD to Legislative.M Decree 351 of 9.4.2022 with which they were attributed, for the year 2022/2023, under the PNRR, Mission 4, component 1 "Strengthening the offer of education services: from nurseries to universities" - Investment 3.4 "Teaching and advanced university skills" and Investment 4.1 "Extension of the number of research doctorates and innovative doctorates for public administration and cultural heritage", of 2500 three-year doctoral scholarships for the attendance of doctoral courses (hereinafter, also courses) accredited ex DM 45/2013 XXXVII cycle – Academic Year 2021/2022 and to be accredited ex DM 226/2021 XXXVIII cycle – Academic Year 2022/2023;
- HAVING REGARD to Table A of the aforementioned D.M. 351/2022 which assigns, among other things, to the University of Bari Aldo Moro a financial endowment of € 180,000.00 for n. 3 doctoral scholarships dedicated to digital and environmental transitions (M4C1 – Inv. 3.4) and € 4,200,000.00 overall (M4C1 – Inv. 4.1) for n. 32 PNRR PhD scholarships, n. 32 doctoral scholarships for Public Administration and n. 6 doctoral scholarships for cultural heritage for a standard cost, of each bag equal to € 60,000.00;
- HAVING REGARD to the Ministerial Decree MUR n. 352 of 09.04.2022 with which they were attributed, for the year 2022/2023, under the PNRR, Mission 4, component 2 "From Research to Enterprise" - Investment 3.3 "Introduction of innovative doctorates that respond to the innovation needs of companies and promote the recruitment of researchers from companies", 5,000 three-year doctoral scholarships for the attendance of courses for accredited doctorates ex DM 45/2013 XXXVII cycle – Academic Year 2021/2022 and to be accredited ex DM 226/2021 XXXVIII cycle – Academic Year 2022/2023;
- HAVING REGARD to Table A of the aforementioned D.M. 352/2022 which assigns, among other things, to the University of Bari Aldo Moro, an effective PNRR financial allocation of € 4,590,000.00 for grants for innovative doctorates that meet the innovation needs of companies and provides for a financial allocation (50% co-financing) of the same amount to be paid by companies, for a standard amount of € 60,000.00 per grant;
- CONSIDERING note no. 11978 of 26 April 2022, by which MUR transmitted the operational guidelines on procedures for accreditation of doctoral programs for the academic year



2022-2023 – XXXVIII cycle;

- CONSIDERING the resolutions adopted by the Academic Senate and the Board of Directors in their respective meetings held on 27 April 2022, 28 April 2022, 10 May 2022, 11 May 2022, 16 May 2022;
- HAVING REGARD to Rectoral Decree no. 1868 of 17.05.2022, relating to the approval of the distribution and allocation of scholarships from the funds allocated by DD.MM no. 351 and no. 352 of 09.04.2022, as well as on university funds for the XXXVIII cycle, A.Y. 2022/2023;
- ASCERTAINED that the accreditation proposals have been formally transmitted electronically to MUR and ANVUR by 06 June 2022;
- CONSIDERING the INPS notice, available on the INPS website at the following link <https://www.inps.it>, concerning “Avviso per le università - Ricerca e selezione di dottorati di ricerca Industria 4.0, Sviluppo sostenibile, INPS e Welfare - a.a. 2022/2023”;
- CONSIDERING Law 11 December 2016, no. 232, Art. 1, paragraph 328 and paragraph 331, letter d, concerning the Departments of Excellence and the subsequent list of the 180 Departments that have obtained funding, as noticed by the Board appointed by Italian Ministerial Decree no. 262 of 11 May 2017, among which there is the Department of Veterinary Medicine of this University;
- CONSIDERING the Framework Agreement between the Polytechnic University of Bari and the University of Bari Aldo Moro signed on 02.12.2019 by which the Parties commit to establish joint Doctoral programmes from the XXXVI cycle and for the next two cycles for:
1. Inter-university PhD program in “Sustainable Land Management”. Administrative headquarters: University of Bari Aldo Moro;
 2. Inter-university PhD program in “Aerospace Science and Engineering”. Administrative headquarters: Polytechnic University of Bari;
 3. Inter-university PhD program in “Industry 4.0.” Administrative headquarters: Polytechnic University of Bari;
- ACKNOWLEDGING that for the XXXVIII cycle this University has signed agreements with other bodies for the activation of the following doctoral courses pursuant to art. 3 paragraph 2 Ministerial Decree no. 226/21 as follows:
1. PhD Course in "Gender Studies" administrative headquarters: University of Bari Aldo Moro in agreement with the University of Macerata and the Scuola Superiore di Studi Universitari e Perfezionamento Sant'Anna di Pisa;
 2. PhD Course in "Mediterranean Archaeological, Historical, Architectural and Landscape Heritage: Integrated Systems of Knowledge, Planning, Preservation and Promotion" administrative headquarters: University of Bari Aldo Moro in agreement with Politecnico di Bari, University of Foggia, University of Basilicata, University of Palermo, University of Naples Federico II, IUAV University of Venice and National Research Council;
 3. PhD Course in "Historical and Philosophical Heritage for a Sustainable Innovation" University of Bari Aldo Moro in agreement with the University of Molise, the University of Foggia and the University of Naples l'Orientale;
 4. PhD Course in "Humanities" administrative headquarters: University of Foggia;
- CONSIDERING the memorandum of understanding and the agreements signed and/or undergoing for financing scholarships for activating positions for industrial doctoral programmes, PhD executive and programmes and apprenticeship for higher education A.Y. 2022- 2023;
- CONSIDERING the Procedures for entry, residency and enrolment at higher education institutions for students requiring visas for higher education courses in Italy for the academic year 2022-2023 <http://www.studiare-in-italia.it/studentistranieri/>;
- ALLOWING FOR any eventual changes and/or additions to this notice that will be published exclusively at: <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023> and on the website of each doctoral programme, whose link is available on the single profiles



DECREES

PART I

CALL FOR ADMITTANCE TO PhD PROGRAMMES

Art.1 – INSTITUTION AND SELECTIONS

The XXXVIII cycle of the Ph.D. Programme has been established for academic year 2022/2023 at the University of Bari Aldo Moro with the present call regulating admission to the following three-year Ph.D. programmes:

1. Biodiversity, Agriculture and the Environment
2. Biosciences and Biotechnology
3. Rights and Protection in Globalized Markets
4. Mediterranean Rights, Economies and Cultures
5. Rights, Institutions and Safeguards in Transitional Societies
6. Economics and Finance of Public Administrations
7. Economics and Management
8. Physics
9. Gender Studies
10. Geosciences
11. Sustainable Land Management
12. Computer Science and Mathematics
13. Humanities, Languages and Arts
14. Metabolism, Aging and Social Medicine
15. Applied Neurosciences
16. Mediterranean Archaeological, Historical, Architectural and Landscape Heritage: Integrated Systems of Knowledge, Planning, Preservation and Promotion
17. Historical and Philosophical Heritage for a Sustainable Innovation
18. Animal Health and Zoonosis
19. Public Health, Clinical Medicine, and Oncology
20. Chemical and Molecular Science
21. Pharmaceutical Science
22. Soil and Food Sciences
23. Human Relations Sciences
24. Humanities
25. Transplantation of Tissues and Organs and Cellular Therapies

According to Ministerial Decree 226/2021, the above mentioned PhD courses will be activated after verification of the possession or maintenance of accreditation requirements by the Ministry of University and Research. Winners will therefore only be able to register following this ministerial review. Therefore, the allocation of positions put up for competition as well as the awarding of scholarships are subject to confirmation of accreditation by ANVUR and are subject to ministerial approval. It should be noted that in the event that the



MUR does not pay the funding for the coverage of scholarships on a subject linked DD.MM no. 351/22 and no. 352/22, the same will not be disbursed, with consequent forfeiture of the positions attributed to the winning candidates.

The winners will therefore be able to enroll only after this Ministerial verification. For each PhD programme described in attachments 1 to 25, which form an integral part of this call for applications, the following information are indicated:

- the Administration Department;
- the number of positions with and without scholarships which will be assigned according to the specific merit rankings of the Course, considering the eventual distribution per Curriculum;
- the number of positions with a thematic – related scholarship funded under the DD.MM. n. 351/22 and n. 352/22;
- the number of potential apprenticeship contracts;
- the number of positions of the industrial/intersectorial doctoral programmes (PhD executive);
- the number of positions dedicated to candidates with degree obtained at foreign universities;
- the number of positions reserved to those holding a scholarship in specific programmes of international mobility;
- the number of positions reserved to candidates with degrees from foreign universities established in the funding institution “Budget Miur Department of Excellence”;
- the eventual curricula;
- the admission procedures, examination schedule, the location of the examinations as well as further admission requirements.

The D.M n. 351 and 352 of 09.04.2022 mentioned, through the activation of doctoral courses on defined themes, intend to promote interdisciplinarity, adherence to international networks and intersectorality referred to in the PNRR.

Doctoral scholarships are activated within the framework of the bound themes indicated in the aforementioned decrees and in compliance with the eligibility criteria referred to in Articles. 6, 7, 8 and 9 of M Legislative Decree no. 351 of 9 April 2022 and art. 6 of M no. 352 of 9 April 2022.

To this end, the doctoral courses provide for the involvement of companies in the definition of the training course, through the performance by the PhD student of periods of study and research mandatory in the company for a minimum of six (6) months a maximum of twelve (12) months for grants under D.M 351, from a minimum of six (6) months to a maximum of eighteen (18) months for grants under D.M 352.

With reference to the scholarships activated pursuant to D.M. 352, the companies involved in the definition of the training project co-finance 50% of the amount of the scholarship established at ministerial level under this decree. For each related topic, a period of study and research abroad from six (6) months to eighteen (18) months at the partner foreign institutions is mandatory.

The number of positions and scholarships listed in the attachments may be increased as a result of funding by public and/or private bodies.

All scholarship positions given by other funding bodies or received by Department, as well as the industrial/ intersectorial (PhD executive) PhDs and higher education apprenticeship will be activated as soon as the agreement is fulfilled. Each agreement regulates the organization of the Course, the specific funding management and the resources available by the partners for each Course, the relationships and obligations of the Parties and the doctoral students who will have to fulfill their duties.

Supernumerary students may be admitted even after the completion of the examinations, if they are provided with foreign Bodies funds or under specific international cooperation and/or mobility programmes. Admission is, however, subjected to a positive judgment of the candidate's eligibility by the Academic Board (Collegio dei Docenti) who will establish the modalities and criteria for evaluation.

This call thus serves as official notification, and candidates are therefore required to present themselves without prior notice at the venue on the day and time indicated for each Ph.D. programme referred to the attached sheet of this decree.

The absence of the candidate, for whatever reason, will be considered as withdrawal from the call.

Any changes, updates or additions to the content of this call will be made available exclusively at the website: <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023> and on the website of



each doctoral programme, whose link is available on each single profile.

Art. 2 - ADMISSION REQUIREMENTS

Candidates holding one of the following qualifications are eligible regardless of their citizenship and age (with the exception of those candidates who apply for an apprenticeship who must not be over 29):

- degree awarded under the system "vecchio ordinamento" in place prior to the one introduced by Ministerial Decree (D.M.) no. 509 of 03 November 1999, amended by Ministerial Decree (D.M.) no. 270 of 22 October 2004;
- "laurea specialistica" or "laurea magistrale" (second cycle degree);
- second-level academic qualification ("titoli accademici di secondo livello") awarded by Institutions belonging to the AFAM ("Alta Formazione Artistica e Musicale") sector;
- master's degree awarded abroad, recognised as such solely for the purpose of admission to the competition.

A) Admission to the selection for the candidates with an academic degree conferred abroad

Those in possession of a degree from a foreign university which has not yet been declared equivalent to an Italian degree will have to apply for their equivalence solely for the purposes of admission to the Ph.D. programme for which they intend to apply.

In such case, in order to allow for assessment of the qualification, application for participation must be accompanied, by the following documentation:

- **(In the case of Italian and EU citizens)** Self-certification, according to D.P.R. 445/2000 and subsequent modifications, of the academic qualification obtained with details of examinations, the relative results and the legal duration of the programme.
- **(Non-EU citizens)** A certificate attesting to the academic qualification obtained with details of examinations, the relative results and the legal duration of the programme together with a translation into Italian and/or English. The translation must be signed under the applicant's own responsibility in order to allow the qualification to be recognized.

The suitability of qualifications obtained abroad will be evaluated by the Judging Commission in accordance with the regulations in force in Italy and in the country where the qualification was obtained and relative treaties and international agreements on the recognition of qualifications for the continuation of studies.

In case of admission to the Ph.D. programme, applicants must submit, within 60 days from the date of registration, the following documentation:

- Curricular qualifications translated into Italian and legalized by the relevant Italian diplomatic or consular representations abroad;
- "Certificate of equivalence of qualification" of the foreign qualification issued by the relevant diplomatic or consular representations abroad.

In case of doubts about the qualification validity, the University also reserves the right to request the "Certificate of equivalence of qualification" to those who have obtained a qualification in a European Union country.

B) Admission to the selection for candidates who have not yet received the degree.

Candidates who are going to obtain the qualification necessary for entry to the Ph.D. programme may also apply if they are to obtain their qualification by and no later than 30 September 2022. Failure to gain the relevant qualifications by this date will result in exclusion from the call.

These candidates will be conditionally admitted and will be required to deliver or send by and **no later than 30 September 2022**, self-certification (or certification in the case of qualifications obtained abroad) with date and signature, accompanied by a copy of a current valid photo ID document to the following address: *U.O. Dottorato di Ricerca, II piano, Palazzo Ateneo, Piazza Umberto I, n. 1 – Bari, Italy* indicating:

- the name of the university issuing the qualification;
- date of completion of the qualification;
- type of qualification (specialist/master/old cycle degree, second level academic degree issued by institutions belonging to AFAM);
- final result.

Candidates who, for whatever reason, do not communicate the obtainment of the relevant qualification by the



deadlines indicated or who send incomplete, incorrect applications, by different means or to different addresses other than those indicated above will be excluded from the call.

Art. 3 - APPLICATION AND ENTRY TO THE CALL

The application for participation in the selection must be submitted using only the appropriate procedure made available at: <https://pica.cineca.it/uniba/dottorati38/domande/> **no later than July 21, 2022 at 12.00 pm (Italian time)** under penalty of exclusion from the selection.

Access to the procedure takes place on the PICA portal (Integrated University Competition Platform) which can be accessed upon registration or with SPID credentials, as indicated in the Guidelines.

Applications received in a different way than the one indicated will not be considered valid.

The registration fee for the competition is € 50.00; in the case of foreign applicants residing abroad, no payment is due. The entry fee is non-refundable for any reason.

The candidate must pay the fee by clicking on the "Paga con Pago PA" button and choosing as the payment method:

- Credit/debit card: for card payment
- Current account: for direct debiting your account
- Other payment methods: such as PayPal or Satispay

Candidates wishing to participate in more than one call must submit multiple applications each showing the relevant qualifications and necessary attachments along with payment for each individual application made.

For each doctorate it is possible to submit your application, under penalty of exclusion, for a single scholarship with a tied theme.

All candidates are admitted to the competition, subject to verification that all requirements have been met.

The procedure for completing and submitting applications online can be carried out on any computer connected to the network.

Please note that any technical issues regarding the completion of call applications should be notified by sending a message to uniba@cineca.it.

Applicants are invited to complete the application for participation in the call with sufficient time prior to the deadline of this call.

It is the responsibility of candidates to verify the correct conclusion of the procedure. Complaints will not be considered in the case of the malfunctioning of the IT system due to application overloads near the deadline.

The payment of the €50,00 call fee does not constitute right to admission to the call in the absence of a formal application, even if made by the deadline of the call notice.

To the application form must be attached, in pdf format, the documents required by the profile of the chosen course as well as:

1. substitute self-certification Statement relating to degree certificates:
 - **for graduate candidates:** self-certification statement (Art. 46 TU - DPR No. 445 of 28 December 2000) signed and dated, specifying the qualification type (old degree cycle/specialist/Master degree etc.), the date of award, the final result and the indication of the university issuing the qualification;
 - **for candidates who are to obtain their qualification by September 30, 2022:** self-certification statement (Art. 46 TU - DPR No. 445 of 28 December 2000), signed and dated indicating the university at which they are enrolled, the qualification type (old degree cycle/specialist/Master degree etc.), the name of the degree program, the list of the examinations taken along with their relative results and the expected graduation date. The same self-certification must also specify the weighted average of the marks of all exams taken up to the expiry date of this call (the weighted average is obtained by multiplying each result by the corresponding examination credits, adding the results obtained and dividing that sum by the total credits earned through exams with results);
2. signed and dated curriculum vitae;
3. numbered, signed and dated list of qualifications deemed useful for the call attached to the application;
4. numbered, signed and dated list of publications deemed useful for the call attached to the application;
5. qualifications the candidate considers relevant to the call;
6. single copy of scientific publications, numbered progressively; publications listed but not uploaded will not be considered;



7. photocopy of a valid ID document of the applicant;
8. where required, research project, relating to the bound theme chosen by the candidate, of a maximum of 3500 words (unless otherwise indicated in the PhD profile attached to this notice) which must include:
 - scientific assumptions and related bibliographic data;
 - purpose, methodologies and expectations of the research;
 - where necessary, experimental and data analysis methodologies.

The application is to be considered in all respects by law as a self-certification, pursuant to Art. 46 and 47 of DPR 445/2000 and ss.mm.ii., the data contained therein and in the documents annexed thereto.

Once completed, the application must be printed, signed and reloaded in the procedure following the indications described in the online procedure. The lack of signature and/or ID is a reason for exclusion from the selection. In the case of authentication with the use of SPID (Public Digital Identity System) credentials, it will not be necessary to sign the application.

Failure to choose the curriculum, where provided, results in exclusion from the competition. The application is submitted to the University automatically with the definitive closure of the online procedure. Therefore, no delivery or shipment of paper material to the Offices should be made.

At the end, the application will be registered and the submission confirmed by e-mail by the system.

The University may, at any time, on the basis of a reasoned decision by the Rector, exclude an application due to failure to meet the prescribed requirements, submission without the required signatures and/or for the lack of chosen curricula where required in the profiles.

Candidates with sensory and motor impairments as recognized in accordance with Law 104/1992 and successive modifications, candidates with a disability percentage of 66% or more in accordance with Law 68/1999 and candidates with recognized learning disabilities (“DSA”) in accordance with Law 170/2010 may, depending on their situation, apply for the support auxiliaries necessary for the carrying out of the call examination and/or additional time. Interested candidates must submit to this University, **by the deadline of July 21, 2022 at 12.00 pm (CET Italian time)** the request completed on the application accompanied by appropriate medical certification issued by the competent health authorities. The necessary aids cannot be guaranteed if the application is received after the deadline of this call. It should be noted that for candidates qualifying as having “DSA” learning disabilities and candidates with sensory and motor impairments in accordance with ex-Law 104/1992, the certification attached must have been issued within the last three years by organisations accredited by the national health service. Additional time will be granted upon request as governed by current legislation.

Call administration assumes no responsibility for misdirected communications due to the improper indication of addresses by the applicant, missing or late notification of a change of address indicated in the application, or for any postal or delivery issues attributable to third parties, due to either accident or force majeure.

Art.4 – JUDGING COMMISSION

The Judging Commission for the Ph.D. programme call will be nominated through a Decree by the Rector in compliance with rules governing research Ph.D. programs at the University of Bari Aldo Moro.

In the case of industrial curricula or industrial/intersectoral PhD educational programmes, the commission may be completed with an expert having proper knowledge, for each external body; the expert expresses a non-binding opinion on the theme appropriateness of the candidates.

The composition of individual Commissions will be published on the site following the deadline for the call at: <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023>

Art.5 – THE CALL SELECTION PROCEDURE BASED ON QUALIFICATIONS AND EXAMS: CRITERIA FOR THE ASSESSMENT OF QUALIFICATIONS

With regard to the call based on qualifications and exams, a total score of 20 points will be awarded for qualifications.

The categories of qualifications will be evaluated in terms of their relevance to the Ph.D. programmes and for which you apply, the maximum score attributable to each is as follows:

- ◆ Graduation assessment up to a maximum of **10 points** determined as follows:



Up to 100	0 points
101-104	4 points
105-107	6 points
108-110	8 points
110 with honours	10 points

For candidates who are to obtain their qualification by September 30, 2022, assessment will be calculated based on the weighted average of the results of all exams up to the expiry date of this call. If the candidate holds more than one degree, relevant to the course for which he wishes to compete, he must indicate the title to be taken into account for the evaluation by the Judging Commission.

- ◆ Up to a maximum of **4 points** may be awarded for scientific qualifications relevant to the subjects covered by the Ph.D. programme for which application is made:
 - Scientific publications (monographs, articles in scientific journals)
 - Minor Publications (national and international dissemination conferences, specific volume contributions, etc.)
- ◆ Up to a maximum of **4 points** may be awarded for academic and study qualifications relevant to the subjects covered by the Ph.D. programme for which application is made:
 - 1st or 2nd Level University Master, post-graduate specialization qualifications, specialised diploma qualifications;
- ◆ Up to a maximum of **2 points** may be awarded for:
 - Documented research activities at qualified Italian and foreign institutions relevant to the subjects covered by the PhD programme for which application is made.

The assessment of qualifications, after identification of the criteria, will be carried out after the written test and before the evaluation of the papers.

The qualifications and publications submitted may be collected by candidates 90 days from the publication of the merit rankings and within a period of 2 months following that date, subject to eventual appeals in progress. The documentation may be withdrawn personally or by a delegate. After the specified period has expired, in the case of non-collection, call administration may dispose of the materials in question.

Documents and certificates must be produced on unstamped paper according to Article 1 of Law No. 370 of 23 August 1988; if produced in a foreign language they must be accompanied by a certified Italian translation in accordance with the foreign text, produced by the competent diplomatic or consular representation or by an official translator.

Reference to documents and publications already submitted to this University is not permitted for any reason. Documents, qualifications or publications received by this University after the deadline for applications will not be considered in the call.

The University assumes no responsibility for misdirected communications due to the improper indication of addresses by the applicant, missing or late notification of a change of address indicated in the application, or for issues attributable to third parties, due to either accident or force majeure.

ART. 6 – THE CALL SELECTION PROCEDURE BASED ON QUALIFICATIONS AND EXAMS: EXAM PROCEDURES

With regards to the call based on qualifications and exams, the admission test consists of a proper test in order to ensure a comparative evaluation and to ascertain the aptitude of the candidates for scientific research.

Without prejudice to the assessment of qualifications under art. 5, the exam procedures, specified in the doctoral profile attached to this call, involve one of the following modalities: A) written and oral examination; B) evaluation of the research project and oral examination; C) oral examination.

In the case of the exam procedure referred to in letter B), as well as where it is explicitly required in the annexed doctoral programme profile, the research project must be attached to the application, **under penalty**



of exclusion.

The scores related to the various tests are given as follows:

	A)	B)	C)
Qualifications score*	20	20	20
Written examination score	40		
Research project score		40	
Oral examination score**	40	40	80

* Up to 10 for the graduation mark

** It includes the examination of the knowledge of English/other foreign language as well as the research project evaluation where required in the profile.

The subjects covered within the examinations relate to scientific disciplinary sectors which make reference to the Ph.D. programme.

In order to be admitted to the examination, candidates must have one of the following validation documents: National ID card, passport, driving license, boat license, weapons license, identification document, provided they include photographs and stamps or other equivalent marks issued by a state administration.

For foreign applicants, written and oral tests may, upon prior request, be carried out in English or in any of the other foreign languages specified in the Ph.D. programme.

For the written examination, candidates must use a black ink pen only.

An examination of the knowledge of at least one foreign languages indicated by the applicant is included in the oral examination from among those listed in the Ph.D. programme profile.

For apprenticeships and industrial doctorate positions in the annexes, the Commission will also examine the research topics outlined in the relevant profile at the end of the oral examination. without prejudice to the provisions of the following art. 9.

A) Written and oral examination

Each Commission, for the evaluation of each candidate, may award up to forty points for each of the two examinations, in addition to the qualifications score.

The day of the written examination, the Commission will inform applicants about the date and location in which they will be able to view the list of those candidates admitted to the oral examination.

The Judging Commission will formulate the list of candidates admitted to the oral test.

Before the oral examination, candidates will be informed of the scores obtained in the evaluation of qualifications and the result of the written examination.

Candidates passing the written examination with a score of no less than 27/40 will be admitted to the oral examination. Where stated in the single Ph.D. programme profile, the oral examination may also consist in a discussion of a research project.

The oral examination will be considered passed in cases in which the candidate has scored no less than 27/40. At the end of each oral examination session, the Judging Commission will formulate the list of candidates examined with an indication of results awarded.

This list, signed by the President and the Secretary of the Commission, will be posted on the same day on the notice board of the exam venue or published on the PhD web page specified in the profile.

B) Evaluation of the research project and oral examination

Each Commission, for the evaluation of each candidate, in addition to the qualifications score, may award up to forty points for the project evaluation and up to forty points for the oral examination.

The Judging Commission will formulate the list of candidates admitted to the oral test. Before the oral examination, candidates will be informed of the scores obtained in the evaluation of qualifications and in the evaluation of the project.

Candidates obtaining a score of no less than 27/40 in the project evaluation will be admitted to the oral examination. The oral examination will be considered passed in cases in which the candidate has scored no less than 27/40.

At the end of each oral examination session, the Judging Commission will formulate the list of candidates



examined with an indication of results awarded.

This list, signed by the President and the Secretary of the Commission, will be posted on the same day on the notice board of the exam venue or published on the PhD web page specified in the profile.

C) Oral examination

Each Commission, for the evaluation of each candidate, in addition to the qualifications score, may award up to eighty points for the oral examination.

Before the oral examination, candidates will be informed of the scores obtained in the evaluation of qualifications. Where stated in the single PhD programme profile, the oral examination may also be a discussion of a research project. The oral examination will be considered passed in cases in which the candidate has scored no less than 54/80.

At the end of each oral examination session, Judging Commission will formulate the list of candidates examined with an indication of results awarded.

This list, signed by the President and the Secretary of the Commission, will be posted on the same day on the notice board of the exam venue or published on the PhD web page specified in the profile.

ONLINE EXAMINATION

The examination, due to the ongoing COVID-19 epidemiological emergency, may be taken online. In such cases, the email address specified by the candidate will be used by the Judging Commission to invite the candidate to join a “team” created via MICROSOFT TEAMS platform or other digital platform and thus allow him/her to take the exams. The operational indications will be provided close to the test and at least three days before, by public notice on the PhD programme web page specified in the profile of the doctoral course the candidate is interested in. Candidates are required to verify admission to the test on the date set for the communication of the results of the research project and, in the event that the examination is online, they must connect on the day and at the time specified in order to take it by videoconferencing via MICROSOFT TEAMS platform or similar, they must install the specified platform software on their own device and equip themselves with a webcam to allow for their identification before the test.

For those Courses that do not provide for a written examination, foreign candidates who are resident or domiciled abroad and all candidates who prove, giving an adequate reason, the impossibility of being in person at the place and time scheduled for the oral examination may require to take such examination online. In such cases, the candidate must submit a written request to be sent to the PEC address of the Department which is the administrative headquarters of the Course, specified in the single PhD programme profile as well as to the email address dottorato@uniba.it, by and no later than the second day before the examination date.

Art. 7 – RANKING MERIT LIST FOR THE ADMISSION TO THE Ph.D. PROGRAMME

Having carried out the call examinations, the Commission will compile a general merit ranking based on the sum of the results awarded to each candidate in each examination.

At the end of the call procedure, the Rector, having ascertained procedure regularity, will approve the call acts and the relevant merit ranking and declare the successful candidates.

The merit ranking will be produced according to the order of the overall points for each candidate in the examinations and in the evaluation of qualifications.

The rankings of the candidates suitable for each scholarship with a tied theme will flow into a single general ranking that will give title to access, possibly divided according to the curricula. The winners will be the candidates who have reported the highest score for each themed scholarship.

Successful call candidates will be declared, according to the limits imposed by the number of positions available, according to best performance in the merit rankings. Scholarships will be approved by Rector's Decree in accordance with the general merit ranking of each Ph.D. program. In any case, the specific provisions indicated in each Ph.D. programme profile will remain valid.

In the case of parity in the merit ranking lists for positions with scholarship, the evaluation of the economic condition prevails, determined in accordance with the D.P.C.M. 9.4.2001 and D.P.C.M. 5.12.2013 n. 159. In this case the candidate must declare his/her economic and patrimonial status (ISEE Dottorato di Ricerca). This declaration must be received within 20 days from the date of the publication of the ranking list. After the aforementioned 20 days, the candidate will be placed in the least favourable position in the merit ranking list. The candidate can present the ISEE declaration on his/her restricted family in accordance with D.P.C.M. n.



159/2013 art 8 co. 4.

In assigning positions without scholarship, the youngest candidate has the priority.

For reserved positions for graduates in foreign universities, the Commission will draw up a specific merit rankings according to the overall score obtained by each candidate. In the case of parity in the merit ranking list, the youngest candidate will prevail.

The declarations of approval of the acts and the relative merit rankings will be made public, through their communication on the notice board of the U.O. Ph.D., Ateneo Building of the University of Bari Aldo Moro, II floor, and through publication on the website following the selection procedure, at: <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023>.

The above methods of publication act as formal notification to successful candidates. No communication will be sent to individual addresses.

Art. 8 – ADMISSION TO THE PhD PROGRAMME

Candidates will be declared successful according to the call merit rankings and according to the number of positions made available for each Ph.D. programme.

In the case of withdrawal by successful call candidates, the call administration will proceed to nominate the next most successful candidate according to the order of the merit ranking. In such cases the nominated candidate must register within three working days otherwise the nomination will be void.

In the case of a candidate being declared successful in more than one ranking, the candidate must select one Ph.D. programme.

A successful candidate who already holds a Ph.D. title may be admitted to attend a second Ph.D. degree programme different to that already attended. In the case of parity of merit, candidates applying for the first time will be awarded priority.

In case the positions with scholarships and the positions without scholarship will not be assigned to graduates at foreign Universities, they will be awarded to the students in the ranking of ordinary positions.

All candidates are admitted to the call subject to the verification of self-certified declarations under D.P.R. 445/2000 and subsequent modifications.

Art. 9 – HIGH-LEVEL APPRENTICESHIP CONTRACTS AND INDUSTRIAL INTERSECTORIAL/ DOCTORATE POSITIONS (PhD EXECUTIVE)

In compliance with current legislation and in accordance with D.M. 226/2021, it is possible to undertake a high-level apprenticeship training programme for the acquisition of the title of Doctor of Research and, at the same time, to be engaged by a business with an apprenticeship contract.

The selected candidate is admitted to the PhD programme without a scholarship and employed by a company on an apprenticeship contract of equivalent duration to that of the doctoral Ph.D. programme. For the purposes of delivering training and mentoring activities, the company and the University are to adopt appropriate forms of coordination and integration for the entire duration of the contract.

Application for participation is open to those in possession of the requirements as stated in Art. 2 above who are between the ages of 18 and 29 at the moment of employment by the company and who have Italian or EU nationality, or non-EU nationals in possession of a regular residence permit in Italy.

Such candidates must state in the application an interest in the “posto con contratto di apprendistato” and will be required to explore, at the end of the oral examination, the themes on which the apprenticeship doctorate will focus.

In some PhD programmes, industrial doctorate positions are available; they are reserved for employees (who hold a master's degree or single cycle or equivalent qualifications provided for by the legislation before the D.M. 22 October 2004, n.270) of companies in agreement with the University and in possession of the prescribed requirements, and engaged in high-qualification activities. Candidates with requirements to access these positions must indicate in the application the industrial/intersectoral (PhD executive). Doctorate position in which they are interested and attach to the application the certificate relating to their employment status.

For these reserved positions, admission will be made through the procedures provided for in the profile relating to the doctoral course for which the candidate competes, without prejudice to the evaluation of a research project discussed with the commission (referred to in Art. 4) possibly supplemented by a member of the company. For this purpose, candidates must attach to the application for participation a specific research project



related to the theme indicated by the profile relating to the PhD course for which they compete.

The agreements between the University and the companies regulate the financing aspects, the modalities of carrying out the research activities and the distribution of the commitment of the PhD student-worker. The salary is considered equivalent to a scholarship and contributes to the calculation of the scholarship put up for tender.

Art. 10 - SCHOLARSHIPS

The scholarships available in accordance with the profiles attached to this call, as well as those potentially added in accordance with Article 1, will be awarded with the Rector Decree in order of the merit ranking lists of each PhD course, taking into account the possible assignment by curriculum.

The different types of scholarships, in favor of the entitled candidates, will be awarded by the Academic Board (Collegio dei Docenti) of each PhD Course, at its absolute discretion, based on the examination results and the candidate's curriculum vitae. For the purposes of the award of the scholarships funded by external companies/bodies, the Academic Board (Collegio dei Docenti) of the relevant PhD Course, where it deems this appropriate, may be completed with a representative of the financing body in an advisory capacity.

In the event of scholarships funded by a Third Party and/or aimed at carrying out a specific research project, the Coordinator shall inform the winner who is going to carry out the above-mentioned project about the related commitments and shall obtain his/her consent, to be communicated to the relevant Office.

The number of positions and scholarships available may be subjected to a subsequent increase due to the University participation in competitive calls, public notices issued by public or private bodies including the INPS call for the funding of scholarships to be awarded to candidates who meet the requirements of the selection call issued by the aforementioned Institute.

The related scholarships will be awarded pursuant to the rules contained in the same calls and, where required, in the specifications signed by the University, following admission to the funding, using in the absence of different indications contained in the aforementioned calls, the general ranking merit list for admission to the doctoral programmes XXXVIII cycle referred to in this call.

The annual scholarship is of € 16.243,00 subject to INPS social security contributions. The duration of the scholarship is equal to the entire duration of the programme.

The scholarship will be paid in deferred monthly instalments and the maximum total annual gross income limit necessary in order to qualify for a scholarship is set at € 16.000,00 (sixteentousand/00).

The determination of this income limit includes income from property and assets as well as income of any other nature.

Exceeding the income limit will lead to the loss of the right to the scholarship for the year in which the excess occurs and obliges the repayment of any monthly payments already received.

The scholarship cannot be combined with other scholarships or grants, except for those intended to supplement research during stays abroad.

The scholarship cannot be awarded in the case of a suspension of more than thirty days, or exclusion from the programme.

During the programme the doctoral candidate may, for research needs, be authorized by the Coordinator for periods of up to six months, or by the Academic Board (Collegio dei Docenti), for periods of more than six months, to complete a period of study in Italy and/or abroad or to carry out an internship with either public or private bodies.

The amount of the scholarship is increased by 50% in the case of periods spent abroad.

Those who have already received a scholarship for a Ph.D. programme (including for a single year or part of year) may not apply for a second scholarship.

Those entitled to a scholarship must, at the time of application, submit a declaration of expected gross personal income as well as declaring the absence of any eventual incompatibilities as outlined in the present article. Scholarship beneficiaries will be required to set up an INPS contribution profile, enrolling in the "Gestione separata" scheme of that Institute.

Scholarships shall be subject to tax relief provisions in accordance with Art. 4 of Law 13.08.1984 No. 476. In any case the special provisions in each specific financing agreement for the scholarship, remain valid.

It is understood that, if a scholarship is declared ineligible for funding following verification by the competent ministerial office, the candidate registered in the post corresponding to that scholarship will be declared



forfeited.

Art. 11 – ADMISSION IN EXCESS

The following applications may also be admitted in excess of the number of available positions. Such excess may not, however, exceed 50% of the designated positions with scholarship:

- Grant holders, without the PhD diploma, eligible for admission having passed the Ph.D. programme admission tests may apply for entry to the programme, in excess of the number of designated positions, provided that the Ph.D. programme they are attending is in the same scientific disciplinary research area for which the allowances are intended. Admission to the programme will be granted following the decision of the Academic Board (Collegio dei Docenti), and the Council of the Department (Consiglio di Dipartimento) from which the research grant is made, which must express their favor on the compatibility of the two activities.

In the event that the applicant carries out his/her activities at another University, the authorization of that University is required;

- Non-EU citizens and public employees who qualify as a result of passing the admission test without the award of a scholarship. For public employees, admission in excess is subject to the opinion expressed, pursuant to Article 8 paragraph 2 of the current University Regulations for Research Doctorates, by the Academic Board which may request the signing of a specific agreement with the relevant public body.

Those candidates will also be admitted who, although not applying directly to the call, have, by the official start date of the PhD programme, been selected as part of the European Union's HORIZON 2020 programme or other cooperation and/or international mobility programmes (e.g. Erasmus Mundus) and have been successfully awarded a scholarship or a research contract within the PhD disciplinary scientific area of interest. In such cases, applicants will be required to submit a special application form that must be approved by the Academic Board who could establish other methods of evaluation.

Registration is, however, subject to the prior approval of the Academic Board (Collegio dei Docenti) of the Ph.D. programme which will determine further methods of evaluation.

Art. 12 - PUBLIC EMPLOYEES

Public employees admitted to the Ph.D. programme are placed, upon request, compatibly with the needs of the affiliated administration, on extraordinary leave for study purposes without allowances for the duration of the programme and with a scholarship in cases in which it is required.

In the case of admission to a doctoral Ph.D. programme without a scholarship or the renunciation of the same, the applicant concerned retains the economic, social and pension benefits associated with the public office the working relationship is established with.

If following the doctoral Ph.D. programme, the relationship with the public administration ceases on the will of the employee during a period of two years, repayment of the amounts paid during the second period will be due.

Those public employees who have already obtained a doctorate or public employees who have been enrolled in a Ph.D. programme for at least one academic year are not entitled to extraordinary leave, with or without allowances, benefiting from that leave. The extraordinary leave period is relevant for career advancement, retirement and retirement benefits.

Art. 13 – Ph.D. COURSES AND MEDICAL SPECIALIZATION SCHOOLS

If successful in the selection process for a PhD, students enrolled at medical Specialisation Schools will be allowed to enrol in a PhD Course in compliance with the following conditions:

- a) compatibility, also in consideration of the distance between the seats, of the activities and commitment envisaged by the Specialization School and the PhD Course, certified by the Board of the Specialisation School and by the Academic Board of the PhD Course;
- b) incompatibility between the PhD grant and the emoluments, however denominated, received in relation to the activities of the specialization school.

In cases of joint attendance, the request for a reduction in doctoral activities is approved by the Academic Board of the PhD Course, after a positive assessment of the consistency of the research activities already carried out in the medical Specialization course with the doctoral project. In order to accept the application



referred to in this paragraph, the opinion of compatibility, expressed by the Board of the Specialization School, of the doctoral project with the didactic purposes of the Specialization School is also required. If the application referred to in this paragraph is accepted, the PhD Course will have in any case a duration of no less than two years.

Art. 14 – ENROLMENT

Successful call applicants will have to enroll by the dates to be announced at the time of the publication of the merit rankings.

Notification will not be sent to successful call applicants regarding the deadline of enrolment.

Failure to enroll within the terms of each Ph.D. programme will be considered withdrawal from the call and the position will be awarded to the next candidate on the basis of merit ranking order.

The application for enrolment and its attachments must be uploaded to the Esse3 platform during enrolment, with the following documentation:

1. signed photocopy of a valid ID document;
2. proof of payment of the registration fee for non-scholarship holding public employees admitted to the Ph.D. programme;
3. receipt of payment of the regional tax for the right to University Study to be made by following the instructions on the ADISU web site at the link: <http://w3.adisupuglia.it/pagamenti-pa> ;
4. photocopy of fiscal code card (codice fiscale);
5. a passport-sized photographs signed on the rear;
6. a payment of € 16,00 for duty fee through PagoPA on the Esse3 platform;
7. a payment of €5,00 per Student Card via PagoPA on the Esse3 platform.

Non-EU citizens must submit a valid permit of stay or a copy of the required application to the competent authorities as well as an Italian fiscal code document (codice fiscale).

Foreign nationals not resident in Italy must submit the following certificates within 30 days of enrolment:

- a) birth certificate;
- b) certificate of citizenship;
- c) certificate of civil and political rights status in the state of origin or provenance;
- d) a certificate equivalent to the general certificate of judicial records issued by the competent authority of the state of which the foreign candidate is a citizen.

Certificates issued by the competent authorities of the state of which the foreign applicant is a citizen must comply with the provisions in force in that state and signatures must be legalized by the competent Italian consular authorities. Foreign language translations must be accompanied by a certified Italian translation of the foreign text produced by the competent diplomatic and consular representation or by an official translator.

Documentation relating to the above-mentioned requirements will also be made available online at the website: <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023>

Art. 15 – TAXES AND FEES

The annual fee for access and attendance of the Ph.D. programme, payable by non-scholarship holding public employees, amounts to € 891,80 divided as follows:

- **First payment:** € 365,60 upon enrolment and together with payment of the regional tax;
- **Second payment:** € 526,20 due from those students with an ISEE indicator greater than € 14.518,38 A. Y. 2022/2023 which must be paid by July 31 of each year of the programme.

For doctoral students placed in industrial doctoral courses, tuition fees and further contributions are paid by the Company/Institution.

All doctoral students are required, at the time of enrollment, to pay the fee for the release of the Student Card, of € 5,00 via PagoPA on Esse3 platform, except for any other payment systems that the University reserves the right to communicate.

Doctoral students who do not benefit from the scholarship or who decline the scholarship are exempt from paying fees. Public employee doctoral students who are not scholarship beneficiaries are required to pay fees. Doctoral students who are eligible for ADISU scholarships and honorary loans and those doctoral students who are eligible for assistance due to a scarcity of resources are exempt from the payment of fees.

Ph.D. students with disabilities with a recognized disability of 66% or more, even if already in possession of



an academic degree, are exempted from taxes and fees.

All doctoral students are required to pay the regional tax for the right to university study except doctoral students with a disability of at least 66%.

All doctoral students are required to pay the Regional Tax, determined on the basis of the income of their family unit (ISEE Module), according to the amounts indicated in the table below:

ISEE REGIONAL TAX

from € 0 to € 23.626,32 = € 120,00

from € 23.626,33 to € 47.252,64 = € 140,00

over € 47.252,64 = € 160,00

Students who do not present the ISEE declaration are placed in the maximum band of the regional tax.

This sum for ADISU must be paid by following the instructions on the ADISU web site at the link: <http://w3.adisupuglia.it/pagamenti-pa>.

Doctoral students already in possession of the title of Research Doctor are required to pay maximum fees.

Doctoral students who do not renew enrolment for the years following the first year of the programme will be excluded from the Ph.D. programme.

In all cases, the sum of € 67,60 is payable per diploma, in addition to the duty stamp in force in a given period.

Late payments will incur a penalty of € 20,00 for payments made within 30 days of the payment deadline, € 40,00 for payments made within 60 days of the payment deadline and € 80,00 for payments made more than 60 days after the payment deadline.

PART II

CALL FOR POSITIONS RESERVED FOR GRADUATES FROM FOREIGN UNIVERSITIES

Art. 16 – PROVISIONS FOR POSITIONS RESERVED FOR GRADUATES FROM FOREIGN UNIVERSITIES

The provisions of this section govern the procedures for participation in the call reserved for graduates from foreign universities, where applicable in the individual Ph.D. programme profiles attached (from 1 to 25).

Applications are accepted for the call reserved for graduates (including Italian graduates) from foreign universities holding a qualification equivalent to an Italian degree, as indicated in article 2. Those in possession of a degree from a foreign university which has not yet been declared equivalent to an Italian degree will have to apply for their equivalence solely for admission to the Ph.D. programme for which they intend to apply as governed by article 2 of this call.

Applications for admission must be completed online using the special procedure available at: <https://pica.cineca.it/uniba/dottorati38/domande/>

Candidates must indicate in the application:

- name and surname, date and place of birth, citizenship, possible tax code, residence and address chosen for call communication, post code, e-mail address, and telephone number;
- the exact title of the Ph.D. programme to be applied for.

Art. 17 - SUBMISSION OF APPLICATION AND SELECTION PROCEDURE

The application for participation in the selection must be submitted using only the appropriate procedure made available at: <https://pica.cineca.it/uniba/dottorati38/domande/> , **no later than July 21, 2022 at 12.00 pm (Italian time)** under penalty of exclusion from the selection.

Access to the procedure takes place on the PICA portal (Integrated University Competition Platform) which can be accessed upon registration or with SPID credentials, as indicated in the Guidelines.

Applications received in a different way than the one indicated will not be considered valid.

The registration fee for the competition is € 50.00; in the case of foreign applicants residing abroad, no payment is due. The entry fee is non-refundable for any reason.

The candidate must pay the fee by clicking on the "Paga con Pago PA" button and choosing as the payment



method:

- Credit/debit card: for card payment
- Current account: for direct debiting your account
- Other payment methods: such as PayPal or Satispay

Application for participation in the call must refer exclusively to the Ph.D. programme for which application is made. In the case of application for more than one programme, multiple applications are required.

For each doctorate it is possible to submit your application under penalty of exclusion, for a single scholarship with a tied theme.

The application is to be considered in all respects by law as a self-certification, pursuant to Art. 46 and 47 of DPR 445/2000 and ss.mm.ii., the data contained therein and in the documents annexed thereto.

The University assumes no responsibility for misdirected communications due to the improper indication of addresses by the applicant, missing or late notification of a change of address indicated in the application, or for issues attributable to third parties, due to either accident or force majeure.

The following documents must be attached to the application:

- ◆ A certificate attesting to the foreign degree of study with the indication of the examinations and the relative results together with a translation into Italian. The translation must be signed under the responsibility of the candidate in order that the qualification be recognized;
- ◆ Curriculum vitae outlining academic qualifications and study, scientific activities and professional experience, written in Italian, English or French, indicating the academic qualifications obtained. In particular, candidates should indicate: any scholarships awarded by Italian, foreign or international bodies specifying the start date, end date, and duration; Attestations of participation in postgraduate or Master's degree programmes, specifying the date of completion, duration, and the training provider; Any acknowledgments and other scientific/academic titles deemed relevant to selection;
- ◆ Scientific publications;
- ◆ A summary of the degree thesis in English or French, of a minimum of 3 and a maximum of 6 pages organized as follows: thesis topic, research methodology, results obtained;
- ◆ Indication of the specific research interest of the applicant (Statement of Research Interest);
- ◆ At least two letters of reference from experts or professors of the Institutions where the candidate has studied or has worked or has collaborated with;
- ◆ Where applicable in the programme profiles, a research project relating to the Ph.D. programme for which application is made;
- ◆ A photocopy of a valid ID document of the applicant;

Qualifications conformity to the original must be declared by the candidate through self-certification or a Substitute Declaration of Certification of Conformity to the Original Copy in accordance with Art. 19, 46 and 47 of D.P.R. 445/2000.

Once completed, the application must be printed, signed and reloaded in the procedure following the indications described in the online procedure. The lack of signature and/or ID is a reason for exclusion from the selection. In the case of authentication with the use of SPID (Public Digital Identity System) credentials, it will not be necessary to sign the application.

Failure to choose the curriculum, where provided, results in exclusion from the competition. The application is submitted to the University automatically with the definitive closure of the online procedure. Therefore, no delivery or shipment of paper material to the Offices should be made.

At the end, the application will be registered and the submission confirmed by e-mail by the system.

The Judging Commissions will be appointed by Decree of the Rector as foreseen in Article 4 of this notice.

The Commission may award a total of 100 points for the evaluation of candidates, which will be carried out based on qualifications only (procedure 1), based on qualifications and oral examination (procedure 2) according to the particulars contained within the individual Ph.D. profiles attached. Candidates scoring below 60/100 will not be eligible.

The categories of qualifications to be evaluated, insomuch as relevant to the subjects of the relative Ph.D. programmes of the call, and the maximum score attributable to each of them are described below:



A) Selection procedure based on qualifications only (procedure 1)

For the evaluation of the qualifications submitted by candidates, the Commission shall, unless otherwise indicated in the profile relating to each Ph.D. programme, allocate up to 100 points as follows:

- ◆ For **Curriculum Vitae e Studiorum** (including academic and study qualifications, as well as for scientific activity and professional experience) up to a maximum of 60 points;
- ◆ For **scientific qualifications** relevant to the subjects covered by the Ph.D. programme, up to a maximum of 20 points:
 - Scientific publications (monographs, articles in scientific journals)
 - Minor publications (national and international dissemination conferences, specific volume contributions, etc.);
- ◆ **Professional expertise and reference letters** illustrative of the candidate's abilities, skills and attitudes, written in English, up to a maximum of 20 points.

B) Selection procedure based on qualifications and oral examination (Procedure 2)

For the evaluation of the qualifications submitted by the candidates the Commission may, unless specifically stated otherwise in the profile relative to each Ph.D. programme, allocate up to 60 points as follows:

- ◆ For **Curriculum Vitae e Studiorum** (including academic and study qualifications, as well as for scientific activity and professional experience) up to a maximum of 30 points;
- ◆ For **scientific qualifications** relevant to the subjects covered by the Ph.D. programme, up to a maximum of 15 points:
 - Scientific publications (monographs, articles in scientific journals)
 - Minor publications (national and international dissemination conferences, specific volume contributions, etc.);
- ◆ **Professional expertise and reference letters** illustrative of the candidate's abilities, skills and attitudes, written in English, up to a maximum of 15 points.

In case of a **research project** is required in the Ph.D. programmes profile, whose positive evaluation together with the evaluation of the other qualifications is necessary condition for the admission to the oral examination, a maximum of 20 points will be attributed. In this case, the scores assigned to the other qualifications will be reduced by assigning 20 points for the curriculum, 10 for publications, and 10 for reference letters.

The oral test, with up to a maximum of 40 points, is intended to ascertain the knowledge of foreign languages and the aptitude of the candidates for scientific research, including through discussion of the research project submitted by the candidate where applicable in the Ph.D. programmes profiles referred to in Article 1.

The oral test will be deemed successful should the candidate score at least 27/40. Only and exclusively if specified in the profile relating to the Ph.D. programme selected, applicants resident abroad may take the oral examination at distance via MICROSOFT TEAMS platform or other digital platform. In this case, interested applicants will have to make a specific request to make use of such a location, provide their contact in the application for admission to the call and ensure the use of a webcam to allow their identification to the Commission. The candidate must be available at their previously communicated contact address on the day for the oral examination, according to the calendar published on the website as indicated on the profile.

The Commission may agree with the candidate on a precise time for the interview to take place.

For the purposes of identification, each candidate must, prior to commencement of the interview, identify themselves, displaying the same identity document already submitted as a copy attached to the application. Failure to do so will result in exclusion from the call.

Failure by the candidate to communicate their personal address, a lack of internet connection, the unavailability of the candidate on the day or time established or the failure to display a valid identification document in accordance with the previous paragraph constitute reasonable motives for exclusion from the call. The University of Bari does not accept any responsibility for the possibility of technical issues preventing the carrying out of the oral examination.

The prevision of art. 6 of this call shall apply accordingly.

In the case of the parity between two or more candidates, preference will be given to the youngest candidate. A specific merit ranking will be drawn up by the Commission for those positions reserved for graduates at foreign universities.



The merit ranking will be established according to the order of points of the overall result reported for each candidate based on the evaluation of qualifications.

The successful candidates will be declared, dependent on the number of positions designated, according to best performance on the merit ranking.

At the end of the call procedure, the Rector will approve the acts of the call and the relative merit ranking. All candidates are admitted with reserve to the call.

The declarations of approval of the acts and the relative merit rankings will be made public through their communication on the notice board of the U.O. Dottorato di Ricerca, Ateneo Building of the University of Bari Aldo Moro, II floor, and through publication on the website at <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023>

The above methods of publication act as formal notification to successful candidates. No communication will be sent to individual addresses.

In the event of withdrawal by one of the successful candidates, the next candidate will be summoned according to the merit ranking.

Art. 18 - ENROLMENT

Successful call applicants will have to enroll by the dates to be announced at the time of the publication of the merit rankings.

Failure to enroll within the terms of each Ph.D. programme will be considered withdrawal from the call and the position will be awarded to the next candidate on the basis of merit ranking order.

The application for enrolment and its attachments must be uploaded to the Esse3 platform during enrolment.

Documentation relating to the above-mentioned requirements will also be made available online at <https://www.uniba.it/it/ricerca/dottorati/dottorato-di-ricerca-38degciclo-a-a-2022-2023>

PART III

SUPPLEMENTARY INFORMATION

Art. 19 - TRANSLATION AND LEGALIZATION OF DOCUMENTS

Acts and documents in a foreign language must be translated and certified by the relevant Italian diplomatic or consular representations in the foreign state in question and must comply with the provisions in force in that State.

Art. 20 – INSURANCE COVER

The University guarantees insurance cover for civil liability and accident for the entire duration of the programme for activities strictly related to the Ph.D. programme itself and will arrange the stipulation of the relevant policy.

Art. 21 – RIGHTS AND OBLIGATIONS OF DOCTORAL STUDENTS

Without prejudice to the rights and obligations provided for by the current University regulations on PhD and by ministerial decree n. 226/21, the acceptance of scholarships from the funds of DD.MM. n. 351/22 and 352/22 implies compliance with the related obligations provided for by ministerial decrees.

Doctoral students are obliged to attend the programme and to carry out continuous study and research activities at the sites designated for this purpose in accordance with the procedures as set out by the Academic Board (Collegio dei Docenti), with an exclusive full-time commitment equivalent to 1500 hours a year. This commitment is verified by the compilation of a register.

Academic Board (Collegio dei Docenti) may, on the basis of a motivated request of the doctoral student, authorize the performance of remunerated activities, verifying their compatibility with the successful carrying out of programme (didactic and research) activities. In particular, doctoral students with scholarships may only carry out remunerated activities strictly related to the Ph.D. programme. Non-scholarship doctoral students must, in any event, consider the possibility that working activities result as incompatible without causing any detrimental effects to basic rights protected data constitutional level, such as the right to study for the capable and worthy, even without the necessary means to do so. Doctoral students, as an integral part of the programme, and having obtained clearance from the Academic Board and with the agreement of the relevant didactic bodies



may, without any additional increase to the scholarship, participate in tutoring activities for both undergraduate and graduate Master students for up to a maximum limit provided for by the legislation in each academic year as supplementary teaching activities. Doctoral students in the medical field may participate in clinical-care activities in accordance with the provisions of Art. 4, Section 1 of the current Doctoral Research Regulations. After the third year of the Ph.D. programme, this limit is abrogated.

The measures of Legislative Decree no. 68 are extended to doctoral students, in accordance with the contents therein.

The Maternity Provisions of the Ministry of Labour and Social Security Decree of July 12, 2007, published in the Official Journal no. 247 of 23 October 2007 are applied in the case of female doctoral students.

The University Regulations provide doctoral students with a doctoral student representation for the purpose of the resolution of educational and organizational issues.

The attendance of a doctoral student may be suspended, upon deliberation of the Academic Board, for a period of up to a maximum of one year while retaining the rights to any scholarship, unless it should cease to be awarded, through resuming regular attendance on the programme. This is applied to cases such as maternity, military or civil service, serious and documented illness.

The doctoral student may not simultaneously be enrolled in a specialization school programme or another degree program. If a successful candidate for a Ph.D. programme results as already enrolled in a specialization school or degree program, he or she undertakes to suspend attendance before beginning the Ph.D. programme, with the exception of medical specialization (Art. 13 of this call).

Participants enrolled on Master or Specialization programmes can obtain the suspension of the beginning of doctoral activities for a maximum of three months from the effective start of the Ph.D. program, to be recuperated within the scope of the legal duration of the Ph.D. programme according to indications from the Academic Board.

If this period is longer than three months, and in any case no more than one year, activities relating to the Ph.D. programme must be deferred.

The granting of scholarships for doctoral studies is compatible with other income, including continuous income in the calendar year in which the scholarship is perceived, provided that maximum limit established by current legislation is not exceeded. If the income limit is exceeded, the scholarship will be revoked for the full year. The doctoral student concerned is obliged to declare the predicted annual income and report the possible exceeding the established limit.

Within the date set by Academic Board (CdD), for the purposes of annual auditing tests, the doctoral candidate is required to submit a written report to the CdD on the research activities and results carried out, as well as indications of possible participation in seminars and conferences and other scientific initiatives, together with publications produced. The positive assessment by the CdD denotes entry to the successive year of the programme, or admission to the final exam in the case of final year doctoral students.

The CdD may propose, by reasoned decision, that the student concerned is temporarily suspended or excluded from the programme, resulting in the partial or total loss of any scholarship in the event of:

- Negative judgment by the CdD within the annual audit;
- Unjustified and prolonged absences;
- Behavior contradicting rules on incompatibility.

Art. 22 – CONFIDENTIALITY AND INTELLECTUAL PROPERTY

In the case in which a doctoral student has, during the Ph.D. programme, developed research products which may qualify for the granting of industrial rights or intellectual property, or for which it may be possible to obtain the designation of industrial property, such as inventions (whether patentable or not), know-how, utility models, designs and drawings, software, data or data collections, these will be regulated in accordance with current university inventor regulations and University of Bari regulations, without prejudice to particular agreements concluded on the basis of particular types of relationships (e.g. industrial doctorate or apprenticeship contract).

The doctoral candidate must undertake a specific commitment to confidentiality and the recognition of industrial and/or intellectual property rights in relation to confidential information, data, and documents that the doctoral student should become familiar with in the course of his or her activities, including those carried out by a company, an Institution or an University.



The doctoral student is, in any case, given the opportunity to perform standard publishing activities as foreseen by the programme, which will take place in compliance with the commitment to confidentiality assumed with the University for their work including that carried out within a company, as well as any specific agreements concluded on the basis of particular types of relationships (e.g. industrial/intersectorial doctorate or apprenticeship contract).

Art. 23 – AWARDING OF TITLE

The title of Doctor of Research (Dott. Ric) or Ph.D. is awarded following positive evaluation of a research thesis that contributes to the advancement of knowledge or methodologies in the chosen field of enquiry. The doctoral thesis, accompanied by a summary in Italian and in English, may be written in either Italian or English or, with prior permission from the Academic Board (Collegio dei Docenti), in another language.

The examining Commissions for the final exam will be formed and nominated, for each Ph.D. programme, according to the doctoral regulations. The examination may not be resit.

Art. 24 – BACKGROUND CHECKS

The University carries out the necessary background checks on the authenticity of the substitute statements made by the candidate. In case the audit establishes falsehoods in the content of such statements, the candidate is excluded from applying to the call or, if already enrolled as a successful call candidate, withdrawn from the programme subject to the criminal penalties provided for in Art. 76 of Law no. 445/2000.

Art. 25 - TREATMENT OF PERSONAL DATA AND RIGHT OF ACCESS

The personal data contained in the application form (and in the curriculum) will be processed for the purposes of the management of this procedure and in application of the current regulations concerning the processing of personal data. The data will be processed - by the parties authorized to process it - with manual, computer tools and telematic tools within and for the purposes specified above, in compliance with the security measures adopted by the University and in compliance with the provisions of EU Regulation no. 2016/679 on the protection of individuals with regard to the processing of personal data and the free movement of such data, as well as legislative decrees to adapt the national legislation to the provisions of the afore mentioned Regulation. The Data Controller is the University of Bari Aldo Moro, with registered office in Piazza Umberto I, n. 1, 70121 - BARI. The designated Data Protection Officer can be contacted at the e-mail address rpdp@uniba.it.

The full text of the information is available at:

<https://www.uniba.it/ateneo/privacy/informative/informative-selezioni/view>

The documents of the selection are public. The candidates may exercise the right of access the documents of the selection according to the legislation in force.

Art.26 – RESPONSIBLE PARTIES FOR CALL PROCEDURE

Pursuant to Law No. 241/1990 subsequent modifications and integrations, the Head of Call Proceedings is Dr. Maria Luisa Loiudice - Head of U.O. – Doctoral Research (PhD Office).

Any clarifications may be requested at the following e-mail address: dottorato@uniba.it.

Art. 27 – LAWS OF REFERENCE

For any specific issues not provided for in the present notice, reference should be made to the current legislation in force and, in particular, to University of Bari Regulations on doctoral research published at www.uniba.it.

Foreign students may obtain more information at <http://www.studiare-in-italia.it/studentistranieri/>.

This call notice translated into English is to be considered informative in nature. In the event of any dispute, the original Italian version of this call notice will prevail.

Art. 28 – PUBLICATION

The notice of the announcement of this call was submitted to the Ministry of Justice for publication in the Official Journal of the Italian Republic - 4th Special Series - Calls.



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This decree will be ratified by the Governing Bodies in their next assemblies.

Bari, 20.06.2022

THE RECTOR

Signed Prof. Stefano BRONZINI



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ANNEX 1)

PROFILE

PhD PROGRAMME IN BIODIVERSITY, AGRICULTURE, AND ENVIRONMENT

Scientific Area CUN: 07 - Agricultural and Veterinary Sciences; 05 - Biological Sciences

Scientific Subject Codes: AGR/01, AGR/02, AGR/03, AGR/04, AGR/05, AGR/07, AGR/11, AGR/12, AGR/17, AGR/19, BIO/03, BIO/04, BIO/05, BIO/07, CHIM/12 and ICAR/03

Coordinator: Prof. Enrico de Lillo

Administrative office: Dipartimento di Scienze del Suolo, della Pianta e degli Alimenti

PEC: disspa@pec.uniba.it

Duration: 3 years

Curricula:

- 1) Genetics and Plant Biotechnology (Scientific Subject Code: AGR/07);
- 2) Environmental Sciences (Scientific Subject Codes: BIO/03, BIO/04, BIO/05, BIO/07, CHIM/12 and ICAR/03);
- 3) Mediterranean Sustainable Agriculture (Scientific Subject Codes: AGR/01, AGR/02, AGR/03, AGR/04, AGR/05, AGR/17 and AGR/19);
- 4) Crop Protection (Scientific Subject Codes: AGR/11 and AGR/12).

Total number of positions: 10, as follows:

- 2 positions with a scholarship funded by D.M. n. 351/2022 – doctorates for the Public Administration: 1 position for curriculum 1); 1 position for curriculum 2);
- 2 positions with a scholarship funded by D.M. n. 351/2022 – PNRR doctorates: 1 position for curriculum 3); 1 position for curriculum 4);
- 5 positions with a scholarship funded by D.M. n. 352/2022 – innovative doctorates with industrial address for curriculum 4);
- 1 position without a scholarship for curriculum 2).

Short descriptions for the projects funded by D.M. n. 351 – doctorates for the Public Administration

1) position for curriculum 1 - **Biodiversity of agricultural species in the Mediterranean basin** - The project envisages the development of technical specifications and conservation guidelines, characterization and subsequent registration of agricultural species at risk of genetic erosion for which there are environmental, cultural, scientific and economic interests, as required by the law of the Region of Puglia, 39/2013. The integration of the scientific approach to the administrative one will allow to strengthen the capacities of the public administration in the management of the topic relative to the agricultural biodiversity, allowing to obtain effective results in short times.

2) position for curriculum 2 - **Eco-friendly technologies for pollution control and environmental remediation in urban areas** - The project would analyse the existing environmental health risk in the territorial area of the Metropolitan City of Bari through the experimental application of innovative calculation models and introduce, in the urban environment, eco-solutions compatible for the control of pollution and the remediation of degraded soils. The research activity will concern the analysis, selection and evaluation of the removal effectiveness of hyperaccumulative macrophytes capable of extracting heavy metals and degrading organic substances in order to control and significantly reduce the transport of pollutants in urban run-off water and remediation of areas contaminated for ongoing or abandoned production activities.

Short descriptions for the projects funded by D.M. n. 351 – PNRR doctorates

- 1) position for curriculum 3 - **Climate-smart forest management in a protected Mediterranean landscape. Simulation of the effects of climate change and adaptive forest management on the capacity of forest**



ecosystems to absorb carbon and on the fragmentation and quality of semi-natural habitats - The project aims to identify climate-smart forest management (Climate-Smart Forestry, CSF) specific to the Mediterranean landscape and will be developed on a large scale in the territory of a national park. The identification of the most appropriate CSF measures will be conducted through the comparative analysis of the combined effects of climate change and alternative management scenarios to current ones, based on a forest landscape modelling approach (e.g. LANDIS-II). Alternative management scenarios will be defined taking into account the specific priorities for the landscape being studied, focusing on the conservation of biodiversity, habitats of community interest and carbon sinks.

2) position for curriculum 4 - **Genome editing and gene silencing for studies of plant pathogen interaction and innovative crop protection** - Through the application of the most innovative biological and biotechnological techniques to the field of plant pathology, will be studied the mechanisms of plant response to pathogens for the development of resistance with the identification of genes of the plant useful to strengthening of defences and molecular targets of the pathogen useful for alternative approaches to protection. Knowledge of plant-pathogen interaction mechanisms involved in the relevant pathogenetic processes will be used to develop biotechnological approaches to reduce the damage caused by pathogens that can supplement or replace current methods of defence and in line with Community plant health regulations.

Short descriptions for the projects funded by D.M. n. 352 – innovative doctorates with industrial address

1) position for curriculum 4 co-funded by Centro di Ricerca, Sperimentazione e Formazione in Agricoltura – Basile Caramia (CRSFA) - **Plant biodiversity: valorisation and characterization of the resistance to phytopathogenic agents** - The research activities will focus on the evaluation of indigenous genetic resources of stone fruit, citrus, grapevine and olive in order to: i) identify resistance to selected fungi, bacteria or viruses, ii) reduce the use of agrochemicals and iii) enhance the local productions. The characterization of these resources, also through the eradication of viruses from plants and the production of certified nursery material, is crucial for the enhancement of local productions. To date, the fruit-growing sector faces various challenges such as the pressure of intensive production systems and the impact of climate change. The identification of varieties, resistant to pathogens and virus-remediated can reduce the impact of chemical protection strategies and prevent the spread of dangerous pathogens.

2) position for curriculum 4 co-funded by Sysman Progetti & Servizi - **Development of digital technologies and decision support systems for plant health** - The activities will focus on modelling of biological systems for applications in the crop management with particular regard to fungal pathogens through the development of smart systems based on monitoring and diagnostic platforms, providing real-time information and alerts on the incidence of plant diseases; on the integration of IoT devices specialized in the monitoring of micro-climatic variables and / or in the measurement of pathogens and diseases and tools to support decisions and precision agriculture that interpolating weather, plant and pathogen data, estimate the impact of plant diseases both in 'ordinary' conditions and in climate change contest.

3) position for curriculum 4 co-funded by TIMAC AGRO Italia SpA - **Resistance induction for sustainable plant protection** - The project aims to set up alternative strategies for sustainable crop protection based on plant resistance induction, *i.e.* on the innate ability of plants to activate defence responses conferring resistance to stress factors. Potential resistance inducers, natural or synthetic, will be selected and analysed for their activity in plants and applicability for control or attenuation of important diseases of the main Mediterranean crops. The influence of environmental conditions, agronomic practices, host genotype and physiological status on the expression of induced resistance will be evaluated and the molecular mechanisms responsible for plant resistance and resilience mechanisms to the effects of biotic and abiotic stress factors will be studied using advanced investigation methods.

4) position for curriculum 4 co-funded by Adama Agricultural Solutions Ltd - **Study of the efficacy of fungicides on the *Fusarium* species involved in Fusarium Head Blight of cereals and their impact on fungal genetics and physiology** - The Fusarium Head Blight causes significant product losses and adversely affects important quality parameters of cereal products. Fungi of the genus *Fusarium* are also important as producers of mycotoxins harmful to humans and animals. In this thesis project several antifungal treatments will be used against *Fusarium* spp. responsible for the disease, in order to identify an effective strategy. With the aid of conventional and molecular tools, the mode of action of the most effective treatments will be investigated and, particularly, their impact on the genetic and physiological aspects of the aforementioned pathogens, including the production of mycotoxins.

5) position for curriculum 4 co-funded by Niteko srl - **Collaborative robotics in precision agriculture** - Technical



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solutions for the development of a collaborative robotic system, also integrated, for the monitoring and sustainable management of agricultural crops, oriented towards the application of precision agriculture will be studied. The aim is to provide new technological tools to address and solve some problems that limit sustainability and safety in agriculture. In particular, in a crop / crop environment identified as “study-case”, efficient technical solutions will be designed and evaluated in supporting the farmer in the management of inputs (nutrition, water, plant protection products) and also in raising the level of safety in a high-risk work environment.

A specific exam for each curriculum will be made; the ranking lists of each curriculum will be merged into a final one which will be used for the candidate admission.

The positions will be awarded, among the curricula, according to the final ranking list, until their exhausting.

Non-assigned positions of a curriculum, because of lack of eligible candidates, could be assigned to candidates of another curriculum based on the score of the final ranking list.

The candidates must indicate their curriculum choice on the application form **on penalty of exclusion from this selection procedure.**

Admission mode:

The selection will be based on the evaluation of titles, written test and oral test, with foreign language knowledge checking (English), according to art. 6 letter A of the call.

As regards the scholarships relating to Ministerial Decree n. 351 and Ministerial Decree n. 352, during the oral exam, the research project presented by the candidate at the time of the application for registration will also be discussed.

Admission tests for foreigner candidates:

Foreign candidates are allowed to be examined in English.

Admission exam dates and time:

Written exam: 26 July, 2022 at 2:00 pm.

Oral exam: 29 July, 2022 at 9:00 am.

Place: Aula XI – Agricultural Building, Via Amendola, 165/A – Bari

For more information see the website:

<https://www.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca/biodiversita-agricoltura-e-ambiente>



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ANNEX 2)

PROFILE

PhD PROGRAMME IN BIOSCIENCES AND BIOTECHNOLOGIES

Scientific Areas CUN: 05- Biological Science, 06- Medical Sciences, 07-Agricultural and Veterinary Sciences, 03-Chemical Sciences

Scientific Subject Codes: AGR/17, BIO/04, BIO/05, BIO/06, BIO/07, BIO/09, BIO/10, BIO/11, BIO/12, BIO/13, BIO/16, BIO/17, BIO/18, BIO/19, CHIM/11, MED/04, VET/10

Coordinator: Prof.^{ssa} Giovanna Valenti

Administrative Location: Department of Biosciences, Biotechnologies and Biopharmaceuticals

PEC: direzione.bioscienze@pec.uniba.it

Course Duration: 3 years

Curricula YES:

1. Biomolecular Sciences and Bioinformatics (Scientific disciplinary sectors: BIO/10 and BIO/11)
2. Cellular and Molecular Physiology and Biotechnology (Scientific disciplinary sectors: BIO/09, BIO/17, VET/10, AGR/17, MED/04)
3. Biochemical Sciences and Cell Biology (Scientific disciplinary sectors: BIO/10, BIO/12, BIO/13, BIO/16, CHIM/11)
4. Genetics, Microbiology and Molecular Evolution (Scientific disciplinary sectors: BIO/18, BIO/19)
5. Morphofunctional Biology (Scientific disciplinary sectors: BIO/04, BIO/05, BIO/06, BIO/07)

Total position with scholarship: **n. 10:**

- n. 3 positions with scholarship funded by University of Bari
- n. 2 positions with scholarship funded by D.M. 351/22 - PNRR
- n. 3 positions with scholarship funded by D.M. 352/22 - Dottorati Innovativi
- n. 2 positions without scholarship

Brief description of the research projects:

PNRR (D.M. 351/22)

scholarship 1. Development of technologies for in vitro RNA editing based gene therapy.

RNA editing is one of the most relevant epitranscriptomic mechanisms by which cellular RNAs can be modified in a non-transient way in specific localizations. A strategy to perform RNA editing in vitro will be developed on a neuronal cell model defective for ADAR2, in which the levels of RNA editing at the site known as Q / R, in the AMPA glutamate receptor, are reduced with respect to the condition. normal and associated with cellular degeneration.

scholarship 2. Development of biorefineries from used edible oils for the production of products with high added value.

The project aims to develop new biotechnological processes to based on the use of biocatalysts as microbial cells or enzymes for the production of chemical compounds of industrial interest through sustainable processes in a perspective of Circular Bioeconomy. The basic substrates will be used oils and other waste obtained from the processing of vegetable oils.



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Dottorati Innovativi (D.M. 352/22)

scholarship 1. Development of new models of integrated biorefineries in the territory.

The proposed research has the general objective of developing new biotechnological processes, based on microbial fermentation and biocatalysis, starting from waste biomass in a circular bioeconomy perspective, increasing industrial competitiveness by developing alternative bio-based products to analogs fossil-based obtained partially or totally from renewable material.

scholarship 2. Development of probiotic microorganisms.

The proposed research involves the study of probiotic microorganisms and their use in the biotechnological and pharmaceutical fields. The proposed research involves the study of probiotic microorganisms and their use in the biotechnological and pharmaceutical fields. In particular, the goal is to develop new strains of probiotic microorganisms with new properties that are either ameliorative or additional to the strains currently available on the market.

scholarship 3. Microbial biotechnologies for the fermentation and biocatalytic production of bio-molecules of industrial interest.

The project aims at the development of industrial production processes based on the development and use of microbial or enzymatic biocatalysts to convert renewable substrates into chemicals of high added value.

Admission procedures:

The selection will take place pursuant to art. 6 lett. A) of the announcement.

The exam will be based on the evaluation of qualifications, on a written test, on an oral test and on the assessment of knowledge of the English language.

Regarding the fellowships related to DM 351 and DM 352, during the oral exam, the candidate will discuss the project presented at the time of the application.

Foreign candidates:

Foreign candidates can choose to take the exam in Italian or in English.

Calendar for admission exams:

Written exam: 27/07/2022 at 9.00 a.m.

Oral exam: 29/07/2022 at 9.00 a.m.

Exam venue and time:

The rehearsals will be held in the Seminarial Room located on the ground floor of the Biological Departments Building - "Ernesto Quagliariello" University Campus in Via Orabona - Bari.

For more information see the website: [BIOSCIENZE e BIOTECNOLOGIE — Bioscienze, Biotecnologie e Biofarmaceutica \(uniba.it\)](https://www.uniba.it)



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ANNEX 3)

PROFILE

PHD PROGRAMME IN RIGHTS AND PROTECTION IN GLOBALIZED MARKETS

CUN Scientific Areas: 12 – Legal Sciences; 13b – Economics and business sciences

Scientific Subject Code: IUS/01, IUS/02, IUS/03, IUS/04, IUS/05, IUS/07, IUS/13; IUS/14; IUS/15; IUS/17; IUS/20; SECS-P/07

Coordinator: Prof. Vito Sandro Leccese

Administrative office: Dipartimento di Giurisprudenza

PEC: direzione.giurisprudenza@pec.uniba.it

Duration: 3 years

Curricula: NO

Total Available PhD positions with scholarship n. 8, among which:

- **n. 3 positions with scholarship DM 351/2022 – PhD for Public Administration** (D.M. 09 April 2022, N. 351 A.A. 2022/2023, PNRR - Mission 4, component 1 “Strengthening the provision of education services: from nurseries to Universities”: M4C1 - Investment 4.1 “Increase research and innovative PhD number for public administration and cultural heritage”), among which:

- n. 1 scholarship for the research activity “**Flexible working schedule and smart working. Designing flexible models of obligations’ performances, between consumer services implementation and family-work balance**” (Scientific Subject Code IUS/07)

The project is aimed at integrating the opportunities emerging from the enacting of innovative strategies in terms of working time flexibility and smart working, both in the light of a greater organized and consumer-oriented efficiency, which will allow a more effective solution for the users’ needs and a higher quality of the public service, and with the aim of more properly addressing the life-work balance necessity belonging to the public services operators. As far as the working schedule is concerned, the research will allow to analyze the latest legislative resolutions, even contractual, aimed at improving the working schedule flexibility figures; with regards for smart working, the research will concern even the digital shift process within the public administration and the topics emerging from the disconnection from the technological tools.

- n. 1 scholarship for the research activity “**Agriculture governance models and actions to address the illegal employment**” (Scientific Subject Code IUS/03 e IUS/07)

The research is aimed at defining policy models in order to contrast the irregular employment in the agricultural field. The study encompasses the outlining of goals and indicators for funding directed to agricultural businesses in compliance with the Common Agricultural Policy 2023-2027, the role played by the strategic national Plans in the employees’ inclusion and in the development of the rural fabric, the enacting of the social conditionality and the PNRR actions for the addressing of illegal employment.

Moreover, the research will concern the regulation instruments for seasonal and immigrant workers recruiting, the legal frameworks for the meeting of agricultural seasonal labor demand and supply and it will assess the action of public and private subjects, aimed at enhancing the foreign workers integration within the rural areas.



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- n. 1 scholarship for the research activity “**Management innovation of the Public Administration and empowerment of public employees’ performances**” (Scientific Subject Code IUS/07)

The project is aimed at studying, starting from the relevant legal framework, the existing links among the managerial profiles of the public administrations and the employees’ performances with the purpose to uncover a possible model, both theoretical and operative, intended to the quantitative and qualitative improvement of the employees’ performances and to the quality of the services available for the users, even through specific training programs. Therefore, the research is designed for the building of an innovative performance ranking and evaluation system, with the possibility of direct experimentation and application in the public bodies, which would combine the improvement of the public employees’ productivity with the fundamental learning programs and thus with the quality and effectiveness of the public action.

- **n. 2 positions with scholarship DM 351/2022 - PNRR** (D.M. 09 APRIL 2022, N. 351 A.A. 2022/2023, PNRR - Mission 4, component 1 “Strengthening the provision of education services: from nurseries to Universities”: M4C1 - Investimento 4.1 “Increase research and innovative PhD number for public administration and cultural heritage”), among which:

- n. 1 scholarship for the research activity “**The legal protection of situations of functional dependence between public welfare and private autonomy. Trajectories of inclusion in the comparison between legal systems**” (Scientific Subject Code IUS/02)

The issue of the care of functionally dependent persons (disabled, sick, elderly) is a priority in the political agenda of most Western states.

The research will tend to investigate how contemporary welfare systems deal with the problems arising from the loss of self-sufficiency, analyzing the different models of public support and the strategies adopted by different states. Best practices will be highlighted, also in order to propose models for our system, in which assistance to persons deprived of autonomy is a priority of the PNRR.

Specularly, the research will focus on the analysis of the contracts that are frequently used to meet the needs of frail persons, whether of an economic or welfare nature.

- n. 1 scholarship for the research activity “**Corporate social responsibility in the framework of the "Due Diligence" Directive: company profiles**” (Scientific Subject Code IUS/04)

The project aims to investigate the topic of Corporate Social Responsibility under the prospective of company law in the light of the new values expressed in the Proposal of EU Directive on Corporate Sustainability Due Diligence (released the last 23.2.2022) whose introduction is upcoming. This proposal, which aims to create a legal basis for choices hitherto considered ethical and purely voluntary as well as a European level playing field, will have effects on CSR issues traditionally debated in company law (from the enforcement tools of ethical codes, to the responsibility of social issues due to the inactivity of ethical demands, the role of stakeholders in decision-making and control processes, the role of non-financial information, etc.) which will be examined in this new light.

- **n. 1 position with scholarship DM 351/2022 – Green and digital transition** (D.M. 09 APRIL 2022, N. 351 A.A. 2022/2023, PNRR - Mission 4, component 1 “Strengthening the provision of education services: from nurseries to Universities”: M4C1 - Investment 3.4 “Teaching and advanced University skills”), among which:

- n. 1 scholarship for the research activity: “**Blockchain and “disintermediated” management of intellectual property rights**” (Scientific Subject Code IUS/04)

The project aims at deepening the issues of intellectual property law related to the use of the blockchain for the distribution of products protected by copyright (such as in particular audiovisuals), also thanks to the involvement in the project of the WESHORT company (which already uses the blockchain to certify materials from producers and authors and repay IP rights). In fact, the use of a decentralized distribution system (Distributed Ledger Technology) poses problems inherent in the activities entrusted to the collecting societies for management of copyright, directly allowing those who participate in the audiovisual distribution "chain" to contract and collect the own fees. This undermines the system used to date and requires the interpreter to study the consequences on a competitive and authorship level.

- **n. 2 position for industrial/intersectoral doctorate funded by CIA Puglia s.r.l. reserved to employees of the company,**



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among which:

- n. 1 scholarship for the research activity “**Legal regulation of blockchain and applications in the agri-food supply chain**” (Scientific Subject Code IUS/03)

The research concerns the application of blockchain technology to the agri-food supply chain traceability, with specific focus to the certification of the quality, origin and raw material features and to the potential blockchain applications aimed at waste reduction in the supply chain.

The study will encompass the information management and transmission, the liability aspects, the know-how protection, and the blockchain application to the distinctive signs of origin and to the biological productions.

The outlining of business management protocols and models will allow to assess the cost to bear in order to improve the process innovations and the achievable access to support measures for technology innovation.

- n. 1 scholarship for the research activity “**Food safety and risk assessment: the obligations of food enterprises**” (Scientific Subject Code IUS/03)

The research concerns the legal framework of the obligations to be undertaken by food businesses in order to ensure the placing on the market of safe food, in compliance with European and national legislations, in terms of productive activities management, in the light of the food legislation concerning food hygiene, business self-monitoring, traceability and extra EU raw materials conformity check.

The study will be aimed at analyzing the application of the new legal framework about the transparency of risk assessment procedures, established by the EU Regulation 2019/1381, with particular concern to the placing on market of new products and the corresponding obligations arising for food operators.

The available positions will be assigned according to the order in the merit ranking for each topic, up to their exhaustion. In the absence of suitable candidates for a specific research activity, positions will be assigned according to the order in the merit ranking. Any additional scholarship will be assigned according to the order in the merit ranking.

Admission test:

The exam procedures will be taken in accordance with art. 6., typology C, of the Call. The knowledge of English or any other foreign language among French, German or Spanish (chosen by the candidate) will be checked as a part of the oral examination

The subjects covered within the oral examination are based on the discussion of the research project as well as on the assessment of knowledge in the field(s) of scientific subjects to which the research pertains.

Admission test for foreign applicants:

Foreign candidates can choose to do the admission test in Italian or English language

Admission test date and time:

Oral exam: 29th July 2022, h 10.00.

Venue: Meeting Room Private Law– 1st floor - Dipartimento di Giurisprudenza – Corso Italia, 23 - Bari

For more information please see:

<https://uniba.it/ricerca/dipartimenti/lex/post-laurea/dottorati-di-ricerca>



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ANNEX 4)

PROFILE

PhD PROGRAMME IN MEDITERRANEAN RIGHTS, ECONOMIES AND CULTURES

CUN Scientific Areas: 11a Historical, philosophical and pedagogical sciences, 12 - Legal sciences, 13a - Economic and statistical sciences, 14 – Political and social sciences

Scientific Subject Code: IUS/01, IUS/02, IUS/03, IUS/04, IUS/05, IUS/06, IUS/07, IUS/08, IUS/10, IUS/11, IUS/12, IUS/13, IUS/16, IUS/17, IUS/19, IUS/21, SECS-P/01, SECS-P/02, SECS-P/06, SECS-P/07, SECS-P/08, SECS-P/11, SECS-P/13, SECS-S/01, M-PED/01, SPS/12

Coordinator: prof. Paolo Pardolesi

Administrative Office: Dipartimento Jonico in "Sistemi Giuridici ed Economici del Mediterraneo: società, ambiente, culture"

PEC: segreteria.djsge@pec.uniba.it

Duration: three years

Curricula: NO

Total available PhD positions: 11

- n. 2 positions with scholarship funded by the University of Bari of which n.1 reserved for applicants that graduated in non-Italian University;
- n.1 position for industrial/intersectoral doctorate, funded by **Eurisko Srls** reserved to employees of the company, pursuant to article 11 of Ministerial Decree n. 45/13; research project: **“The assessment of technological innovations in the digital transition and data economy scenario. Variables and differences identifiable from a business perspective”**;
- n.1 position for industrial/intersectoral doctorate, funded by **TOOR4 Srl** reserved to employees of the company, pursuant to article 11 of Ministerial Decree n. 45/13; research project: **“The evolution of the qualitative and quantitative levels of non-financial information disclosed by Italian companies. State of the art and empirical evidence”**;
- n.1 position for industrial/intersectoral doctorate, funded by **Webidoo S.p.A.** reserved to employees of the company, pursuant to article 11 of Ministerial Decree n. 45/13; research project: **“Horizons and risks of digital finance in the world of start-up and scale up”**;
- n.1 scholarship on a restricted topic funded under Ministerial Decree 351/2022 for research on **“Urban Food Policy”**: The Milan Urban Food Policy Pact commits the mayors of 210 worldwide cities to make food systems sustainable, resilient and equitable. In this perspective, within the AGRICULTURE project funded by the PON Legality 2014-20, the strategic governance lines of the agri-food system for the Metropolitan City of Bari are framed, to be implemented in a participatory way with projects and best practices, including logistical ones. Therefore, the idea is to provide a broad research framework, considering European priorities and guidelines (EU Food 2030 Research and Innovation Policy Framework, EU's commitment under the Paris Agreement, UN Sustainable Development Goals), inspiring integrated food policy development in favor of the more than 1.2 million residents in the 41 metropolitan municipalities;
- n. 1 scholarship on a restricted topic funded under Ministerial Decree 351/2022 for research on **“Prevention and treatment of chronic diseases: application of consumer behavior for the effectiveness of digital communication in the context of obesity”**. Obesity affects 10% of the population in Italy. However, methods of consumer behavior have never been applied to improve the effectiveness of communication with patients suffering from this pathology. Therefore, this project, based on the empirical method of behavioral experiments,



is aimed at understanding: a) what are the most effective communication stimuli to push citizens to consider the surveillance and prevention of obesity; b) what are the most effective communication stimuli to make behavioral therapies more effective; c) how to make the communicational "interface" used in multi-channel digital platforms (web, mobile, text messages) more effective in actively engaging the patient, in order to optimize the management of the care path;

- n. 1 scholarship on a restricted topic funded under Ministerial Decree 351/2022 for research on “**The incandiability occurred during the regional elective mandate**”. The objectives of the research concern criminal law and administrative law in the jurisprudence of the Edu Court and the Constitutional Court. The question of ineligibility arising in the regional mandate obliges us to question whether the forfeiture belongs to the punitive-afflictive right, with the consequent application of the constitutional and conventional principles relating to "criminal matters" or should it be confined to the area of administrative sanctions and therefore has retroactive font;
- n. 1 scholarship on a restricted topic funded under Ministerial Decree 351/2022 for research on “**Archaeological assets and threats of organized crime**”. The research objectives concern the phenomena of illicit trafficking in works of art and / or archaeological finds (so-called "archeomafia") which allow mafia organizations to make huge profits, through a well-structured criminal network, capable of dispersing traces of illicit origin. The study of this thematic area - starting from the different forms of crime widespread in the Mediterranean basin, which contains the historical and cultural roots of many civilizations - will concern the profits deriving from the illicit trafficking of cultural assets (often also linked to the financing of terrorist groups);
- n. 1 scholarship on a restricted topic co-funded by **VE.AN.FASHION SRL** pursuant to Ministerial Decree 352/2022 for research on “**Corporate compliance with ESG standards between needs for correct accounting representation and corporate promotional communication**”. The research objectives concern the development of a corporate compliance path that enables small and medium-sized companies to fulfill the additional budgetary obligations regarding ESG (Environment, Social and Governance) factors, in force starting from balance sheet 2023. The study first of all envisages the analysis of the company production cycle (production and distribution of textile and clothing products) in the light of the criterion of the so-called "Double materiality", identifying the impact profiles on the company activity of climate change and, specularly, the aspects of the activity that may affect in terms of impact on the reference environment;
- n.1 position without scholarship.

The places available with scholarships on a specific topic pursuant to the DD. MM. 351/2022 and 352/2022 will be assigned according to the order in the ranking of merit for each topic, until all the places themselves are exhausted. The places available will be assigned according to the order in the merit ranking, until the places are exhausted. The places available for competition on an unconstrained topic will be assigned in priority according to the order of the general ranking.

Admission test (ordinary posts):

The selection will take place pursuant to art. 6, typology C of the call.

The selection will be pursued through qualifications and oral exam with discussion of an original research project consistent with the research directives of the doctoral course, previously submitted by the candidate (maximum 12000 characters including spaces) together with the application for admission under penalty of exclusion. The oral exam will focus on the discussion of the research project with regard to its originality, methodological rigor and consistency with the research directives of the doctorate. As part of the oral test, knowledge of English as foreign language will also be verified. As regards the places available for competition with scholarships on a specific topic pursuant to the DD. MM. 351/2022 and 352/2022, the exam will be based on the evaluation of qualifications and on the oral exam with discussion of the research project (maximum 12,000 characters including spaces) relating to the restricted topic provided for in the call. The oral exam will focus on the discussion of the research project and will also verify the knowledge of the foreign language: English.

Methods of conducting the tests in English for foreign candidates:

Foreign candidates may choose the admission exam in Italian or English

Admission test date and time:

Evaluation of scientific qualifications: 27th July 2022, 10:00 am



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Oral exam: 28th July 2022, 10:00 am

Exam location: Classroom 1, Dipartimento Jonico in "Sistemi Giuridici ed Economici del Mediterraneo: società, ambiente, culture", Via Duomo n. 259, Taranto. As regard the place reserved for graduates from foreign universities, the oral exam will be carried out using the Microsoft Teams platform. The access code to the platform will be promptly communicated to the candidates on the website of the Doctorate in Mediterranean Rights, Economies and Cultures.

For more information see the website: <https://w3.uniba.it/ricerca/dipartimenti/sistemi-giuridici-ed-economici/postlaurea/dottorato-di-ricerca>



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ANNEX 5)

PROFILE

Ph.D PROGRAMME IN RIGHTS INSTITUTIONS AND SAFEGUARDS IN TRANSITIONAL SOCIETIES

Scientific Areas CUN: 12 – Legal Sciences; 10 – Sciences of Antiquity, Philological-Literary and Historical-Artistic, 14 – Politics and Social sciences

SSD: IUS/01, IUS/08, IUS/09, IUS/10; IUS/11, IUS/12, IUS/13, IUS/14, IUS/16, IUS/19, IUS/20, IUS/21, L-LIN/12, SPS/06.

Coordinator: Prof. Alessandro Torre

Administrative location: Department of Law

PEC: direzione.giurisprudenza@pec.uniba.it

Duration: 3 years

Scholarships: 5

- n. 1 (University scholarship)
- n. 4 (PNRR scholarship) – (*) restricted research topics listed and described below:

(*) **The candidate is asked to select and apply for one of the following research projects:**

N. 1 PNRR scholarship research project in the Area “**PNRR Phd Programmes**”

Title: **NEUROSCIENTIFIC PROOFS AND CRIMINAL LIABILITY**

[SSD IUS/20 – Legal Philosophy]

Characterization: The project is consistent with the already existent PhD research lines and with the PNRR missions in the area IUS/20 – Philosophy of Law, considering that several investigations in the neuroscientific area may provide valuable contributions to the issues concerning the legal qualification of the human action. As a result, they are relevant to understand the most important preconditions of a great social cohesion. The above-mentioned investigations are crucial while studying the most fundamental issues concerning the legal qualification of human action and, as a result, are relevant to understand the most important preconditions of a greater social cohesion.

N. 1 PNRR scholarship research project in the Area “**PhD programmes for Public Administration**”

[SSD: IUS/10 – Administrative Law]

Title: **PUBLIC CONTRACTS. BALANCING COMPETITION, ENVIRONMENTAL PROTECTION, SIMPLIFICATION, AND BRIBERY PREVENTION**

Characterization: In recent years, within the Italian legislation concerning public contracts, it is possible to watch the emergence of a “multi-value” character of the procedures for the award of contracts with particular reference to the Green procurement. The mentioned procedures aim not only at ensuring fair competition, but also at protecting further values, such as environmental protection, simplification, and fast procedures. Within the evolution of the rules concerning public contracts, indeed, several values have been introduced, such as environmental protection, transparency, simplification, bribery prevention, etc., with the outcome of outspread and frequent conflicts among values. The project, in compliance with the PNRR commitment, will focus the mentioned problematic issues.

N. 1 PNRR scholarship research project in the Area “**Programmes for environmental and digital transitions**”

[SSD IUS/21 – Comparative Public Law]

Title: **FREEDOM OF EXPRESSION AND DIGITAL VULNERABILITIES**

Characterization: According to the PhD and PRIN targets, the project impacts on several subject matters in the 12 area (Legal Sciences): equality, equal opportunities, human dignity, freedom of expression on the Internet and its effects on economic freedoms (e.g. data profiling for commercial purposes). The mentioned issues, considering the PhD’s programme values, are consistent with the following PNRR missions: education and research, social inclusion and cohesion, digitalisation, innovation, and competitiveness.

N. 1 PNRR scholarship research project in the Area “**PhD programmes for Public Administration**”



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[SSD: IUS/21 – Philosophy of Law]

Title: LIMITING PERSONAL FREEDOM IN MIGRATION POLICIES. MONITORING AND PROTECTION MODELS

Characterization: Since the Nineties, legal measures aiming at limiting personal freedom of immigrants and asylum seekers have been introduced in all the immigration countries. Scholars criticized those measures, considering similar to the universe of restrictive locations coherent with criminal detention facilities reserved to foreigners.

Detention centres, whose names changed frequently over the years, were introduced also in Italy, since the adoption of delegated law n. 286/1998. The mentioned centres aim at holding in custody foreigners who will be expelled or some categories of asylum keepers, soon after their arrival on the Italian territory. In compliance with the mission of the PhD and the PNRR, the project aims at studying the evolution of and the guarantees offered by the Italian legislation and the supranational agreements in this field.

Curricula: NO

Projects' Selection:

The examination procedures will be taken according to art.6 lett.B).

For all the Projects the selection will take place through: evaluation of the qualifications, evaluation of the Research Project, oral exam, and test of linguistic knowledge, with the formulation of separate rankings for University Projects with free content and Projects with PNRR bound content that will converge in a single general ranking. Any additional scholarships will be awarded according to the order of the general ranking.

The examination will be achieved by the assessment of the applicant's qualifications and an oral discussion of an original research project to be previously submitted, **under penalty of exclusion**, to the Examination Committee by a paper (max 15,000 writing characters including spaces) together with the formal application for admission.

The oral examination will focus on the discussion of the submitted research project and on the assessment of a comprehensive knowledge of the project's issues. The project discussion will focus on: 1) its consistency to the Ph.D's research directions; 2) knowledge of the "state of the art; 3) clarity of the target ; 4) methodological accuracy.

In the oral examination, the knowledge of English or any other foreign language among French, German or Spanish will be checked as a part of the test.

Foreign applicants' examination:

Applicants from abroad are allowed to speak in Italian and English

Calendario esami di ammissione:

CV and Projects' evaluation: **26th July 2022** – h. 15:00 (03:00 pm)

Oral examination **29th July 2022** – h.9:00 (09:00 am)

Where: Fabris Room – V floor - Department of Law - University of Bari Aldo Moro

Further information:

<https://w3.uniba.it/ricerca/dipartimenti/lex/post-laurea/dottorati-di-ricerca/dottorato-di-ricerca-37deg-ciclo-in-diritti-istituzioni-e-garanzie-nelle-societa-in-transizione>



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ANNEX 6)

PROFILE

PHD COURSE IN ECONOMICS AND FINANCE OF PUBLIC ADMINISTRATIONS

CUN Scientific Areas: 13a – Economic and statistical science; 12 - Law; 02 –Physical sciences; 13b - Economics and business sciences

Scientific subject code: SECS-P/01, SECS-P/02, SECS-P/03, SECS-P/06, SECS-P/07, IUS/05, IUS/09, IUS/10, IUS/12, IUS/21, SEC-S/01, SEC-S/06, FIS/01, FIS/07

Coordinator: Prof. Nicola Daniele Coniglio

Administrative Unit of the PhD course: Dipartimento di Economia e Finanza

PEC: direttore.dsem@pec.uniba.it

Duration: 3 years

Total PhD positions for this Call for Applications: 12

- n. 10 on research topics listed and described below;
- n. 2 position without scholarship.

PhD course with a single curricula:

PhD scholarships will be awarded on the following research topics:

N.	Title of the research project	Partner	Brief description
1	PNRR, green and digital transition and socio-economic cohesion in the Italian Mezzogiorno *	Bank of Italy(Bari branch)	The research project will have to evaluate the progress in the field of green and digital transitions in Italian context, and in particular in the South, to define how much they support socio-economic cohesion. The actual transformations brought about by the PNRR and other public policies in the period 2022-206 will have to be monitored and evaluated, both from the point of view of the growth/improvement of public capital and from the point of view of the effective improvement of the context conditions, of the productive capacities and of labour demand, of the ability of public operators to organize and offer new/better services to citizens and businesses, also in comparisons with other realities In Italy and Europe.
2	Economic law of cultural goods: economic incentives for cultural and touristic enterprises.	Municipality of Alberobello (BA)	The research focuses on European and state legislation on the economic enhancement of cultural heritage and its repercussions for the purpose of encouraging tourism and hotel companies. The legislation refers to a number of sources of economic law, among which the State aid framework (especially following the pandemic), which, in recent years, plays a fundamental role following both the temporary framework derogating from the general rules and the EU-State co-programming for the revival of the economy. The specificity of the aforementioned legislation also makes it possible to combine economy, culture and the environment in a perspective in line with Reg. (EU) No 241 of 2021 and reg. (EU) No 852 of 2020, as well as the recent Communication on environmental protection.



3	Inequality of opportunity and gender policy	Fondazione Istituzione Pugliese di Ricerche Economiche e Sociali – IPRES	The project could address, from both a theoretical and an empirical perspective, the following topics: methodologies for the analysis and the measurement of inequalities of opportunities (including gender inequalities) and for the cross country comparability; design and evaluation of policies (tax, benefit and regulation policies) aimed at reducing inequalities of opportunities; relationship between inequalities of opportunities, efficiency and economic growth; relationship between inequalities of opportunities and meritocracy.
4	Statistical learning for the evaluation of coastal and marine ecosystem services	ISPRA -Italian National Institute for Environmental Protection and Research	The state of an ecosystem corresponds to the physical, chemical and biological conditions that determine its quality and is strongly linked to the well-being of a community through the concept of ecosystem services. The research aims to develop methodologies for measuring the state of ecosystems through indicators based on mechanisms of evolution over time and diffusion in space. An effective assessment of ecosystem services allows policy makers and stakeholders to analyse synergies between different services that contribute to the well-being of the community.
5	Territorial inequality and policy for education, human capital and mobility	Bank of Italy (Bari branch)	The project could address, from both a theoretical and an empirical perspective, the following topics: intergenerational mobility in education (in Italy and compared to other countries); human capital, personal and geographical inequalities; from education to labour market (the returns to education); the evaluation of policies for the increase in human capital for the equity in education; meritocracy of the education system.
6	Impact evaluation of health policies and technologies	Strategic Regional Agency for Health and Social Care (ARESS Puglia)	Fellows will develop skills in the economic evaluation of health policies and technologies. Activities may include systematic review, meta-analysis, organisational arrangements (PPPs), methods for the economic evaluation of health care. The fellow will collaborate with members of the Apulian regional center of health technology assessment (CReHTA) at ARESS.
7	Earth observation and big data analytics for the measurement of economic dynamics and for the design of public policies	Planetek Italia srl	Satellite Earth Observation data is increasingly used by economists thanks to technological developments that enable ever greater spatial resolutions and extensive, low-cost global coverage. The research activities will be aimed at measuring, through the use of Earth Observation data and the development of data analytics skills, economic dynamics with high geo-spatial resolution in order to refine the design of public policies both in advanced and developing countries.
8	Economic law of digital transition in public education	Apulia Region – Assessorato Formazione e Lavoro	The research is aimed at examining, even critically, of the latest legislation on digitization in the field of public education. This is a typical theme of economic law that essentially refers to two survey profiles: the removal of territorial and social inequalities through the implementation of technologies and spending commitments concerning budgetary policies in support of the national education system (which, as is known, includes a plurality of potentially providers of the public school service).
9	Public policies for the enhancement of cultural heritage for the sustainable development of regional territories. The contribution of the PNRR.*	Apulia Region – Department of Tourism, Cultural Economy and Territorial Promotion	The project could address, from both a theoretical and an empirical perspective, the following topics: definition and dimensions of the cultural heritage; characteristics and dynamics of the demand for culture; theoretical models, empirical methodologies, data sources; public policies for the management and the enhancement of the cultural heritage; cultural heritage and sustainable local development.
10	Evaluation of tools and measures of cohesion policies	First Ministry Cabinet (Italian Government) – Department for Cohesion Policies	The project envisages a phase of information gathering and subsequent evaluation through statistical and econometric techniques of the functioning of some of the most important measures of the Cohesion Policies adopted in the last decade, in particular those used for the territorial development of the Italian



			Mezzogiorno. A prominent role will be played among these by “Resto al sud”, an incentive to new entrepreneurs, (DL 91/17, comma 1), the Special Economic Zones (comma 4 and 5 of the same Decree), and the tax credit on industrial investments. Evaluation will concern also measures of territorial planning like the Internal Areas National Strategy. The research will also implement a comparison with the main comparable measures of our European partners.
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*PNRR is the acronym for National Plan for Recovery and Resilience

Admission requirements:

Applicants with a degree in the following areas of study (or equivalent if obtained in foreign universities) are eligible:

LM-16 Finanza (Finance)

LM-52 Relazioni internazionali (International relations)

LM-56 Scienze dell'economia (Economics)

LM-62 Scienze della politica (Political Sciences)

LM-63 Scienze delle pubbliche amministrazioni (Public Administration Science)

LM-76 Scienze economiche per l'ambiente e la cultura (Cultural and Environmental Economics)

LM-77 Scienze economico-aziendali (Economics and Business)

LM-81 Scienze per la cooperazione allo sviluppo (Cooperation and Development Sciences)

LM-82 Scienze statistiche (Statistical Science)

LM-83 Scienze statistiche attuariali e finanziarie (Financial Statistics)

LM-87 Servizio sociale e politiche sociali (Social and Political Science)

LM-90 Studi europei (European Studies)

LM-92 Teorie della comunicazione (Communication Theories)

LM/SC-GIUR Scienze Giuridiche (Law)

19/S (specialistiche in finanza) (Master in Finance)

22/S (specialistiche in giurisprudenza) (Master in Law)

49/S (specialistiche in metodi per la ricerca empirica nelle scienze sociali) (Master in Empirical Methods for Social Science)

60/S (specialistiche in relazioni internazionali) (Master in International Relations)

64/S (specialistiche in scienze dell'economia) (Master in Economics)

70/S (specialistiche in scienze della politica) (Master in Political Science)

71/S (specialistiche in scienze delle pubbliche amministrazioni) (Master in Public Administration Science)

83/S (specialistiche in scienze economiche per l'ambiente e la cultura) (Master in Cultural and Environmental Economics)

84/S (specialistiche in scienze economico-aziendali) (Master in Economics and Business)

88/S (specialistiche in scienze per la cooperazione allo sviluppo) (Master in Cooperation and Development Sciences)

90/S (specialistiche in statistica demografica e sociale) (Master in Demography and Social Statistics)

91/S (specialistiche in statistica economica, finanziaria ed attuariale) (Master in Economic and Financial Statistics)

92/S (specialistiche in statistica per la ricerca sperimentale) (Master in Statistics for Research)



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99/S (specialistiche in studi europei) (Master in European Studies)

101/S (specialistiche in teoria della comunicazione) (Master in Communication Theories)

102/S (specialistiche in teoria e tecniche della normazione e dell'informazione giuridica) (Master in Theory and Practice of Law-making and judicial information)

LMG/01 GIURISPRUDENZA) (Law)

Selection criteria:

The exam procedures will be taken in accordance with art. 6, typology C, of the Call: evaluation of academic titles + PhD project on one of the 10 listed topics to be submitted with the application + oral exam for the discussion of the PhD project

The selection of PhD candidates will be carried out considering the academic titles/professional experiences of the applicants as well as an interview. During the interview (oral exam), applicants will also discuss their PhD project (max 4 pages). The candidates are required to submit the PhD project together with the application form, **under penalty of exclusion**.

The interview will also be finalized to test proficiency in English language. The interview might be done in videoconference, if there are no conditions to be able to carry it out in presence, at the request of the candidate.

Foreign candidates might decide to take the written test and the interview in Italian or in English.

Selection dates:

Oral exam/Interview: 1/August/2022 (time 9.30 am)

Location: Biblioteca 'Etta Chiuri' (2nd floor), Dipartimento di Economia e Finanza, Università degli Studi di Bari Aldo Moro, Largo Abbazia Santa Scolastica, 70124 Bari (Italy).

For further information: <https://www.uniba.it/ricerca/dipartimenti/dse/dottorato>



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ANNEX 7)

PROFILE

PHD PROGRAMME IN ECONOMICS AND MANAGEMENT

Subject area CUN: 13 Economics and statistics

Scientific Subject Codes: SECS-P/01, SECS-P/02, SECS-P/03, SECS-P/05, SECS-P/06, SECS-S/06, SECS-P/07, SECS-P/11, SECS-P/13 and SECS-S/04

Coordinator: Prof. Angela S. Bergantino

Administrative location: Dipartimento di Economia, Management e Diritto dell'Impresa

PEC: direzione.demdi@pec.uniba.it

Duration: 3 years

Curricula:

1. Economics (Scientific Subject Codes: SECS-P/01, SECS-P/02, SECS-P/03, SECS-P/05, SECS-P/06 and SECS-S/06)
2. Management and technology (Scientific Subject Codes: SECS-P/07, SECS-P/11, SECS-P/13 and SECS-S/04)

Total number of position available: **8** divided as follows:

- n. 3 positions with scholarship funded by University of Bari
- n. 1 position with scholarship funded by PNRR project: D.M. 351/22
- n. 2 positions with scholarship funded by D.M. 352/22
- n. 2 positions without scholarship

Project description for scholarships on specific themes (DM 351/22 and DM 352/22)

Innovating as a response of companies and territories to natural disasters. Resilience and sustainability (D.M. n.351/22)

The research project aims to investigate the impulses for transformation and innovation generated by natural disasters that can produce positive and transformative effects of a structural and lasting nature in ecosystems and communities. The proposed analysis will mainly concern the ability of economic actors to "react" to the pandemic catastrophe caused by Covid-19 and the policies implemented by the central government. In particular, the analysis will focus on the one hand, on the residential, work and consumption choices of families, and on the adoption of eco-sustainable technologies and processes by private companies.

Study of innovative digital models in the banking sector: economic and social sustainability analysis of digital branches (D.M. n.352/22)

The research project aims to study the new economic models of digital banks and sustainable strategies from both an economic-financial and social point of view. The project intends to analyze the presence and characteristics of digital banks and their impact on citizens focusing both on the supply and on the demand. About the supply, the main opportunities and criticalities underlying the opening of a digital bank will be analyzed, the differences and advantages compared to traditional banks, the services offered and the study of virtuous cases. The demand will be studied through choice experiments, based on the stated and revealed



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preferences analysis of citizens on the services provided by the online bank, the characteristics it must have, the preferred methods and the services to be provided.

Study of innovative urban management models aimed at the economic, behavioral and social sustainability of the territories (D.M. n.352/22)

The research project aims to study new models and data drivers to build sustainable strategies both from an economic-financial point of view and in relation to the 17 ESG objectives of the 2030 Agenda for the Sustainable Development of the cities of the future. The main objective is to build models that allow both the real-time monitoring of the city's performance and the setting of scenarios built on the basis of public policy alternatives and political agenda objectives. To this end, the project will use local performance indicators suitable for the objectives of economic-financial sustainability and the well-being of the citizens of the territories (such as urban transport and parking, green areas, public services and infrastructures, school facilities, etc.).

Admission procedure:

Selection will take place in accordance with Art. 6 lett. C) of the call for applications.

The examination will be based on the discussion of a research project proposed by the candidate, inherent to the themes of the PhD (written in Italian or English, between 1,000 and 2,000 words), sent together with the application for admission. Knowledge of the following foreign language will be part of the assessment: English. There will be only one examination and a single ranking list of merit. The places offered in the competition will be allocated, among the various curricula, according to the order in the merit list, until the places are filled. Scholarship places will be allocated in priority according to the order of the merit list. In the event of the renouncement of successful candidates, the ranking list may be extended. An oral test to discuss the research project is scheduled. The research project discussion may be conducted online upon request.

Method of carrying out the tests for foreign candidates:

Foreign candidates may choose to sit the examination in Italian or in English.

Admission examination calendar:

Oral test: 26 July 2022

Aula Paolo Emilio Cassandro (3° piano – Corpo Dipartimenti) – h. 14.00

For further information please consult the

website: <https://www.uniba.it/ricerca/dipartimenti/demdi/ricerca/dottorato-di-ricerca-1>



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ANNEX 8)

PROFILE

PHD PROGRAMME IN PHYSICS

in collaboration with ISTITUTO NAZIONALE di FISICA NUCLEARE, FRASCATI - ROMA

CUN Scientific Area: 02 – Physical sciences

SSD: FIS/01, FIS/02, FIS/03, FIS/04, FIS/07

Coordinator: Prof. Giuseppe Gonnella

Administrative headquarters: Dipartimento Interateneo di Fisica “M. Merlin”

PEC: direzione.fisica@pec.uniba.it

Scholarship duration: 3 years

Total positions available: n. 9:

- n. 3 ordinary positions with scholarship granted by University of Bari.
- n. 3 ordinary positions with scholarship granted by INFN.
- n.1 position, in agreement with D.M. 351/22, on the project “Development of complex network models and explainable artificial intelligence for one-health applications”. The research activities will be lead in partnership with Planetek Hellas. The main activity will focus on the study and design of machine learning or deep learning models for remote sensing data for one-health applications. Besides, to shorten the gap between classical and quantum algorithms, the project will consider state-of-the-art hybrid variational classifiers for benchmarking purposes and the study of novel quantum strategies dedicated to one-health applications.
- n. 1 position, in agreement with D.M 352/22, on the project “Development of Artificial Intelligence algorithms for the standardization of the breath analysis process”, in partnership with Predict srl. The research activities will deal with the development of quantitative methodologies to standardize human breath analyses by means of artificial intelligence. The PhD will aim at the development of novel methodologies for complex data to achieve a standardized characterization of breath and the development of dedicated algorithms to outline pathological conditions or deviations from normalcy.
- n.1 position financed by “Leonardo SpA” on the project “Quantum Imaging sensor applications and architecture”. The activity aims at the study, design, implementation and characterization of novel quantum imaging sensors.

Curricula:

- 1) Nuclear and subnuclear physics (FIS/01, FIS/04);
- 2) Condensed Matter Physics, Photonics and Quantum Technologies (FIS/01, FIS/03);
- 3) Applied physics (FIS/01, FIS/07);
- 4) Theoretical physics (FIS/02).

Admission procedures (ordinary positions):

The exam procedures will be taken in accordance with art. 6, typology C, of the Call.

Selection will be based on the CV evaluation and an interview. The knowledge of the English language will be also verified. The interview will concern physics fundamental arguments from the



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courses of the First Degree in Physics, and the research interests of the candidate related to the doctorate in physics.

With regard to the scholarships with a restricted theme, during the oral exam, the research project presented by the candidate at the time of the application will be discussed.

There will be a unique merit list and the scholarships will be assigned following the order in the merit list.

Foreign candidates can choose to take the admission exam in Italian or English.

Admission exam timetable:

Oral exam: July 27th 2022, H: 10.00

The oral exam will be held at Dipartimento di Fisica, Aula A, Campus Universitario, via Orabona 4, Bari, Italy.

If requested by the candidate, the examination may be taken online, if there are no conditions to be able to carry it out in presence.

Additional information at: <https://dottorato.fisica.uniba.it/>

<http://www.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca>



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ANNEX 9)

PROFILE

PHD PROGRAMME IN GENDER STUDIES

CUN Scientific Areas: 10 - Ancient History, Philology, Literature and Art History, 11 - Historical, Philosophical and Pedagogical Sciences, 12 – Law, 13 -Economic and Statistical Science, 14 - Politics and Social sciences

Scientific Subject Code: SPS/01 SPS/07 IUS/10 M-PED/02 M-PED/01 M-PSI/04 SPS/02 SPS/08 SECS-S/04 IUS/01 M-FIL/05 M-FIL/06 M-STO/02 M-PED/03 SECS-P/06 IUS/08 L-ART/06

Coordinator: Prof. Francesca R. Recchia Luciani

Administrative Office: Department of Humanistic Research and Innovation

PEC: dottorato.genderstudies@pec.uniba.it

Duration: 3 years

Total number of scholarship places in the competition is 8, of which 7 are subject-linked.

1 position with scholarship funded by University of Bari

The following is a list of the topic-bound fellowships with a description of the research project:

1. DOTTORATO DI RICERCA INNOVATIVO CON CONNOTAZIONE INDUSTRIALE D.M. 352/22.

Title: **COMMUNICATION STRATEGIES FOR ENHANCING GENDER EQUALITY AND EQUAL OPPORTUNITY IN BUSINESS, VALUING GENDER DIFFERENCES AND PROMOTING NEW ENTREPRENEURSHIP AND SOCIAL INCLUSION**

Research Project: The project is framed within Area 11, SSD M-FIL/05. The project proposed here focuses on the relationship between linguistic performativity and gender-based power relations within workplaces, with particular reference to the workplace. An investigation into stereotypes and forms of hate speech circulating in everyday language use, with particular reference to gender discrimination, is proposed.

Months abroad: 6

Months in the company: 18

2. DOTTORATO DI RICERCA INNOVATIVO CON CONNOTAZIONE INDUSTRIALE D.M. 352/22.

Title: **ECOSYSTEM SUSTAINABILITY AND WORLD CARE: ECOFEMINIST STRATEGIES FOR RESPECTING THE ENVIRONMENT AND THE LIVING.**

Research Project: The project is framed within Area 11, SSD M-FIL/06. The theoretical part of the project focuses on studying the relationship identified by ecofeminism between environmental exploitation and gender discrimination. This connection is useful in theoretically elaborating the



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ecosystemic connection between social sustainability, ecological sustainability and economic sustainability. Theoretical research on these issues will produce the possibility of systemizing a gendered sensibility on issues of environmental respect and practices of recycling and saving and energy resources, promoting a new vision of interdependence in the biosphere.

Months abroad: 6

Months in the company: 6

3. DOTTORATO DI RICERCA INNOVATIVO CON CONNOTAZIONE INDUSTRIALE D.M. 352/22.

Title: **THEORIES AND STRATEGIES FOR INCLUSION AND VALUING DIFFERENCES: DIVERSITY MANAGEMENT FOR INCLUSIVE AND SUSTAINABLE ORGANIZATIONS**

Research project: The project is framed in Area 14, SSD SPS/02. The project aims to bring gender studies into dialogue with the culture and practices of diversity management in order to improve the organizational competencies of companies in terms of social inclusion, valuing and recognizing diversity. The project aims to promote the enhancement of the individual skills and inclinations of staff with a view to integration and the realization of well-being in the work environment, through the activation of innovative strategies aimed at inclusion and the development and application of best practices capable of promoting improved relations into the organizations with a view to corporate social sustainability.

Months abroad: 6

Months in the company: 18

4. DOTTORATI PER LA PUBBLICA AMMINISTRAZIONE DM 351/22

Title: **WOMEN BETWEEN PRODUCTION AND REPRODUCTION: RECONCILING LIFE TIME AND WORK TIME IN PUBLIC ADMINISTRATION**

Research Project: The project is framed in Area 11, SSD M-FIL/06. The project focuses on the concept of reproductive labour. The objective of the theoretical research is the analysis of the theoretical conceptual modes and models that preside over the organization of work in contemporary production paradigms, which are based no longer as in the past only on production inside the factory but also and above all on the production of services, including through teleworking. The analysis of these issues is aimed at the elaboration of strategies and practices at the level of work planning in PA, in order to reconcile work time with women's life time, with a view to social sustainability that can positively affect work sustainability.

Months abroad: 6

Months in the company: 6

5. DOTTORATI PER LA PUBBLICA AMMINISTRAZIONE DM 351/22

Title: **GENDER STUDIES AND DIVERSITY MANAGEMENT FOR INCLUSIVE PUBLIC ADMINISTRATIONS.**

Project: The project is framed in Area 14, SSD SPS/08. The interdisciplinary project aims to bring gender studies into dialogue with the culture of diversity management in order to improve the



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organizational skills of public administration in terms of social inclusion, valuing and recognizing diversity/uniqueness, and improving the impact generated by administrative work on communities

Months abroad: 6

Months in the company: 6

6. DOTTORATI PER LA PUBBLICA AMMINISTRAZIONE DM 351/22 (Scuola Superiore Sant'Anna Pisa)

Title: **MANAGING DIVERSITY IN PUBLIC ADMINISTRATION AND PRIVATE COMPANIES**

Research Project: The Project is framed in Area 14, SSD SPS/01. The project focuses on the capacity of inclusion and visibility of the multiple diversities, which connote the different individual identities, following the intersectional perspective. Starting from the theoretical and conceptual models related to the construction/definition of identities and their problematic relationships, the project aims at assessing the different modalities of labour organization, in the private companies and in the public administration as well. The analysis will concentrate on the 'good practices' at the national and at the European level, by proposing a range of proper solutions in order to include diversities, under the policies perspective and the governance design as well.

Months abroad: 6

Months in the company: 6

7. DOTTORATI PNRR DM 351/22 (Università degli Studi di Macerata)

Title: **VULNERABILITY AND INCLUSION: RIGHTS, POLICIES AND PRACTICES**

Research project: the project is framed in Area 14, SSD SPS/01.

The project focuses on the relationship between inclusion and vulnerability with attention to the possible transformations of rights and policies. The aim of the research concerns the analysis of the notion of vulnerability, in its problematic nature, through the theoretical elaborations matured in the contemporary debate also in the light of a fruitful interaction with disability and intersectional studies. This relationship also requires a focus on the reconfiguration of the forms of force and domination that affect the human condition in a limiting sense. The analysis of these issues is aimed at the elaboration of strategies and practices in order to achieve a renewed dimension of territorial and social inclusion, starting from the places of living.

Months abroad: 6

Admission procedures:

Selection will take place in accordance with Article 6 lett. B of the notice.

The examination will be based on the evaluation of

1. TITLES;
2. RESEARCH PROJECT;
3. ORAL TEST (including foreign language ENGLISH)

Modalities of the tests for candidates

Candidates may choose to take the entrance examination in ITALIAN or ENGLISH.

Admission examination schedule and location

Oral exam: 29 July at 9:00 am

Examination venue and timetable: Department of Humanistic Research and Innovation (DIRIUM), Room I on



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the second floor of Palazzo Ateneo Bari.

The oral exam will be in the presence or, at the motivated choice of the candidate, remotely by videoconference on an electronic platform.

For further information see: [A.A. 2022/2023 — Ricerca e Innovazione Umanistica \(uniba.it\)](#)



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ANNEX 10)

PROFILE

PhD PROGRAMME IN GEOSCIENCES

CUN scientific area: 04 - Earth Sciences

Scientific Subject Code: GEO/01, GEO/02, GEO/03, GEO/04, GEO/05, GEO/06, GEO/07, GEO/08, GEO/09, GEO/10, GEO/11

Coordinatore: Prof. Roberto Sulpizio

Administration: Dipartimento di Scienze della Terra e Geoambientali

PEC: direttore.geo@pec.uniba.it

Duration: 3 years

Curricula: NO

Total available position n. 6, as follow:

- i) 1 position with scholarship funded by university of Bari free project. SSD GEO/01-GEO/11
- ii) Numerical modelling of phreatic eruptions (PNRR, DM351/22). SSD GEO/08
The project is within the theme "Environmental, natural, and antropic risks". I twill contribute to the comprehension of processes driving phreatic eruptions, which are amongst the most difficult volcanic phenomena to be predicted. The goal will be achieved through the use of poroelastic models of upper crust, which are able to simulate the physical conditions that may lead to phreatic eruptions. The numerical simulations will be compared with geological data, already in the availability of the research group in Bari. This will lead to a better knowledge of processes preceding the explosive dynamics, and will be of great help in improving our comprehension of the physics of phreatic eruptions. The outputs of the study will be of paramount importance for the mitigation of volcanic risk and will improve our communication with stakeholders and society.
- iii) Authomated learning techniques (machine learning) applied to analysis of seismic data sets (PNRR, DM351/22). SSD GEO/10
The project is within the theme "Environmental, natural, and antropic risks", with particular focus on seismic monitoring. The project is strongly multi-disciplinary, because it requires computer literacy (machine learning), geological (seismotectonic characterization of the landscape), and mathematical-physical (modelling of seismic source) skills. The outputs will be disseminated into international networks for sharing data, like FDSN (International Federation of Digital Seismograph Networks) and EIDA (European Integrated Data Archives).
- iv) The use of concrete in monumental buildings in the first half of 20th century: materials, technologies and alterative processes. (Patrimonio Culturale, DM351/22). SSD GEO/09
The prroject is aimed to the study of concretes used in monumental buildings of the first hald of 20th century, with particular attention to alterative processes. External partner will be the Dipartimento di Chimica dei materiali del E. Torroja Institute for Construction Science (IETcc), Madrid, which is part of National Council for Science of Spain (CSIC). Researchers at IETcc has a sound scientific experience on technology of building naterials, especially for concretes, and on low-carbon new materials, as geo-polymerous. Institutional partner of the project will be the "Soprintendenza Archeologia, belle arti e paesaggio per la Città metropolitana di Bari".
- v) High-resolution magnetotelluric survey of Central Italy, aimed at the reconstruction of a resistivity model of the crust. (Granted by INGV). SSD GEO/11



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- vi) Recovery of mineral nutrients from urban water waste, aimed at promoting their use in the fertilizing industry for a sustainable environment. (Project with industrial target, partner TIMAC AGRO SpA, DM352/22). SSD GEO/09

The project has the aim to offer new solutions for the development of techniques in a new and strategic sector of industry, like the food processing. This reflects the need to have new solutions for the fertilizing industry, promoting the re-use of waste material, following the concept of using material "from cradle to grave". The project fits very well with innovation and development plans of Apulia region, in agreement with the PNRR European and national plan "Green Deal". At its end, the project is aimed to diminish the use of primary natural resources in fertilizing industry, increasing the recovery of nutrients from water waste.

Admission and selection procedure:

The exam procedures will be carried out in accordance with art. 6 lett. C.

Applicants will be selected by titles and oral examination.

With regard to the scholarships with a restricted theme, during the oral exam, the research project presented by the candidate at the time of the application will be discussed

Procedures for foreign candidates:

Evaluation of qualification and telematic interview. Foreign candidates may have the interview in English.

Candidates may request to carry out the test electronically if the conditions for physical presence do not apply through the procedure provided for in the announcement.

Date of examination:

Oral exam: July 27th 2022, H: 10.00 CEST

The oral exam will be held at Dipartimento di Scienze della Terra e Geoambientali (Campus Universitario), sala Giunta.

website:

<http://www.geo.uniba.it/dottorato-presentazione.html>



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ANNEX 11)

PROFILE

PhD PROGRAMME IN SUSTAINABLE LAND MANAGEMENT in convention with POLYTECHNIC UNIVERSITY OF BARI

Scientific Areas CUN: 07 – Agricultural and Veterinary Sciences, 08b – Civil Engineering, 02 – Physical sciences, 04 – Earth Sciences, 05 - Biological Sciences, 08a – Architecture, 09 - Industrial and information engineering.

Scientific Subject Code: AGR/01, AGR/03, AGR/04, AGR/05, AGR/08, AGR/09, AGR/10, AGR/11, FIS/01, FIS/07, BIO/03, GEO/05, ICAR/01, ICAR/02, ICAR/03, ICAR/07, ICAR/20, ING-IND/16, ING-IND/22, ING-IND/35 e ING-INF/07.

Coordinator: Prof. Francesco GENTILE

Administrative headquarters: Dipartimento di Scienze Agro-Ambientali e Territoriali (Department of Agricultural and Environmental Science)

PEC: direttore.disaat@pec.uniba.it

Affiliated headquarters: Polytechnic University of Bari

Duration: 3 years

Total number of positions: n. 11

- n. 3 positions with a scholarship from University of Bari Aldo Moro
- n. 3 positions with a scholarship from Polytechnic University of Bari
- n. 3 positions on defined topics D.M. 351/22
- n. 2 positions on defined topics D.M. 352/22

Research projects on a defined topic D.M. 351/22

1. Title: **Monitoring of the biodiversity of arthropods and evaluation of their influence on the resilience and requalification of Mediterranean agroforestry ecosystems that have suffered environmental stress**

The monitoring of arthropods will allow to thoroughly evaluate the biodiversity of arthropod fauna in Mediterranean agroforestry ecosystems, providing fundamental elements for a study of the relationships with the various environmental, biotic and abiotic components. The topics of monitoring and the methodologies used envisaged by the "Manuals for the monitoring of species and habitats of community interest (Directive 92/43 / EEC) in Italy: Animal species" will be studied in depth. The Project respects the horizontal principles of the PNRR in relation to the concepts of resilience, environmental assessment, protection and enhancement of the biodiversity of arthropods.

2. Title: **Sustainable management of water resources in degraded and compromised areas**

The Project will address various issues aimed at providing a significant development of knowledge in the areas of interest of the PNRR. Irrigation management using remote sensing techniques; Use of proximal sensors for the management of irrigation of fruit tree species; Recovery and maintenance of biodiversity and ecosystems; Mitigation of climate change, thanks to the reduction of GWP and greenhouse gas (GHG) emissions; Reduction of the water footprint (WF). The repercussions will concern aspects such as increasing the competitiveness and sustainability of the agricultural sector; the promotion of research and technological development in the agri-food area, facilitating technology transfer.

3. Title: **Sarments and pomace: precious waste for the cultivation of edible and medicinal mushrooms**

The project intends to develop innovative models with a significant and demonstrable impact to facilitate



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the ecological transition through the responsible use of natural resources such as waste from vine cultivation and wine production in order to help reduce CO₂ emissions and energy consumption and promote the use of business models and solutions related to the circular economy. A period of activity is foreseen at the Trulli il Castagno company located in Valle d'Itria. The project activities are in line with Component 1 of Mission 2 of the PNRR, "Sustainable agriculture and circular economy".

Research projects on a defined topic D.M. 352/22

1. Title: **Manufacturing sustainability through Cyber Physical Systems**

The Project activity is fundamentally linked to the acquisition of operational skills for the implementation of Cyber Physical Systems for companies with high technological value, such as those in the pharmaceutical sector. The goal is to increase process knowledge and to be able to optimize manufacturing sustainability also by structuring the data acquisition system consisting of multiple sensors and processing algorithms based on artificial intelligence techniques but firmly correlated to the reference production context. The Project provides for a period of activity at the SANOFI s.r.l. company, based in Anagni.

2. Title: **Remote sensing techniques for territorial resources in marginal areas**

The Project aims at using remote sensing techniques for a rational use of agro-forestry and territorial resources, with particular regard to climate change. The possibilities for the absorption and storage of atmospheric carbon and the use of agro-forestry products for the production of renewable energy in a circular economy context will be considered. The uses of forest products for other purposes will also be taken into account. The Project provides for a period of activity at the e-Geos company based in Rome and Matera.

Curricula: NO

Admission procedure:

The exam procedures will be carried out in accordance with art. 6 lett. C.

The selection will be based on the evaluation of qualifications and an oral test. The knowledge of a foreign language (English) will be evaluated during the oral test. The oral exam will take place face-to-face for Italian candidates, electronically on the Teams platform for foreign candidates.

Upon submitting the application, the candidate must **attach a synthetic research project**, which can be written in Italian or English, of a maximum length of 2500 words. The research project, which must be relevant to the topics of the PhD Course in Sustainable land management, will be discussed during the oral test.

For scholarship positions funded by the University and the Polytechnic of Bari, the topics covered in the research project are in no way binding for the identification of the topic that will be developed during the PhD Course.

Failure to submit the project in the application is under penalty of exclusion from the procedure.

Methods of examination for foreign candidates:

Foreign candidates can choose to take the oral test in Italian or English.

Admission exam dates and time:

The evaluation of qualifications will take place on July 26, 2022. The oral exam will begin on July 28, 2022 at 9.00 am, with eventual prosecution in the next days until the completion of the evaluation of all candidates.

The oral exam calendar and the methods for accessing the Teams platform for foreign candidates will be published on the phd Course website by 27 July 2022 at 6:00 p.m.

The oral exam for Italian candidates will take place at the Dipartimento di Scienze Agro-Ambientali e Territoriali of University of Bari Aldo Moro, via Amendola 165/A, Bari.

For further information see the PhD Course website:

<https://www.uniba.it/ricerca/dipartimenti/disaat/dottorato/en>



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ANNEX 12)

PROFILE

PhD PROGRAMME IN COMPUTER SCIENCE AND MATHEMATICS

Subject area CUN: 01 Mathematics and Computer Science, 09 Industrial and Information Engineering

Scientific Subject Code: INF/01, ING-INF/05, MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08

Coordinator: Prof. Francesca Mazzia

Administrative office: Dipartimento di Informatica

PEC: direzione.di@pec.uniba.it

Duration: 3 years

Curricula:

1) COMPUTER SCIENCE (Scientific Subject Code: INF/01, ING-INF/05)

2) MATHEMATICS (Scientific Subject Code: MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08)

Even if the PhD programme is organized in the two curricula mentioned above, the available positions will be assigned according to the ranking obtained by the applicants, until all positions are covered and by taking into account the reserved positions. Thus, the applicants do not have to provide their choice of the curriculum in the attachment A), which is an integral part of this call for applications.

Number of available positions: n. 12

- 1 position with scholarship funded by the University.
- 1 position without scholarship.
- 1 position with scholarship D.M. 352/22 in agreement with the company Eusoft s.r.l. for Curriculum 1 Computer Science (INF/01), with theme bound by title:

Human-Centered Artificial Intelligence (HCAI) techniques for supporting end users interacting with AI systems

The goal of this project is to define new methodological and technological solutions to design and evaluate Artificial Intelligence (AI) systems that can augment and improve humans' capabilities and make these systems more trustworthy and secure. In particular, this project aims at studying solutions of eXplainable Artificial Intelligence, in order to generate transparent predictive models that, by providing explanations of both the model and the results, allow the end user to understand and trust the system's decisions. The end users should also be empowered to control the AI systems: during the interaction with the system, they should be enabled to control and manipulate model parameters and observe the effect of the changes induced by their actions.

- 1 position with scholarship D.M. 352/22 in agreement with the company Auriga S.p.A. for Curriculum 1 Computer Science (INF/01), with theme bound by title:

Investigating XAI techniques to help user defend from phishing attacks

The research project aims to define methodological and technological solutions to protect users, especially non-technical users, from security attacks. The human factors that come into play during attacks will be analysed, since such attacks exploit the victims' weaknesses (stress, haste, lack of knowledge, etc.). Prototypes of user interfaces will be studied, designed and evaluated that not only alert users to possible attacks but also explain the reasons and consequences of the potential threat, so as to increase users' trust and awareness, with the ultimate goal of improving their choices in the event of an attack. To this end, XAI techniques will be studied that can provide simple and effective explanations to users.



- 1 position with scholarship D.M. 352/22 in agreement with the company Planetek Italia Srl, for Curriculum 2 Mathematics (MAT/08), with theme bound by title:

Low-rank models for the analysis of Earth Observation data focusing on coastal and marine environments;

The research project focuses on studying and developing low rank approximation (LRA) computational models able to integrate heterogeneous data, hyper/multispectral images, and sensor data, to better understand the environmental phenomena these data represent. Existing LRA methods are tools for the representation and analysis of multivariate large datasets used in various application areas. The project aims to construct variants of LRA using constrained optimization algorithms based on appropriate cost functions. These will allow adding ad-hoc constraints on the latent components to be extracted from Earth observation data, marine and coastal data, to improve the quality of the resulting approximation model.

- 1 position with scholarship D.M. 352/22 in agreement with the company Exprivia SpA for Curriculum 1 Computer Science (INF/01), with theme bound by title:

Computer vision techniques for sustainable AI applications using drones.

The research topic will concern the development of new Computer Vision and Deep Learning techniques for sustainable AI applications using drones, in particular in precision agriculture. Drones are increasingly used as economical and agile tools for collecting data for applications in this area. In fact, they can be equipped with sensors, e.g. multispectral cameras, to collect valuable information for monitoring purposes. These data can then be processed using Computer Vision and Deep Learning techniques to guide decision-making processes, potentially leading to environmental and economic benefits. The research will focus on the development of methods that offer a good compromise between effectiveness and efficiency.

- 1 position with scholarship D.M. 352/22 in agreement with the company Lutech SpA for Curriculum 1 Computer Science (INF/01-ING-INF/05), with theme bound by title:

Quantum Machine Learning: Algorithms and Practical Applications.

The research activities will focus on the study and design of supervised and semi-supervised Machine Learning algorithms with computational model based on Quantum Annealing. Although the quantum advantage so far is predominant only in some use cases, the Quantum Annealing approach seems to be the most promising i) compared to speed-up in relation to the training phase of models from 'tagged' data (training) and ii) in terms of accuracy of the models on unlabelled' data (generalization). We will investigate how the typical characteristics of the Semi-supervised learning approach, namely 'scarcity of labelled data' and 'abundance of unlabelled data' can be conveyed to further accelerate the training of models and / or improve their predictive accuracy.

- 1 position with scholarship D.M. 352/22 in agreement with the company Exprivia SpA for Curriculum 1 Computer Science (INF/01), with theme bound by title:

Analysis and enhancement of artistic heritage using Artificial Intelligence

The research topic is located in the area of Digital Humanities and has as its objective the development and application of new methods, based on Artificial Intelligence, for the analysis and use of digitized artistic heritage. Recently, the growing availability of digitized art collections has opened up new opportunities to assist art historians, museum curators, enthusiasts, etc., in studying and making better use of digitized artistic heritage. This favors the spread of culture. The research will focus on the development of methods that take into account not only the "visual" information of artworks, as is usually the case in literature, but also "contextual" information stored for example in Knowledge Graphs.

- 1 position with scholarship D.M. 352/22 in agreement with the company Exprivia SpA for Curriculum 1 Computer Science (INF/01), with theme bound by title:

Emotion recognition non-invasive biometric sensors.

The research project focuses on the theme of Human-centric AI. This project aims to study the role of emotions in software development. We plan to investigate the main causes for emotions at work as well as the relationship between emotions and perceived productivity in the workplace. In order to support the emotional awareness of developers, we will design and implement classifier based on machine learning for emotion recognition, features extracted from non-invasive biometric sensors. This information will then be conveyed to the end user in order to support their emotional awareness. The users will decide whether to share the insights gained through the visualization of the emotion report with their colleagues, for example during the agile retrospective meetings, in order to improve the awareness of emotions at the team level and to intervene in a corrective manner on the causes of the negative emotions.

- 1 position with scholarship D.M. 352/22 in agreement with the company Auriga S.p.A. for Curriculum 1 Computer Science (INF/01), with theme bound by title:



Quality and security of Machine Learning-based systems.

The research project aims to define a set of recommendations that can be used to monitor, evaluate and continuously improve the quality of Machine Learning (ML) based systems, including also the crucial security aspect of the models and systems that incorporate them. as components. Quality assurance will be guaranteed from several perspectives. both during development and operation of the system. We will define parameters for evaluating and implementing the quality of both data and ML models. Further attention will be paid to the communication problems that could arise between data scientists and software developers. Finally, we will define approaches to (i) identify quality problems in the CI / CD pipeline; and (ii) monitor the quality of the system during the operational phase.

- 1 position with scholarship founded by Istituto Tumori IRCCS Giovanni Paolo II di Bari for Curriculum 2 Mathematics (MAT/08),

Low rank numerical approach for deconvolution and analysis of onco-hematological GEP data.

Data dimensionality reduction (DR) methods play a crucial role in the analysis of gene expression profiling (GEP) data, i.e. data obtained by simultaneously calculating the transcriptome (mRNA) levels of thousands of genes that define the expression profile of the cell's genes, through various types of analysis such as DNA Microarrays, RNA-seq or NanoString. The research will focus on the study and development of low-rank DR approaches for onco-hematological and transcriptomic GEP data of patients with hematological malignancies (lymphomas, myelomas, and leukemias) to deconvolve different cell types (tumor and microenvironmental); characterize the biological activities of cells, and identify molecular pathways in the pathologies under investigation.

- 1 position for industrial/intersectoral doctorate, reserved for employees of the company Niteko for Curriculum 1 Computer Science (INF/01), with theme bound by title:

Artificial intelligence system for autonomous driving of ground vehicles

The goal of the project is to develop an autonomous navigation system that can be installed in ground vehicles (on tracks or wheels) that, by exploiting machine learning and computer vision algorithms, can complete tasks given by humans, adapting to the surrounding environment, without a priori knowledge of the map, and in complete safety. In order to navigate 3D environments and perform complex tasks, autonomous navigation systems will require a spatial and semantic understanding of the surrounding environment, implying the development of artificial intelligence that, in addition to recognizing simple geometric figures, can reconstruct semantic maps and perform complex reasoning, empowering the human to decide not only the tasks to be performed, but also how to perform them.

Admission procedure:

The applicants will be evaluated on the basis of: a) the documents presented with the application, b) an oral exam in which, among other things, they will discuss a research project (written in English, max 500 words) presented with the application and that will also include the assessment of the applicant's knowledge of English.

Admission exam date and time:

Oral exam: 29 July 2022 at 10:30 am.

Exam venue: Sala Consiglio on the seventh floor of the Computer Science Department.

Where it is not possible to do it in person, candidates may request to do it remotely at least three days before the test. It will be the responsibility of the commission to communicate the methods of connection.

For more information, see: <http://dottorato.di.uniba.it>



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ANNEX 13)

PROFILE

PhD PROGRAMME IN HUMANITIES, LANGUAGES AND ARTS

CUN Scientific Areas: 10 - Antiquity Studies, Philology, Literary Studies, Art History, 11 - Historical, philosophical and pedagogical sciences.

Scientific Subject Code: L-FIL-LET/02, L-FIL-LET/04, L-FIL-LET/09, L-FIL-LET/10, L-FIL-LET/11, L-FIL-LET/13, L-FIL-LET/14, L-LIN/01, L-LIN/02, L-LIN/03, L-LIN/04, L-LIN/05, L-LIN/07, L-LIN/10, L-LIN/12, L-LIN/13, L-LIN/21, L-ART/01, L-ART/02, L-ART/03, L-ART/06, L-ART/07, M-GGR/01.

Coordinator: Professoressa Olimpia Imperio

Administrative Office: Dipartimento di Ricerca e Innovazione Umanistica

PEC: direzione.dirium@pec.uniba.it

Duration: 3 years

Curricula (Subject Areas):

1. Literatures and Philology (Scientific Subject Code: L-FIL-LET/02, L-FIL-LET/04, L-FIL-LET/09, L-FIL-LET/10, L-FIL-LET/11, L-FIL-LET/13, L-FIL-LET/14; L-LIN/03, L-LIN/05, L-LIN/10, L-LIN/13, L-LIN/21).
2. Languages, Linguistics and Translation (Scientific Subject Code: L-LIN/01, L-LIN/02, L-LIN/04, L-LIN/07, L-LIN/10, L-LIN/12, L-LIN/13, L-LIN/21);
3. Arts, Theatre, Music and Performing Arts (Scientific Subject Code: L-ART/01, L-ART/02, L-ART/03, L-ART/06, L-ART/07, L-FIL-LET/02, L-FIL-LET/10, L-FIL-LET/11, L-LIN/10, L-LIN/11, M-GGR/01).

To identify code and title of the above-mentioned specific academic disciplines see:

<https://www.cun.it/documentazione/academic-fields-and-disciplines-list/>

Number of positions **7**:

-n. **1** position with scholarship from the University of Bari for **curriculum 3**

D.M. 351/22:

-n. **1** position for PNRR

“The South Italy between Renaissance and Baroque, borderland and european cultural heritage” - curriculum 1

Aim of this Doctoral fellowship is to enhancing the cultural heritage of the South Italy at an international level, by strengthening the network of scientific interests between Italy and Spain (see the Pronapoli (<https://pronapoli.com/>) project, founded few years ago). The fellow will be dedicate a to research areas related to the interactions and interferences between the culture of the South Italy and the Catalan and Spanish ones, in a period ranging from the conquest of the Kingdom by Alfonso V of Aragon to the Spanish Viceroyalty (1442-1707). The goal is to train a scientific figure who qualifies as an expert in the study of literary, artistic and/or more generally cultural phenomena of this long period, in a transversal way (between Italy and Spain) and with interdisciplinary skills.

-n. **3** positions for Public Administration

1) *“Among women: female homosexuality in the modern and contemporary French novel” – curriculum 1*

In French literature, especially that of the twentieth century, female writers (starting with Colette, Simone de Beauvoir,



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Violette Leduc ...) have courageously faced the question of female homosexuality (and more generally that of female sexuality), managing to both define it in sentimental terms, as well as sexual, and to consider its social impact. Not only will this multidisciplinary study inventory texts of different nature like fictional, autobiographical and semi-essayistic ones but also catalogue narrative and expressive topoi, typical of this genre of literature.

The project avails itself of the collaboration of the LGBTQI office of the Municipality of Bari and the scientific support of Sorbonne Nouvelle University (Paris).

2) *“A Digital Database of French-Italian translations from the Renaissance to the Nineteenth Century. Internationalization and Preservation of Culturale Heritage”* – **curriculum 2**

This project focuses on translation practice as a means to convey instructions as well as a key source to study the history of translation between France and Italy from the Renaissance to the Nineteenth Century. Printed databases already exist, but they only consider Italian-French translations. Hence, this project will be centred on Italian as a target language and it will lead to the creation of an open access bibliographical directory. In relation to the PNRR research guidelines, this project refers to the fields of digitalization, innovation and culture. It will be realized in collaboration both with the Liceo Scientifico “Arcangelo Scacchi” (Bari) and the University of Toulouse Jean Jaurès, Research Team “Il Laboratorio”.

3) *“Interactive and inclusive didactics for studying Greek theatre”*– **curriculum 3**

The goal of the project is the development of a long-term collaborative platform, helpful for both research and didactic purposes, that will allow scholars, teachers and students to analyse classical Greek theatre and that will later become a stable reference point for interactively studying and teaching ancient drama, starting from some significant case studies. The digital scholarly edition will allow users to explore a wide variety of content either created by the editor or derived from external electronic resources, to check on the quality of the editor’s choices as it progresses and to contribute to the integration of new content and to the updating of the already published content. Partners of the project: the Liceo classico Socrate (Bari) and the University of Freiburg (Germany).

-n. 1 position for Cultural Heritage

“Enhancement of the manuscript heritage from archives and libraries in Bari from the fourteenth to the fifteenth century” – **curriculum 1**

The project aims at the enhancement and recovery of the manuscript heritage from the fourteenth to the fifteenth century which are now kept at the public and private archives of Bari and consist of material from various sources. The project roadmap foresees the following steps: 1) selection of relevant and significant documents from the archives and libraries in Bari and its surroundings; 2) digitalization of documents of interest; 3) creation of a lexical database of the research bodies envisaged by the project (Opera del Vocabolario Italiano - CNR; Italian Etymological Lexicon - Akademie der Wissenschaften und der Literatur Mainz) and edition of particularly significant texts.

D.M. 352/22:

-n. 1 position for Innovative PhD Programs

“Language learning through “serious games” to prevent neuro-cognitive decline. Digital tools, methods and media for internationalization and inclusion” – **curriculum 2**

The Digital Game Based Learning approach is considered an innovative **educational model since users can play different roles and develop a variety of cognitive functions such as visual attention, memory, and learning abilities. The project targets an adult audience to whom a language learning experience through "serious games" is offered as a means to prevent neuro-cognitive decline, and as a response to the need for strategies to face such decline as a structural change in the population. Key partners in the project are the University of Toulouse Jean Jaurès,**



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Département de traduction, d'interprétation et de médiation linguistique (DETIM) and the Node Soc. Coop., digital services for businesses.

Admission

The verification procedures as to ordinary positions take place in compliance with art. 6, lett B).

The selection will be made on the basis of Academic qualifications + Research Project proposal + interview. The candidate's research project can be submitted either in Italian or in English.

The candidate's knowledge of one second language, i.e. English, French, Spanish, German, or Russian will be tested during the interview.

It is mandatory for candidates **to indicate the curriculum** they have chosen.

Exam procedures in English for foreign candidates:

Foreign candidates may be examined in Italian or in English, French, Spanish, German or Russian.

Interview: 27 July 2022

Timetable: 9.00 a.m.

Location: Palazzo Lingue, via Garruba 6, 3rd floor, Section of English, room of the Coordinator of the PhD in Letters, Languages and Arts

Further information on the interview and suggested readings is available at

[Dottorato in Ricerca in Lettere, Lingue e Arti — Ricerca e Innovazione Umanistica \(uniba.it\)](http://uniba.it)



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ANNEX 14)

PROFILE

PHD PROGRAMME IN METABOLISM, AGING AND SOCIAL MEDICINE- METABOLISMO, INVECCHIAMENTO E MEDICINA SOCIALE

Scientific Areas CUN: 06 – Medical Sciences; 07 – Agricultural and veterinary sciences

Scientific Subject Codes: MED/04; MED/09; MED/28; MED/36; MED/43; MED/44; MED/46; MED/50; AGR/15; VET/04; BIO/18.

Coordinator: Prof. Antonio Moschetta

Administrative office: Interdisciplinary Department of Medicine

PEC: direzione.dim@pec.uniba.it

Duration: 3 years

Curricula:

- 1) CLINICAL AND EXPERIMENTAL RESEARCH (Scientific disciplinary sector: MED/09; MED/28; MED/36; MED/43; MED/44)
- 2) TRANSLATIONAL RESEARCH (Scientific Subject Code: MED/04; MED/46; MED/50; AGR/15; VET/04)

Total number of places available: **n. 5**

- 2 positions with scholarship funded by University of Bari (curriculum 1)
- 1 position with scholarship funded by D.M. 351_2022 (curriculum 1)
- 1 position with scholarship funded by D.M. 352_2022 (curriculum 2)
- 1 position without scholarship (curriculum 2)

Scholarship funded by D.M. 351 del 09.04.2022

Project title: Systems Biology applied to liver metabolism to understand the Metabolic Syndrome and its liver complications

This project proposes to study the molecular basis driving obesity, metabolic syndrome, hepatic steatosis and their complications (cirrhosis, HCC, atherosclerosis). At the Clinica Medica Frugoni (UNIBA), a deep metabolic/hepatological phenotyping of the patients will be performed. The project includes collection and processing of mononuclear cells, serum, biopsies, DNA for omics studies (lipidomics, metabolomics, sequencing) and a research period (6 months) at the Roger Williams Institute of Hepatology (London, UK). The goal of the project is the metabolic/molecular investigation of the pathophysiology of liver steatosis, with particular interest in 1) lipoprotein metabolism and systems biology approaches; 2) biological responses to nutritional/pharmacological treatments.

Scholarship funded by D.M. 352 del 09.04.2022 (Medpath s.r.l.)

Project title: Personalized medicine and new digital technologies applied to molecular medicine

Italy has adopted the Strategic Program for Artificial Intelligence (AI) 2022-2024 to improve the quality of personalized care and effective management of patients suffering from chronic disease. Recently, new applications of AI have become available to precision medicine supported by new therapeutic approaches. The program aims to deepen the understanding of new therapeutic approaches through the use of digital technologies, complementary/non-pharmacological interventions, bioinformatics and AI applied to personalized medicine. These approaches will be tested on patients suffering from chronic non-communicable diseases, such as chronic kidney disease, and their impact on the cognitive decline will also be evaluated.

Admission procedures:

The verification procedures are carried out pursuant to Article 6 letter C. The selection will take place through an



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evaluation based on qualifications and an oral test with a discussion of a research project concerning the topics of the doctoral course (between 1,500 and 2,000 words), previously sent by the candidate together with the admission application, **under penalty of exclusion.**

The oral exam will focus on the discussion of the research project in relation to its originality, methodological rigor and consistency with the research lines of the doctorate. Knowledge of the English language will also be verified as part of the oral exam.

The exams will be distinguished for each curriculum and the respective rankings will merge into a single final ranking that will entitle access. The places available will be assigned, among the various curricula, according to the order in the merit ranking, until the places are exhausted. Places that have not been assigned due to lack of suitable candidates in a curriculum, could be assigned to candidates found to be suitable for other curricula, based on the score obtained in the general ranking. Candidates must indicate the choice of curriculum, under penalty of exclusion from the competition.

Test arrangements for foreign candidates:

Foreign candidates can choose to take the selections in Italian or English.

Admission examination schedule and venue:

Evaluation of qualifications: 26 July 2022, 9:30 am.

Oral exam: 28 July 2022, 9:30 am.

Location: Aula Frugoni - Interdisciplinary Department of Medicine, c/o Pad. Chini - Bari Polyclinic, p.zza G. Cesare n.11 – 70124 Bari

For more information about the competition, visit the website:

<https://w3.uniba.it/ricerca/dipartimenti/dim/dottorato/home-dottorato>



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ANNEX 15)

PROFILE

PhD PROGRAMME IN APPLIED NEUROSCIENCES

Scientific CUN areas: 06 - Medical Sciences, 05 - Biological Sciences, 11 - History, Philosophy, Pedagogy and Psychology Sciences.

Scientific Subject Codes:

Curricula:

- 1) Basic Sciences (Scientific Subject Codes: BIO/09, BIO/10, BIO/11, BIO/12, BIO/13, BIO/16 e BIO/17, M-PSI/02);
- 2) Clinical Sciences: (Scientific Subject Codes: MED/05, MED/10, MED/25, MED/26, MED/27, MED/30, MED/31, MED/33, MED/34, MED/39, MED/48, MED/50, M-PSI/01 e M-EDF/02).

Coordinator: Prof. Domenico RIBATTI

Administrative office: Department of Basic Medical Science, Neuroscience and Sense Organs

PEC: segreteriadirezione.smbnos@pec.uniba.it

Duration: 3 years

Curricula: Yes

Curricula:

- 1) Basic Sciences
- 2) Clinical Sciences

Number of positions available as PhD students: n.5

Number 2 position for Ministerial Decree n. 351 of April 9, 2022:

- n. 1 positions with scholarship for the project entitled "*The unexplored properties of the olfactory system to battle Neurodegeneration and Aging*" - (curriculum # 1)

BRIEF DESCRIPTION OF THE PROJECT:

The olfactory epithelium with its neuronal cells sensitive to odors and, unique in the nervous system, with its own niche of stem cells, could be considered an outpost of the brain in the outside world. Its neurons could be used to study biophysical and molecular properties. The olfactory stem cells, on the other hand, without genetic manipulation and with less carcinogenic potential than iPSCs, will differentiate into neuronal phenotypes that could constitute an excellent model for the creation of biobanks accompanied by clinical data of the donor subjects. In summary, the project aims to make the olfactory epithelium a powerful tool for studying the molecular mechanisms underlying the onset and progression of various neurodegenerative diseases and aging.

- n. 1 positions with scholarship for the project entitled "*Cognitive reserve in neurodegenerative disorders*" - (curriculum # 2)

BRIEF DESCRIPTION OF THE PROJECT:

The main objective of the project is to study Mild Cognitive Impairment (MCI) or Mild Neurocognitive Disorder (mild NCD) from a longitudinal perspective to predict the trajectories of cognitive decline before it results in age-related disorders frameworks. Research focuses on neuropsychological characteristics, psychophysiological and biological aging with the aim to identify as early as possible signs of decay and give



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the opportunity to improve the diagnosis and treatment of the multiple manifestations of preclinical NCDs. The results of this longitudinal approach could provide guidance to health services for a multimodal and proactive approach aimed at reducing risk factors associated with low cognitive/brain reserve before the diagnostic threshold of NCD is reached.

Number 1 **position** for **Ministerial Decree n. 352 of April 9, 2022:**

- n. 1 **positions with scholarship** for the project entitled "*Genetic risk for psychiatric disorders is associated with transcription of DNA into messenger RNA, which can be studied in postmortem brains*" - (curriculum # 1)

BRIEF DESCRIPTION OF THE PROJECT:

In collaboration with Exprivia, this project proposal aims to combine genetic information from the Psychiatric Genetic Consortium, which has identified genetic variants associated with several psychiatric diagnoses, with data from postmortem brain databases available at the Lieber Institute for Brain Development and neuroimaging data collected by the Psychiatric Neuroscience Group. The aim of the research is to develop machine learning and deep learning algorithms to predict the relationship between genes and disease so that it can be verified in clinical samples."

Number 1 **position** with scholarship program funded by the University of Bari - (curriculum # 1)

Number 1 **position** without scholarship – (curriculum # 2)

Examinations will be appropriate for each curriculum and the resulting graded lists will converge in a single final list for the admissions to the PhD Course. All positions available in each curriculum will be covered even by successful candidates applying for different curricula in the case of lack of winners in a specific curriculum, with respect to the graded list. Candidates must complete the application form (A) and indicate the curriculum that they choose, pending their **exclusion from the competition**.

Arrangements for admission:

The exam procedures will be carried out in accordance with art. 6, lett.A), with a verification of the knowledge of the English language.

The exam will be based on the evaluation of qualifications, the written test and the oral test (and at the same time discussion of a research project concerning the topics of the PhD Program, previously sent by the candidate together with the application for admission)

Exam procedures in English for foreign candidates:

Foreign candidates can do the exam in Italian or in English.

Calendar of admission exams:

Written exam: TUESDAY, JULY 26, 2022 at 10:00 AM

**Venue of the exams: Classroom "A" - "New Complex of Biomedical Sciences" – Policlinico
Conorziale di Bari – Piazza Giulio Cesare, 11 – Bari – 70124.**

Oral exam: THURSDAY, JULY 28, 2022 at 10:00 AM

**Venue of the exams: Classroom "A" - "New Complex of Biomedical Sciences" – Policlinico
Conorziale di Bari – Piazza Giulio Cesare, 11 – Bari – 70124.**

For more information, see: <http://www.uniba.it/ricerca/dottorati>
<https://www.uniba.it/ricerca/dipartimenti/smbnos/ricerca/nuovo-corso-di-dottorato-di-ricerca>
<http://www.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca>



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ANNEX 16)

PROFILE

PHD PROGRAMME IN MEDITERRANEAN ARCHAEOLOGICAL, HISTORICAL, ARCHITECTURAL AND LANDSCAPE HERITAGE: INTEGRATED SYSTEMS OF KNOWLEDGE, PLANNING, PRESERVATION AND PROMOTION

in agreement with THE NATIONAL RESEARCH COUNCIL (CNR), POLYTECHNIC UNIVERSITY OF BARI, UNIVERSITY OF BASILICATA, UNIVERSITY OF FOGGIA, UNIVERSITY OF NAPLES 'FEDERICO II', UNIVERSITY OF PALERMO, UNIVERSITY IUAV OF VENICE

Scientific Areas CUN: 08 – Civil Engineering and Architecture, 10 - Ancient History, Philology, Literature and Art History

Coordinator: Prof. Giuliano VOLPE

Administrative office: Department of Humanistic Research and Innovation

PEC: direzione.dirium@pec.uniba.it

Duration: 3 years

Curricula:

1. Archaeological, historical, architectural and landscape heritage: knowledge, methods and techniques (Scientific Subject Code: L-ANT/01, L-ANT/06, L-ANT/07, L-ANT/08, L-ANT/09, L-ANT/10, L-FIL-LET/01, L-ART/01, L-ART/02, ICAR/15, ICAR/18 e ICAR/21)
2. Archaeological, historical, architectural and landscape heritage: project methods and techniques (Scientific Subject Code: ICAR/08, ICAR/14, ICAR/15, ICAR/16, ICAR/18, ICAR/21, L-ANT/07, L-ANT/08 e L-ANT/10)

Total number of positions: **15**

- 3 positions with scholarship funded by the University of Bari Aldo Moro
- 3 positions with scholarship funded by D.M. n.351/22, PNRR, from the University of Bari Aldo Moro on the following topics:

- **Underwater and naval archaeology**

Research of archaeology of coastal and underwater landscapes, with particular reference to the territory of Apulia and/or the Southern regions, capable of constituting a significant advancement in the knowledge of the underwater cultural heritage, trade, navigation, exploitation of the resources of the sea, also in terms of protection, communication, valorisation and management, with a focus also on the relationship between underwater landscapes and communities in the spirit of the European Convention on the Value of Cultural Heritage for Society (Faro 2005).

A period of research activity of at least six months is foreseen at the Soprintendenza Nazionale per il patrimonio culturale subacqueo, Taranto, and at the Centre Camille Jullian, Aix-en-Provence, respectively.

- **Archaeology of the Contemporary Age**

Research in modern and contemporary age archaeology, with a strong multidisciplinary matrix and a particular focus on Southern Italy and Apulia. The research will have to cover at least one of the peculiar themes of contemporary archaeology (19th-20th centuries): conflicts, migrations, industrial production, etc. and offer specific attention to the aspects of protection, management and valorisation of the contemporary heritage as well as the heritage communities it expresses.

A research period of at least six months is envisaged, respectively at the Archaeological Heritage Office of the Province of Trento and at INCIPIT, (Instituto de Ciencias del Patrimonio) in Santiago de Compostela, Spain.

- **Archaeology of urban and rural landscapes**

Research on settlement patterns from prehistoric to modern-contemporary times, on the relationship between man and the environment, on the exploitation of resources, socio-economic systems, organisation of urban and/or rural spaces, with particular reference to the Apulian territory and/or southern regions, capable of constituting a significant advancement of knowledge, also in terms of preventive archaeology and protection, communication,



valorisation and management, and in the relationship between historical landscapes and local communities in the spirit of the European Landscape Conventions (Florence 2000) and on the value of cultural heritage for society (Faro 2005).

A period of research activity of at least six months is planned at the ABAP Directorate of the Ministry of Culture, and at HERILAND, Amsterdam, respectively.

- 3 positions with scholarship funded by the Polytechnic University of Bari
- 1 position with scholarship funded by the National Research Council (CNR)
- 1 position with scholarship funded by D.M. n.351/22, PNRR, from the University of Basilicata on the following topics:

Mediterranean territories, landscapes and cities.

The research concerns the reading and interpretation of territory and Mediterranean cities, in which every transformation is inserted, recognizing grafts, permanences, deformations and reuses. Landscape, architecture and archaeology assign the project a critical updating task from the past to the present, not interrupting the cognitive tension, but motivating it to reconfigure the needs of today's society.

The goal is to critically investigate Mediterranean landscapes and contexts of history, selecting those signs that still have current consequences. The project becomes an investigation tool, able to operate in contemporary processes making knowledge useful for guiding unprecedented dynamics.

A period of research activity of at least six months is envisaged at the Soprintendenza Archeologia Belle Arti e Paesaggio della Basilicata and the Universidad de Sevilla - Departamento de Proyectos Arquitectónicos or Espace et Socièté ESE Unversitè Rennes 2, respectively.

- 1 position with scholarship funded by D.M. n.351/22, PNRR, from the University of Foggia on the following topics:

Landscapes and Archaeological Heritage.

Research on landscape archaeology, settlements and material culture from prehistory to the modern-contemporary age, with particular reference to Apulia and South Italy and an interdisciplinary approach, focusing on the actual outcomes in the fields of the promotion, preservation and management of territories, as well as on forms of communication and the use of technologies.

A period of stay and research of at least six months at one or more of the Ministry of Culture's (SABAP) locations, in connection with the topics of the doctoral research, and one of at least equal length at SAIA-Scuola Archeologica Italiana di Atene is envisaged.

- 1 position with scholarship funded by D.M. n.351/22, PNRR, from the University of Naples 'Federico II' on the following topics:

Project strategies for inland archaeological areas

The research relates to the definition and experimentation of design strategies for archaeological sites in inland areas, with particular reference to the southern Italian regions. The goal is to build an advancement of knowledge on places not sufficiently investigated from the point of view of landscape potential and territorial networks. Strategic lines of action for the studied territories will be defined through targeted architectural design insights, developed in the context of a multidisciplinary dialogue.

A period of research activity of at least six months is required respectively at one of the offices of the Superintendence of Archeology, Fine Arts and Landscape and at the Universidade de Coimbra and the Museu Monográfico de Conímbriga, in order to establish a continuous comparison with the cases studied in Italy

- 1 position with scholarship funded by University of Palermo (Polo di Agrigento).

- 1 position with scholarship funded by D.M. n.351/22, PNRR, from the University IUAV of Venice on the following topics:

Historical-archaeological traces and making of landscape: North-East case

The research deals with the study of various landscapes seen as places where new and ancient forms of production, new and ancient settlement typologies, through specific and original projects, show new forms of development. Even today, too often, the technical-administrative practice of the Soprintendenze, the interpretative practice of an outdated urban planning legislation inadequate to the contingency of settlement phenomenologies, contribute to considering the areas characterized by the presence of archaeological paths and finds as substantially separated from urban life. The goal is to relocate the problem of ancient structures within the view of the present and future city, overcoming "defensive" concepts mainly leading to conservative recovery, rejecting the concept of design aimed to interpreting the need for transformation and development.



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Admission procedure (ordinary positions):

The exam procedures will be carried in accordance with art. 6 lett. B of the Call for applications.

The selection procedure consists of the evaluation of qualifications, of the research proposal by the candidate and of an interview, also aimed at the assessment of the knowledge of one of the following foreign language will be examined: English, French, Spanish.

In support of the research proposal, the candidate may also submit two recommendation letters from established scholars in the proposed research field.

Candidates may choose to compete for a free scholarships or for one of the PNRR scholarships on specific topics.

There will be a single admission procedure and ranking list for both scientific *curricula*.

The positions available will be allocated between the two scientific curricula according to the candidates' ranking in the competition, until all the position are filled.

Scholarships will be assigned primarily in order of ranking. Positions without scholarship will be assigned next, in order of ranking. The PNRR fellowships will be allocated following the single ranking list on the basis of the options made by the candidates.

Admission procedure for foreign candidates:

Foreign candidates can choose to take the interview in Italian, English, French or Spanish.

Access requirements:

“Laurea specialistica” or “Laurea magistrale” (second cycle university degree, e.g., M.A., M.Sc.) in:

LM-2 Archaeology

LM-3 Landscape architecture

LM-4 Architecture and construction engineering

LM-11 Conservation and restoration of cultural heritage

LM-15 Ancient philology, literature and history

LM-43 Information technology methods for the humanities

LM-48 Regional, urban and environmental planning

LM-84 History

LM-89 Art history

LMR/02 Conservation and restoration of cultural heritage

2/S Archaeology

3/S Landscape architecture

4/S Architecture and construction engineering

10/S Conservation of architectural heritage and environment

12/S Conservation and restoration of cultural heritage

15/S Philology and classical literature

54/S Regional, urban and environmental planning

93/S Ancient history

95/S Art history

97/S Medieval history

98/S Modern history

Degree taken under the old Italian university system (prior to the one introduced by the Italian Ministerial Decree No. 509/99) in Humanities and Architecture

Access requirements for graduates from foreign universities:

Equivalent foreign degree in the same scientific fields

Admission interview date and time:

Candidates can choose, upon reasoned request, to give the interview in videoconference.

Date: 2-3 August 2022 Time: 9 a.m.

Venue: Sala del Consiglio, Department of Humanistic Research and Innovation, University of Bari ‘Aldo Moro’, Santa Teresa dei Maschi, Strada Torretta (Borgo Antico)

If the examination, due to the ongoing epidemiological emergency, will take place online, it will be carried out in accordance with art. 6 of the Call for applications.

Admission interview date and time for positions reserved for Graduates from foreign universities:



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details*



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Videoconference

Date: 4 August 2022 Time: 9 a.m.

See the PhD program website

For more information see the website:

<https://w3.uniba.it/ricerca/dipartimenti/dirium/postlaurea/dottorati/dottorato-in-patrimoni-archeologici-storici-architettonici-e-paesaggistici-mediterranei>



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ANNEX 17)

PROFILE

Ph.D PROGRAMME IN HISTORICAL AND PHILOSOPHICAL HERITAGE FOR SUSTAINABLE INNOVATION

Areas CUN: 10 Antiquities; Philology; Literary Studies; Art History, 11 – History, Philosophy, Pedagogy and Psychology; 13 – Economics and Statistics.

Scientific Subject Code: L-ANT/02; L-ANT/03; M-FIL/01; M-FIL/04; M-FIL/06; M-FIL/08; M-STO/01; M-STO/02; M-STO/04; M-STO/05; M-STO/07; SECS-P/12.

Coordinator: Prof.ssa Elisabetta Todisco

Administrative office: Dipartimento di Ricerca e Innovazione Umanistica

PEC: direzione.dirium@pec.uniba.it

Duration: 3 years

Curricula:

- 1) PHILOSOPHICAL DISCIPLINES (Academic disciplines list for Italian University Research and Teaching: M-FIL/01; M-FIL/04; M-FIL/06 ; M-FIL/08 ; M-STO/05)
- 2) HISTORICAL DISCIPLINES (Academic disciplines list for Italian University Research and Teaching: L-ANT/02 ; L-ANT/03 ; M-STO/01 ; M-STO/02 ; M-STO/04 ; M-STO/07 ; SECS-P/12)

Total number of positions: **14** of which:

- **n. 6 position with scholarship for curriculum 1: Philosophical Studies**, as follows:

- n. 1 position with scholarship funded by the University of Foggia;
- n. 1 position with scholarship under D.M. n. 351 of 9 April 2022, doctorates for the Public Administration, on the topic **“Policies of identity between performativity and participatory parity”**: The PhD research project aims to provide tools to address and solve - within the public administration - gender inequalities, analyze and resolve the causes of gender asymmetries present in the world of work, along with active citizenship participation policies, referred to as citizenship competencies, sanctioned by the European Community;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates for the Public Administration, on the topic: **“‘The Imitation Game’. Humanoid robots and simulation of emotion for “humane” and inclusive technology”**: The project aims to build a cross-sectoral bridge between philosophical disciplines, neuroscience and computer science, envisioning research that has useful implications for the purposes of scientific foundation and operational design of “human”, emotional and inclusive innovation using humanoid robots;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates for the Public Administration, on the topic: **“On the scene of the 'Baroque'. Elaboration of an interdisciplinary platform focusing on Baroque culture between the 16th and 18th centuries: intangible and material heritage (philosophical categories, architectural styles, literary canons in the southern Italian and European context)”**: The doctoral project aims at the elaboration of a kind of interdisciplinary 'platform' focusing on Baroque culture between the 16th and 18th centuries. In it, differentiated factors and phenomena within the intangible heritage and the material heritage of Baroque culture will be taken into consideration, and an attempt will be made to highlight certain elements of continuity that are transversally present in various expressions of Baroque thought. In particular, the presence of philosophical categories specifically characterising the phenomenon of the Baroque (subject and world, freedom and grace, representation and imagination, nature and law, etc.) will be examined, cross-referencing and combining them with artistic styles and literary canons in the panorama of Southern Italy and the European context;



- n. 1 position with scholarship, D.M. n. 352 of 9 April 2022, innovative doctorates with an industrial connotation, funded by Exprivia S.p.A. (Moltetta-BA), on the topic: “**Machine learning in an inclusive society: epistemological foundations and ethical challenges**”: The very rapid market development of Key Enabling Technologies, including in the regional territory, poses the problem for companies to ground them epistemologically and to probe their ethical dimension. The two aspects are far from independent and are fundamental in designing an innovation that makes processes more efficient, while respecting fairness, transparency, diversity and inclusion. With this in mind, there is a need for a new professional figure who, in an enterprise dimension, combines philosophical research methods with mathematical and computational models for the support to decisions;
- n. 1 position with scholarship, D.M. n. 352 of 9 April 2022, innovative doctorates with an industrial connotation, funded by Teatro Pubblico Pugliese - Consorzio per le arti e la cultura (Bari), on the topic: “**Chief Philosopher Officer & Performing arts managements: role of philosophy in the policies of creative and cultural industry**”: The PhD research project corresponds to the development of a highly qualified professional figure, the Chief Philosophers Officer, employed so far in high-tech companies, within the Cultural and Creative Industries. The CPO would be an engine of development in the fields of performing arts, media, fashion, tourism, museums, art galleries, publishing, video games, social media, emerging technologies and visual cultures.

- **n. 8 position with scholarship for curriculum 2: Historical Studies**, as follows:

- n. 1 of position with scholarship funded by the University of Molise;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates for the Public Administration, on the topic: “**Governance and management of European funding to South Italy. Experiences and proposals for the XXI C.**”: The project aims at reconstructing the dynamics of European Communities and EU funding and investment to South Italy in the framework of the Cold War and the cooperation with Mediterranean countries since the 1950s. It shall focus on the institutional patterns and the actors involved and contribute to suggesting innovative models of governance of European resources;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates for the Public Administration, on the topic: “**The work of women between past and present: historical, social and legal aspects**”: The project aims at reconstructing a history of women’s work from the Middle Ages to the present time, investigating the opportunities, the obstacles, the dynamics and the criticalities of working environments, using a long-term and interdisciplinary perspective, focusing on women’s roles and profiles, balances and gender differences, also in a comparative perspective;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates for the Public Administration, on the topic: “**Sacred spaces and sacred paths: Custodians of Heritage and Crossroads of Relationships for a Euro-Mediterranean Inter-Cultural History. Places, Trails, and Memories**”: Through historical-hagiographic research, the Project focuses on sacred places and sacred paths in a Euro-Mediterranean perspective, with a focus on Apulia, bridging the Western and Eastern shores of the sea. Sacred places and sacred paths will be interpreted as poles of religious experience, expressions of the relationship between humans and landscape, and catalysts of intercultural and historical awareness. Therefore, the Project requires actions to enhance one or more sacred paths/sanctuaries, taking into account their role as destinations/maps of thematic paths and itineraries, and their function as cultural attractors for a socio-economic growth;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates PNRR, on the topic: “**Villages and rural identities in the ancient Mediterranean. Knowing, enhancing and promoting in the name of sustainability the so-called “minor heritage**”: The project aims to study the villages and other forms of organization of the rural population in Roman Italy; in particular, through the study of literary, legal, and epigraphic sources. It will research the appearance, representation and perception, and cultural and social characterization of ancient rural areas through an interdisciplinary approach between history, epigraphy, archaeology, and law. The study promotes the use of heritage considered "minor" by contributing to the design of alternative forms of sustainable tourism that bring to the attention of visitors hitherto neglected heritage and relieve the pressure (overtourism) on "well-known" cities and archaeological sites;
- n. 1 position with scholarship, D.M. n. 351 of 9 April 2022, doctorates PNRR, funded by the University of Naples “L’Orientale” on the topic: “**Greek cities and quality of life: perception and regulatory interventions**”: This project aims at the investigation of Greek authors' perception of the liveability of urban life and the regulations



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- implemented in this field by Greek cities through the analysis of literary and epigraphic sources and comparison with data provided by the archaeological evidence;
- n. 1 position with scholarship, D.M. n. 352 of 9 April 2022, innovative doctorates with an industrial connotation, funded by Fondazione di studi storici “Filippo Turati” (Firenze), on the topic: “**Giacomo Matteotti between History and Memory**”: The research shall focus on the elaboration of the “cultural heritage” of the national and international legacy of Giacomo Matteotti since 1924 until today. The study will aim at setting up a digital repository of the documents available at the Fondazione Turati as well as the other sources, material and symbolic, on his legacy in Italy and abroad. The study shall also set up an innovative digital communication of Matteotti’s memory and cultural heritage;
- n. 1 position with scholarship, D.M. n. 352 of 9 April 2022, innovative doctorates with an industrial connotation, funded by Acquedotto Pugliese S.p.A., (Bari), on the topic: “**Historical-documentary territorial analysis for a war risk mapping**”: The project aims at reconstructing a mapping of the war risk in the areas affected by the works of the *Acquedotto Pugliese*, located outside the Puglia region, in particular in Campania and Basilicata. The research will focus, in a first phase, on the presence of military structures and war events on the territory, starting from the First World War and, subsequently, will reconstruct geo-referenced maps that represent the phenomena identified.

Selection procedure will be different for each curriculum and within this by type of position or project. The final ranking list of each curriculum are dealt with separately and then they will feed into one general ranking list.

For each curriculum, according to the type of position or project, PhD posts will be allocated based on the ranking list. Non allocated posts due to a lack of successful candidates in one curriculum (position funded by the University of Foggia and the University of Molise) could be attributed to another curriculum, always following the general ranking list of these positions.

Applicants are asked to indicate what curriculum and type of positions they are applying to. **Should this not occur, the application will be automatically disqualified.**

Admission criteria:

The exam procedures will be taken in accordance with art. 6 lett.B).

Selection of candidates will be based on qualifications, research project (to be sent together with the application), oral examination and on the foreign language skills assessment on the basis of what has been indicated in the application (English, French, German or Spanish).

Procedures for the exam for foreign candidates:

Foreign candidates can choose to take the entrance examination in Italian or English.

Calendar for admission procedures:

Oral exam: 27 July 2022 (based on the number of admitted candidates, a decision will be made whether to extend the assessment to the following day).

Venue and time of the exams: Classroom 10 (Sala Riviste), Palazzo Ateneo, second floor, P.zza Umberto I, 70121 Bari; at 10:00 A.M.

For more information, see:

<https://w3.uniba.it/ricerca/dipartimenti/dirium/postlaurea/dottorati/dottorato-in-patrimoni-storici-e-filosofici-per-uninnovazione-sostenibile/a-a-2022-2023-xxxviii-ciclo>



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ANNEX 18)

PROFILE

PhD PROGRAMME IN ANIMAL HEALTH AND ZOOZOSIS

Scientific Areas CUN: 07 - Agricultural and veterinary sciences, 06 - Medical sciences

Scientific Subject Code: VET/02, VET/04, VET/05, VET/06, VET/08, MED/44

Coordinator: Prof. Maria Tempesta

Administrative office: Department of Veterinary Medicine

PEC: director.dimev@pec.uniba.it

Duration: 3 years

Curricula: NO

The places available will be assigned according to the order in the merit ranking, up to the exhaustion of the seats themselves.

Total positions n. 8 of which:

n. 3 positions with scholarship funded by the University of Bari

n. 1 position with scholarship funded by Ministerial Decree 351/22 (PNRR)

n. 2 positions with scholarship reserved for graduates from foreign universities, financed with ministerial funds (Department of Excellence)

n. 2 positions without scholarship

Admission procedures:

A) ORDINARY PLACES

The selection will take place pursuant to Article 6, procedure B.

The selection will be based on the evaluation of qualifications and a research project, written in English and concerning one of the themes of the doctorate, and of the oral exam (discussion of the candidate's qualifications and of the project presented) with verification of knowledge of the foreign language: English.

Examinations for foreign candidates:

Foreign candidates can choose to take the exam in Italian or English

Admission exam calendar and location:

Oral exam: 27 July 2022 at 9.30 am at the library of the Infectious Diseases section of the Veterinary Medicine Department, sp 62 for Casamassima km 3, 70010 Valenzano (BA)

B) PLACES RESERVED FOR THEME SCHOLARSHIPS RESERVED pursuant to Ministerial Decree 351/22

Nr 1 scholarship for research activity on: **Occurrence of microplastics in bivalves: an emerging food safety and human health issue.**

Recent studies have documented that the trophic transfer of microplastics represents a significant problem for food safety and human health, as humans are exposed to it through the consumption of food. Microplastics can be transferred into different food systems to marine organisms of commercial interest consumed by humans, such as bivalve molluscs. A concrete and realistic assessment of the risk associated with the consumption of food contaminated by microplastics must be implemented through the application of experimental protocols and systems for isolation and control. Furthermore, through risk analysis it is necessary to collect information on the possible interactions between microplastics and other microbiological and chemical hazards of significant interest for food safety.

Admission procedures:

The selection will take place pursuant to Article 6, procedure B.



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The selection will take place on the basis of the evaluation of the qualifications, the research project and the oral exam (discussion of the candidate's qualifications and the project presented on the specific topic) with verification of knowledge of the English language.

Examination for foreign candidates:

Foreign candidates can choose to take the exam in Italian or English.

Admission exam calendar and location:

Oral exam: 27 July 2022 at 3.30 pm at the library of the Infectious Diseases section of the Veterinary Medicine Department, sp 62 for Casamassima km 3, 70010 Valenzano (BA)

C) POSITIONS RESERVED FOR GRADUATES FROM FOREIGN UNIVERSITIES

The verification procedures for places reserved for graduates from foreign universities are carried out pursuant to art. 17, procedure 2.

The selection will take place on the basis of the evaluation of qualifications and a research project (written in English) concerning one of the themes of the research doctorate. The oral exam will focus on the discussion of the candidate's qualifications and the project presented and will be carried out by videoconference on the Skype platform. A separate ranking will be formulated (according to the procedures set out in art.17 of the competition announcement), it being understood that the places, if not used, will be assigned to candidates usefully placed in the ordinary ranking.

Examination for foreign candidates:

For foreign candidates, the oral exam will be held in English.

Admission exam calendar and location:

Oral exam: 29 July 2022. The oral exam will be held remotely via videoconference (via Skype). The times of the oral exam will be agreed with the individual candidates and published on the PhD website at the following address: http://www.uniba.it/ricerca/dipartimenti/dipmedveterinaria/post-laurea/dott_ric

For more information see the website:

http://www.uniba.it/ricerca/dipartimenti/dipmedveterinaria/post-laurea/dott_ric



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ANNEX 19)

PROFILE

PhD PROGRAM IN PUBLIC HEALTH, CLINICAL MEDICINE, AND ONCOLOGY

CUN scientific areas: 05 – Biological Sciences, 06 – Medical Sciences

Scientific Subject Codes: BIO/14 - MED/01 – MED/06 - MED/09 - MED/12 – MED/16 – MED/17 - MED/18 - MED/38 - MED/40 - MED/42 – MED/45 - MED/46

Coordinator: Prof. Jean-François DESAPHY

Administrative Office: Department of Biomedical Sciences and Human Oncology
PEC: segreteriaamministrativa.dimo@pec.uniba.it

Duration: 3 years

Curricula: NO

Total positions available: n. 6

n. 3 positions with scholarship funded by University of Bari

n. 1 position with scholarship funded by PNRR program according to DM n. 351/22

n. 1 position without scholarship

n. 1 industrial/intersectoral PhD position reserved to company employees (PhD executive) funded by OMEGA Pharma Srl (Cantù, CO) for the following research program: “Gut Liver Axis Features (GLAF)”.

The available positions will be awarded according to the order in the merit ranking, until the positions will be exhausted.

Role of TElemedicine in Autoinflammatory diseases (RO TE AD)

Description of the research project relative to the PNRR scholarship according to DM n. 351/22:

Long-term follow-up in rare diseases is critical for adequate clinical management. However, it is currently performed mainly through outpatient visits, causing elevated costs for the health system and logistic difficulties for patients, who usually need to go to scarce, distant referral centers starting from different geographical areas. The aim of this project is therefore to verify the usefulness of telemedicine in patients with Familial Mediterranean Fever (FMF). Digitalized procedures will need:

(i) to validate innovative and digitalized tools for not-in-person clinical monitoring/management of patients, (ii) to efficiently select patients who need an urgent reassessment in an outpatient clinic, (iii) to develop new research procedures, also building a network between different referral centers.

Admission procedures:

The examination procedures will be performed according to art. 6 lett. B).

The selection will be made based on scientific qualifications, examination of an original research project coherent with the PhD topics, and an interview including the discussion of the project.

The research project (max. 10.000 chars including spaces, either in Italian or in English) has to be previously sent by the candidate together with the admission application. This is mandatory: missing of the project will be **cause of exclusion from the competition**.

The interview will focus on random questions regarding topics of the PhD course and on the discussion of the research project provided for by the candidate, taking in consideration originality, scientific rigor, and relevance to the PhD topics. Knowledge of English language will be also verified.

Specificity for foreign candidates:

Foreign candidates will have the opportunity to take the examination in Italian or English.

Place and schedule of the examination:



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Interview for industrial PhD position: **July 28, 2022, 2:00 PM**

Interviews for ordinary positions: **July 29, 2022, 9:00 AM**

Both exams will take place in the Pharmacology Classroom, Biological Institute, Bari Polyclinic

For more information, please visit the website: www.uniba.it/ricerca/dipartimenti/scienzebiomediche



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ANNEX 20)

PROFILE

PHD PROGRAMME IN CHEMICAL AND MOLECULAR SCIENCE

Scientific area CUN: 03 Chemical Science

Scientific Subject Codes: CHIM/01, CHIM/02, CHIM/03, CHIM/06 and CHIM/12

Coordinator: Prof.ssa Luisa Torsi

Administrative location: Dipartimento di Chimica

PEC: direttore.chimica@pec.uniba.it

Duration: 3 years

Curricula:

- 1) Advanced chemical processes (Scientific Subject Codes CHIM/01, CHIM/02, CHIM/03, CHIM/06)
- 2) Chemistry of innovative materials (Scientific Subject Codes CHIM/01, CHIM/03, CHIM/06, CHIM/12)
- 3) Chemistry of biological systems (Scientific Subject Codes CHIM/01, CHIM/02, CHIM/03 and CHIM/10)

Total number of available positions n. 9 di cui:

- n. 2 positions with a scholarship from the University of Bari;
- n. 2 positions with a scholarship financed by ENI SPA for the research projects:
 1. **“From waste water to H₂ for microbial bioelectrolysis”**
 2. **“Bioconversion of CO₂ to minerals and fuels”**
- n.2 positions with a scholarship financed under DM 351/22

1. n.1 scholarship for the research project **“Cold Plasma Processes and Technologies for Sustainable Agriculture and Food Processing - PLASMA for AGRO-FOOD”**

DESCRIPTION: The research activity, embedded in the projects CNR AGRO-PLASM (Ist. NANOTEC e ISPA) and COST Action EC CA19110, is interdisciplinary between Chemistry and Agronomy, and investigates plasma processes on substrates of Agro-Food interest (seeds, soil, part of plants for ground/greenhouse, water for irrigation/disinfection, etc), for developing eco-compatible protocols of decontamination of the substrates mentioned, of protection of the seeds from fungi and other pathogens, and of activation of seed germination, with the aim of limiting the use of pesticides and fertilizers. The research group has already published on this topic: Masiello et al, J Mol Sci 22, 9301, 2021; Lo Porto et al, Plasma Proc Polym 16, 1900022, 2019; Lo Porto et al, Inn Food Sci & Em Tech 49, 13, 2018.

2. n.1 scholarship for the research project **“Smart Artificial Cells for Health Applications”**

DESCRIPTION: The aim of the research project is to design and develop smart artificial cells (SMACs) as responsive systems that can tune the release of insulin as a function of the level of glucose in the surrounding environment. The research project plans to test this approach first, at the proof-of-concept level, by implementing micro-sized engineered lipid vesicles (mSMAC) that can be observed directly under the optical microscope and then scaling, the most promising systems to the nanoscale (nSMAC) and incorporating the nanometric vesicles into injectable heat-sensitive gels for localized drug delivery (nSMAC-TG).



- n.3 positions with a scholarship financed under DM 352/22
 1. n.1 scholarship co-financed by Costruzioni Industriali CIVIDAC SPA for the research project “**E.H.S.S. Evolution Hydrogen Starge System**”

DESCRIPTION: The project aims at developing new materials for hydrogen storage of interest for automotive applications. Nanocomposite carbon-based materials (fullerene and graphene) and metals forming hydrides (e.g. Mg and Al) will be the class of interest. Furthermore, these composite materials will be coupled with photocatalytic metal oxides nanoparticles (TiO₂, Al₂O₃, MgO, ZnO) able to lower the hydrogen release temperature. Bimetallic alloys will be also investigated due to their high interstitial hydrogen storage capability enabling a faster release at ambient temperatures.
 2. n.1 scholarship co-financed by Pirelli Tyre SPA for the research project “**Characterization of tire rubber-based materials by high resolution mass spectrometry**”

DESCRIPTION: Natural rubber or caoutchouc is an important ingredient in Pirelli tires, it is a unique element in the production of a tire and is the perfect example of a renewable raw material. Natural rubber is made from tropical plant latex (typically *Hevea brasiliensis*); it is composed of approx. 94 - 95% from polyisoprene associated to proteins, fatty acids, and other substances. The aim of the research project is the analysis of the minimal portion of the proteins contained in natural rubber by means of advanced mass spectrometry techniques. Rubber deriving from different trees and from different geographic regions will be investigated to find a relationship between the protein composition and the performance of the tires to ultimately guarantee the improvement of the quality of natural rubber.
 3. n.1 scholarship co-financed by LabService Analytica Srl for the research project “**Development of new ecofriendly protocols of sampling, extraction, concentration and detection of emerging classes of organic persistent pollutants**”

DESCRIPTION: The research will be focused on the development and optimization of new protocols for sampling, extraction, purification, and micro-concentration of various emerging classes of organic persistent pollutants (POPs, fire retardant compounds, fluorinated PFOS organic pollutants, endocrine disruptors). The research will aim to develop ecofriendly protocols by reduction, removal, or replacement of toxic halogenated or aromatic solvents, such as dichloromethane or toluene, as well as by enhancing the efficiency of extraction and/or adsorption steps. Besides using commercially available adsorbent phases, new polymeric materials will be ad-hoc designed to improve performances of the process.

Arrangements for admission (ordinary candidates)

The exam procedures will be taken in accordance with art. 6 lett. C).

The selection process will include the evaluation of the titles and oral exams as well as a verification of the knowledge of English language.

As regards scholarship financed under DM 351 and DM 352, during the oral exam, the research project submitted by the candidates at the time of the application will be discussed.

The exams are unique and the ranking list will be unique.

The available positions will be assigned according to the ranking list.

Methods of accomplishment for the exams in English for foreign candidates

For foreign candidates, the oral exam can be done in Italian or in English.

Admission Exam dates and time:

Oral exam: July 27th, 2022 at 09:00 a.m.



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Venue: Dipartimento di Chimica – Aula 1 – Ground floor - Campus Universitario - Via Orabona, 4 – 70125 Bari (Italy)

For more information:

<https://www.uniba.it/ricerca/dipartimenti/chimica/ricerca/dottorato-di-ricerca>



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ANNEX 21)

PROFILE

PHD PROGRAMME IN PHARMACEUTICAL SCIENCE

Scientific areas CUN: 03 Scienze Chimiche, 05 Scienze Biologiche

Scientific Subject Codes: CHIM/06, CHIM/08, CHIM/09, BIO/14

Coordinator: Prof. Nicola Antonio Colabufo

Administrative headquarters: Dipartimento di Farmacia – Scienze del Farmaco

PEC: direzione.farmacia@pec.uniba.it

Number of position with scholarship: n. 7

- n. 2 scholarship funded by University of Bari
- n. 2 scholarship funded by SusPharma project “Merging Sustainable and Digital Chemical Technologies for the Development of the Greener- by-Design Pharmaceuticals” (SusPharma – N. 101057430 – HORIZON-HLTH-2021-IND-07-01 – CUP H97G22000130006), funded by European Health and Digital Executive Agency (HADEA)

1) *Development of new flow chemistry routes for the synthesis of pharmaceuticals –Fellowship 1*

The research activity will focus on the development of new synthetic tactics for building molecular architectures and accessing new chemical space currently unexplored and inaccessible at industrial level because of technology limitations. The key task will be: **Introducing new bio-isosteric groups using the flash chemistry approach**. The PhD student will be involved in the development of new flow protocols for easy and green access to fluorinated molecules in connection with the implementation of the Flow-to-Pharma concept. Unexplored fluorinated organometallics will be investigated starting from suitable starting materials either purchased or prepared at large scale using flow photochemistry technology. The flow processes will be made green by design giving access to new chemical space.

2) *Development of new flow chemistry routes for the synthesis of pharmaceuticals –Fellowship 2*

The research activity of the PhD student will focus on three main challenges: 1-Medicine shortage at EU level using green technologies and methods. 2-Merging flow photochemistry and flash chemistry approach for the development of automated telescoped preparation of complex scaffolds. 3-Approaching complex synthesis in pharma industry to face the needs of fast and reliable production methods with low environmental impact.

The key task will be: **New flow methods for facing synthetic challenges in modern pharmaceutical industry**. The PhD student will be involved in the development of new synthetic strategies for easy and green access to pharmaceutically relevant molecules.

- n. 2 scholarship funded by PNRR, D.M. 351/2022:

Area 03 CHIM/01

"Development of single molecule bioelectronic assays for precision oncology"

The PhD project aims at developing a point-of-care, ultrasensitive bioelectronic platform for early detection of pancreatic cancer, by recognizing relevant biomarkers at the single-molecule level. Qualitative and quantitative detection of proteins as well as genetic markers will be performed directly in biological fluids such as for instance blood, saliva, or juices/fluids from tumor tissues, at the limit of identification of one single molecule. Immunometric assays still heavily rely on enzyme-linked immunosorbent assays (ELISA). However, ELISA's lower limit of detection (LLOD) is at the picomolar level. However, a number of cancer malignant progression mechanisms involve proteins at very low concentrations. Besides, correlation studies between protein markers in tumoral tissues or fluids and in peripheral biofluids, for instance plasma, open to much wider use of the minimally invasive liquid biopsy for early diagnosis and prompt cure. The assays herein developed will be highly



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reliable with an incidence of false positive and false negative lower than 1%, enabling to assess if a sample contains or not a given marker with a threshold of 1 entity in 0.1 mL

Area 05 BIO/14 – (campione nazionale 3)

"Preclinical validation of efficacy and effectiveness of novel nanotherapies RNA-based in cellular, organoids and animal models of neuromuscular diseases"

The research project is based on the preclinical validation, in efficacy and efficiency, of new RNA-based therapies, to be used in cellular models, organoids and animals, for neuromuscular disorders. We foresee a wide integration of interdisciplinary competences (biology, chemistry, molecular biology and genetics). The project is very innovative as it aims to implement the existing gene therapy with RNA based new drugs for different neuromuscular disorders. The efficacy of these drugs will be tested directly on patients derived stem cells and animal models to validate long term efficacy and security also through new biomarkers.

- **n. 1 scholarship funded by PNRR – mission 4, D.M. 352/2022**

Area 05 – SSD BIO14 – UNIBA - BIOND Solutions BV

"Development of innovative platforms for long-term pharmacological studies on human organoids"

The project is based on the synthesis of 3D organoids with cells derived from patients affected by Duchenne Muscular Dystrophy. The project aims to validate biocompatible scaffolds, microfluidic systems and nanometric scale sensors, to obtain and maintain 3D organoids in culture even when co-cultured with other cells types (motoneurons and vessels). The 3D structures will be obtained by differentiation of human derived stem cells. These supports give the possibility to keep the organoids in culture for a longer time, paving the way for in vitro drug testing and disease modelling. This project aims to overcome the ethical, economical and temporal impact of translational research, by using innovative platforms which offers experimental advantages such as reproducibility and ability to test a high number of drugs with minor costs.

Study period: 3 years

Curricula: NO

The fellowships will be awarded according to the ranking of merit until all the available positions will be assigned. Only for fellowships D.M. 351/2022 and D.M. 352/2022, the candidate should present a project to carry out the aims of fellowships above mentioned.

Modality of admission ordinary positions:

The selection will be performed on qualifications and exams (interview) with the assessment of the knowledge of the foreign language: English.

Procedures for the oral exam for foreign candidates:

Foreign candidates can choose to take the entrance examination in Italian or English

Calendar of admission exams:

Oral Proof: July 26, 2022, at 12 o'clock CET

Where: Room 6, Department of Pharmacy, Campus E. Quagliariella, via E. Orabona 4, Bari

Calendar of admission exams for places reserved for graduates in foreign universities:

Oral Proofs: July 26, 2022, at 12:00 a.m.

For further information, please consult the following Web address:

<https://www.uniba.it/ricerca/dipartimenti/farmacia/ricerca/dottorati-di-ricerca/dottorato-di-ricerca-in-scienze-del-farmaco/bando-di-concorso-dottorato-di-ricerca-xxxvii-ciclo-anno-accademico-2022-2023>



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ANNEX 22)

PROFILE

PhD PROGRAMME IN SOIL AND FOOD SCIENCES

CUN Scientific Areas: 02 - Physical Sciences, 03 – Chemical sciences, 05 – Biological Sciences, 06 – Medical sciences, and 07 – Agriculture and veterinary sciences

Scientific Subject Codes: AGR/01, AGR/02, AGR/04, AGR/13, AGR/15, AGR/16, AGR/19, BIO/11, BIO/12, CHIM/01, CHIM/10, FIS/07, MED/09 and MED/38

Coordinator: Prof. Fabio Minervini

Administrative site: Department of Soil, Plant and Food Science

PEC: disspa@pec.uniba.it

Duration: 3 anni

Curricula: YES

- 1) Food microbiology, technology, safety and chemistry; Scientific Subject Codes AGR/01, AGR/04, AGR/15, AGR/16, AGR/19, BIO/11, BIO/12, CHIM/01, CHIM/10, FIS/07, MED/09 and MED/38)
- 2) Agricultural chemistry (Scientific Subject Codes: AGR/01, AGR/02 and AGR/13)

Total positions with scholarship n. 7 of which:

N. 1 position with scholarship funded by University of Bari reserved for Graduates from Foreign Universities (curriculum 1: Food microbiology, technology, safety and chemistry)

N. 1 position with scholarship funded by D.M. N. 351/22

- **Title: Innovative technological applications of plant-based ingredients (curriculum 1: Food microbiology, technology, safety and chemistry)**

This research project is aimed at researching, developing, and optimizing technological solutions to obtain "green" protein ingredients, with nutritional, technological and sensory characteristics suitable for use in innovative food products. The activities will follow the principles of green and circular economy, promoting the use of local resources (legumes, cereals, and pseudo-cereals) and by-products of the food industry with high content of protein.

N. 5 positions with scholarship funded by D.M. N. 352/22:

- **Title: Study, research, and scientific validation of an integrated crop model within the Solarfertilization agri-photovoltaic model (curriculum 2: Agricultural chemistry)**

The topic of this research relates to the optimization of an integrated agricultural production and photovoltaic energy system with the aim of studying an integrated crop model within an agri-fotovoltaic system. To this end, the adaptability of some model species, in the context of herbaceous and horticultural crops, to the agri-fotovoltaic system under study in the typical conditions of Mediterranean environments will be assessed, with a particular focus on the identification of agronomic strategies for the sustainable management of resources (water, fertilizers, and soil), also using sensor-based technologies. Different operational solutions will be compared to identify the most efficient ones from an agronomic and energy point of view.

- **Title: Analysis of the socio-economic results of companies in the form of associations and their propensity to introduce innovations in the agri-food sector (curriculum 2: Agricultural chemistry)**

This research project aims at creating a tool for understanding and verifying the impacts generated - and that can be generated - on the associated agri-food companies from an economic, social, and environmental point of view, by the propensity and degree of adherence to innovation processes. This will contribute to a greater efficiency and



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effectiveness of the activities carried out by the associated agri-food companies and will favor the positive and concrete development of local communities with specific analysis models, methodologies and measurement systems and which also have a specific focus on the following topics: innovation, biodiversity and promotion of sustainable development.

- **Title: Use of vegetal bioactive extracts in dairy cows: effects on milk traits and animal welfare (curriculum 1: Food microbiology, technology, safety and chemistry)**

The present project, starting from waste vegetable matrices or co-products of industrial processes, will identify molecules and substances with bioactive action on dairy cattle, trying to improve the quality of production, increase the shelf life, reducing the use of preservatives, raising the standards of animal welfare and, consequently, reducing the use of antimicrobial molecules in the production process. These activities may also find a place in agricultural marginal systems, which could represent elements of great value to produce bioactive molecules useful in livestock production.

- **Title: From research to business: Technology transfer models in the Food Science field (curriculum 1: Food microbiology, technology, safety and chemistry)**

The research topic will concern the creation of a professional figure able to act as a cornerstone in the technology transfer between organizations and companies through the scale-up of the solutions proposed by research on scales closer to the industrial one. An "Innovation Coach" will be trained, with skills in the food science field with in-depth knowledge of international research topics who, thanks to the experience in the business reality, will be able to adapt and transfer to companies the innovation needs expressed by research bodies.

- **Title: Design, optimization and development of plant-based innovative supplements and functional foods of on a pilot and industrial scale (curriculum 1: Food microbiology, technology, safety and chemistry)**

This research project aims at implementing new biotechnological solutions on a large scale to respond to the needs of the modern food industry, designing and optimizing novel "plant-based" functional foods and supplements. Diversifying the protein supply is widely considered the right approach to innovate the use of cultivars from the Apulian and national territory and generate new solutions, planning research with a strong interest in the application field.

Application Requirements (Ordinary positions):

The exam procedures will be taken in accordance with art. 6 lett.B)

The selection is based on qualifications, evaluation of a research project and oral exams.

During the oral exam, applicants should also prove knowledge of the English language.

The contents and formatting instructions for preparing the research project are available at the following website:

<https://w3.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca/scienze-del-suolo-e-degli-alimenti>

Exam procedures for foreign candidates (Ordinary positions):

Foreign candidates can choose Italian or English language for their admission exam.

During the oral exam, applicants should also prove knowledge of the Italian language.

The exams will be distinct for each curriculum and the respective rankings will merge into a single final ranking that will give the title to access.

The places available will be assigned, among the various curricula, according to the order in the ranking of merit, until the places are exhausted.

Candidates must indicate the choice of curriculum **under penalty of exclusion**.

Position reserved for Graduates from Foreign Universities:

The exam procedures will be carried out in accordance with art. 17 procedure 2.

The selection will take place based on qualifications, evaluation of a research project and oral exams.



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The contents and formatting instructions for preparing the research project are available at the following website:

<https://w3.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca/scienze-del-suolo-e-degli-alimenti>

The oral exam may also take place by videoconference. A separate ranking will be formulated, however, if not used, the position will be assigned to candidates usefully placed in the ordinary ranking.

Admission exam dates, time, and place:

Oral interview: 28th July 2022, at 9:00 am (CEST)

The oral exams will be held in: ROOM VII of the Department of Soil, Plant and Food Sciences, street Giovanni Amendola 165/A, 70126, Bari.

ON-LINE by Teams

(https://teams.microsoft.com/l/meetup-join/19%3a3nkZCW7-2fZT30nFKy_OgMXHkWCbcIE8ZE-7unxBISE1%40thread.tacv2/1654778278997?context=%7b%22Tid%22%3a%22c6328dc3-afdf-40ce-846d-326eead86d49%22%2c%22Oid%22%3a%2207cacad3-3605-45ea-93e7-867351517fb9%22%7d)

Admission exam dates and place for n. 1 position with grant reserved for Graduates from Foreign Universities:

Oral interview: 28th July 2022 and 29th July 2022

The oral exams will be held in: ROOM VII of the Department of Soil, Plant and Food Sciences, street Giovanni Amendola 165/A, 70126, Bari.

ON-LINE by Teams

(https://teams.microsoft.com/l/meetup-join/19%3a3nkZCW7-2fZT30nFKy_OgMXHkWCbcIE8ZE-7unxBISE1%40thread.tacv2/1654778278997?context=%7b%22Tid%22%3a%22c6328dc3-afdf-40ce-846d-326eead86d49%22%2c%22Oid%22%3a%2207cacad3-3605-45ea-93e7-867351517fb9%22%7d)

Candidates will be informed, through e-mail, about the exact time of the oral exam.

For further details and information, the candidates are pleased to visit the website:

<https://w3.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca/scienze-del-suolo-e-degli-alimenti/xxxviii-ciclo>



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ANNEX 23)

PROFILE

DOCTORATE PROGRAMME IN HUMAN RELATION SCIENCES

CUN Scientific Areas: 06 – Medical Science; 10 – Philology, Literature, Arts of Antiquity; 11A Historical, Philosophical and Pedagogical Sciences; 11B Psychological Sciences; 13A Economic and Statistical Science; 14 – Politics and Social sciences.

Coordinator: Prof. Andrea Bosco

Administrative Office: Department of Education, Psychology, Communication

PEC: direttore.forpsicom@pec.uniba.it

Duration: 3 years

Curricula:

- 1) Historical and social policies (scientific sectors: M-STO/02, SPS/01, SPS/02, SPS/06, SPS/07, SPS/08, SPS/11, SPS/12, L-LIN/03, L-LIN/10, M-FIL/01)
- 2) Educational dynamics and education to politics (scientific sectors: M-PED/01, M-PED/02, M-PED/03, M-PED/04, SECS-S/01)
- 3) Psychology: cognitive, emotional and communicative processes (scientific sectors: M-PSI/01, M-PSI/02, M-PSI/03, M-PSI/04, M-PSI/05, M-PSI/06, M-PSI/08, L-LIN/12, MED/43, M-FIL/01)

Total number of positions available: **6**

- 5 positions with scholarship, one of them reserved for graduates from foreign universities
- 1 position without scholarship

The positions are only partially divided among the curricula:

- 1 position with scholarship funded by DM 351/22 - “PNRR” for the curriculum 3),
- 1 position with scholarship funded by DM 351/22 - “PA” for the curriculum 2),
- 1 position with scholarship funded by DM 352/22 - “DOTTORATI INNOVATIVI” for the curriculum 3),
- 2 positions with scholarships funded by University of Bari, one of them reserved for graduates from foreign universities, not distributed among the curricula,
- 1 position without scholarship not distributed among the curricula.

The examinations will be differentiated for each curriculum and the respective rankings will merge into a single final ranking list that will make the candidate eligible for the scholarship.

The positions will be assigned, within each curriculum, according to its ranking, until all the positions have been filled.

Positions that have not yet been assigned due to lack of candidates in a curriculum, will be assigned to candidates who are suitable for other curricula, based on the score obtained in the general ranking.

Candidates must indicate in attachment A), which represents integral part of this call, the choice of one curriculum, **under penalty of exclusion**. Candidates who do not specify the curriculum they apply for will be excluded from the competition, even if they do not compete for a scholarship already allocated to one of the curricula. Furthermore, whoever intends to compete for a scholarship on a specific topic must specify the title of the research project for which she/he is competing.

Description of Research Projects

Project 1- DM 351/22, PNRR, M-PSI/03, curriculum 3

ITINERANT - Traveling with the mind. Interference and dIstraction IN pErfoRming dANgerous acTivities: the case of driving

Driving distraction (DD) means any kind of diversion of attention from the driving task towards secondary activities, guided by the perception / response to external stimuli or by self-generated internal thoughts.



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The aim of the project is to investigate different profiles of distraction in driving behavior. The effectiveness of the model will be studied in forensic and interventional assessment contexts, on clinical and non-clinical populations and it will be verified whether different DD measures provide convergent results. The project proposal is divided into two specific objectives:

- develop and validate a new psychometric questionnaire on DD.
- investigate the relationships between personality traits related to driving, driving skills, attitudes, behaviors and susceptibility to different types of distraction.

Project 2 - DM 351/22, PA, M-PED/04, curriculum 2

Strengthening of the PA through the active participation of the territory for the benefit of the frail parts of the population

The research is aimed at strengthening the PA through the active participation of the territory for the benefit of the weaker sections of the population, in particular through:

1. Study of the new contexts of interaction and social infrastructure
2. Creation of innovative models of participatory planning and digital interaction between the various social stakeholders for the strengthening of active policies in the area, with a focus from the analysis of needs to the implementation of training interventions
3. Identification of new technologies for the elderly and disabled for inclusive purposes
4. Design of proposals to fill the structural, quantitative and qualitative gaps in the supply of educational services in the area
5. Forms of interaction between PA and the Third Sector for the improvement of systems for the protection of social and economic fragility in an eco-sustainable perspective

Project 3 - DM 352/22, Innovative Doctorates, M-PSI/01, curriculum 3

Multimodal detection of emotion expression in customer care & satisfaction of bank sector

This research project aims to define on a theoretical and applicative level the procedures for a multimodal detection of emotional expression in the dyadic interactions of customer care & satisfaction both online and in presence in the context of banking services, integrating the different verbal and non-verbal channels. Verbal expression and emotional communication (linguistic, paraverbal, facial, behavioral indices, etc.). It is also proposed to use verbal and non-verbal indicators of emotional expression with the goal of identifying situations of deception and fraud (deception detection).

This proposal will make use of IT tools and models for the automatic identification of emotional expressions. The data collected in this way will be used to develop a multimodal detection protocol of emotional expression in order to improve the ability to identify the levels of satisfaction and the emotional state of users, as well as to contribute to deception detection in the context of customer care.

Admission procedure:

The examination procedures will be taken according to art. 6 lett. B).

Scientific qualifications + original research project to be attached to the registration form + oral examination. The selection will be based on scientific qualifications, original research project, to be attached to the application, and oral examination on theoretical and methodological insights inherent in the contents of the project presented, and the assessment of the knowledge of a foreign language: English. The must have a maximum length of 15000 characters, spaces and bibliography included. The project must include four sections: 1) state of the art / rationale and aims of the project, 2) method, 3) expected results, 4) potential threats to project success.

The candidates' admission to the oral examination will be conditional upon a positive evaluation of the original research project.

The research project will be discussed and the knowledge of the English as a foreign language will be assessed during the oral examination, that can be held electronically, where requested by the candidate.

Examination for foreign candidates:

Foreign candidates can choose to take the exam either in Italian or English.

Positions reserved for graduates from foreign universities:



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The exam procedures will be carried out in accordance with art. 17 procedure 2), selection procedure by scientific qualifications and oral examination.

The selection will be based on scientific qualifications, original research project, to be attached to the application, and oral examination on theoretical and methodological insights inherent in the contents of the project presented, and the assessment of the knowledge of a foreign language: English. The must have a maximum length of 15000 characters, spaces and bibliography included. The project must include four sections: 1) state of the art / rationale and aims of the project, 2) method, 3) expected results, 4) potential threats to project success.

The oral examination is held by videoconference, according to the procedures set out in the notice (art. 17). A separate ranking will be formulated: the intended positions, if not assigned to graduates from foreign universities, will be assigned to candidates in the ordinary ranking.

Calendar of the admission exams for ordinary positions:

Selection procedures start (for the panel members only): August 1st 2022 at 9.00 a.m.

Publication of the admitted candidates to the oral examination: August 2nd 2022, on the following website:
<https://www.uniba.it/ricerca/dipartimenti/forpsicom/didattica/formazione-postlaurea/dottorato>

Oral interview: August 3rd, 2022 at 9.00 a.m., Hall Nelson Mandela, 1st Floor, Palazzo Chiaia-Napolitano.
Via Crisanzio, 42 Bari

Admission exam calendar for the position reserved to graduates from foreign universities:

Oral interview: August 3rd, 2022 at 9.00 a.m., on the MS Teams platform (code: 7cczg2k). Candidates will be invited to share the platform by an e-mail notification. The address of the e-mail is that they have declared on the registration form.

For more information, visit the website:

<https://www.uniba.it/ricerca/dipartimenti/forpsicom/didattica/formazione-postlaurea/dottorato>

<http://www.uniba.it/ricerca/dipartimenti/disspa/dottorato-di-ricerca>



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ANNEX 24)

PROFILE

PHD PROGRAMME IN SUSTAINABLE TECHNOLOGIES FOR THE INDUSTRIAL DEVELOPMENT OF MEDICINAL AND DIAGNOSTICS - TeSSMeD

Scientific areas CUN: 03 Scienze Chimiche, 05 Scienze Biologiche, 06 Scienze Mediche

Scientific Subject Codes: CHIM/09, CHIM/08, CHIM/06, CHIM/01, BIO/15, BIO/14, MED/42, MED/07

Coordinator: Prof. Nunzio Denora

Administrative headquarters: Dipartimento di Farmacia – Scienze del Farmaco

PEC: direzione.farmacia@pec.uniba.it

Number of position with scholarship: n. 6

- **n.1 position with scholarship funded by University of Bari;**
- **n.1 position with scholarship funded by the company Merck KGaA Germany;**
- **n.1 position covered by a higher education and research apprenticeship contract funded by Farmalabor srl:**

The higher education and research apprenticeship contract provides for the technology transfer activities and on the co-development of technologies, know-how and solutions, in which apprentice/trainee will play a pro-active role in the creation and invention of innovative technologies, starting from clear business needs, in order to support and to accelerate innovation processes and business growth, strengthening synergies and relationships with the industrial research ecosystem;

- **n. 1 position with scholarship funded by D.M. 351/2022 - PNRR:**

- Area 03, CHIM/09:

The research project titled: "**Development by microfluidics techniques of new RNA-based nanotherapies and their preclinical validation in cellular, organoid and animal models of rare diseases**" involves a broad integration of interdisciplinary skills (technological-formulative, biological, genetic and molecular biology) with a highly innovative character aimed at implementing existing gene therapy with the development and production by microfluidics of nano drug delivery systems for nucleic acids. The PhD student will be able to spend 6 months at the Department of Biomedical Engineering of the University of Groningen-The Netherlands under the supervision of Prof. Hélder A. Santos for the development with 3D printers of microchips for microfluidic nanoparticles production.

- **n. 2 positions with scholarship funded by D.M. 352/2022 - PNRR – mission 4**

1) Area 03, Settore CHIM/08:

The research project titled: "**Design and synthesis of new bioactive molecules and in silico prediction studies of pharmacological and/or toxicological activity**" falls under the disciplinary field CHIM/08 and involves the co-funding of the fellowship by the company Colosseum Combinatorial Chemistry Centre for Technology (C4T) Srl, where a period of 6 months of activity will be spent. The theme of the project is consistent with the National Plan for Research (PNR) 2021-2027, where the expected goal of the project is to prevent diseases, promote healthy aging and decrease their economic burden on the National Health Service, and to personalize as much as possible prevention, prediction, diagnosis and treatment for any patient.

2) Area 03, CHIM/09:

The research project titled: "**Design, formulation and biological evaluation (pharmacological and/or toxicological activity) of new molecules for therapeutic use, labeled with Lu-177 and Ac-225**" falls within the disciplinary field CHIM/09 and involves the co-funding of the fellowship by the company Beforpharma Srl, where a period of 18 months of activity will be provided. The theme of the project is on the development of new



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technologies of chemical pharmaceutical production of radiopharmaceuticals with high diagnostic and therapeutic impact. The theme is consistent with the strategic area of the PNRR Research and Enterprise, as it supports the technological innovation processes currently available for the production of radiopharmaceuticals and their technology transfer.

Study period: 3 years

Curricula: NO

The scholarships will be awarded according to the ranking of merit until all the available positions will be assigned.

Modality of admission ordinary positions:

The selection will be performed on qualifications and exams (interview) with the assessment of the knowledge of the foreign language: English. Only for fellowships D.M. 351/2022 and D.M. 352/2022, the candidate should present a project to carry out the aims of fellowships above mentioned.

Procedures for the oral exam for foreign candidates:

Foreign candidates can choose to take the entrance examination in Italian or English

Calendar of admission exams:

Oral Proof: July 26, 2022, at 16 o'clock CET

Where: Room 6, Department of Pharmacy, Campus E. Quagliariella, via E. Orabona 4, Bari

For further information, please consult the following Web address:

<https://w3.uniba.it/ricerca/dipartimenti/farmacia/ricerca/dottorati-di-ricerca/dottorato-201cindustriale201d-in-forma-associata-ai-sensi-dellart-10-dm-226-2021-in-tecnologie-sostenibili-per-lo-sviluppo-industriale-di-medicinali-e-diagnostici-tessmed-xxxviii-ciclo-nuova-istituzione>



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ANNEX 25)

PROFILE

PhD PROGRAMME IN ORGANS AND TISSUES TRANSPLANTATION AND CELLULAR THERAPIES

CUN Scientific Area: 06 Medical Sciences, 07 Agrarian and Veterinary Sciences, 05 Biological Sciences

Scientific Subject Codes: BIO/17, VET/09, MED/15, MED/12, MED/13, MED/14, MED/18, MED/19, VET/08, VET/01, MED/41 and MED/15

Coordinator: Prof. FRANCESCO STAFFIERI

Administrative office: Department of Emergency and Organ Transplantation

PEC: direzione.deto@pec.uniba.it

Duration: 3 years

Curricula: NO

Total positions available: n. 9

- n. 3 positions with scholarship funded by DM 351/22 - PNRR
- n. 3 positions with scholarship funded by DM 352/22
- n. 1 position with scholarship funded by University of Bari reserved to candidates graduated in foreign universities
- n. 2 positions without scholarships, of which 1 reserved to candidates graduated in foreign universities

Short description of projects with a specific theme - DM 351/22:

1) Design and synthesis of an irisin receptor agonist for the therapy of type 2 diabetes

Irisin exerts beneficial effects on the survival and function of pancreatic beta cells, in vitro, in vivo in healthy mice and ex vivo in the islets of T2D patients. Furthermore, irisin exhibits beneficial cardiovascular and anorectic properties, as well as. Favorable metabolic effects in insulin-dependent organs. The specific objectives of this project are: 1. Identify the irisin receptor on pancreatic beta cells. 2. Generate an irisin receptor-specific beta-cell knockout mouse model and study its metabolic effects in response to both a standard diet and a high-fat diet, after administration of irisin or vehicle. 3. Design and synthesize a molecule similar to irisin, capable of binding the receptor with high affinity and activating it in a prolonged manner.

2) Development of drug-eluting biomimetic scaffolds for osteochondral tissue regeneration

The project is part of the tissue engineering field of osteochondral tissue and is aimed at creating innovative custom made solutions for the treatment of cartilage lesions due to neoplastic pathology, congenital or acquired anomalies, trauma. Osteochondral lesions represent one of the main problems in orthopedics as they involve the joint, affecting not only the cartilage but also the subchondral bone tissue. The techniques used to treat osteochondral lesions (such as microfractures, drilling) contribute only in part to regenerate the cartilage tissue which in any case does not show physiological biomechanical properties.

3) Cardiac metabolic alterations in a canine model of heart failure

The goal of the project is to evaluate the contribution of strain and strain rate analysis in the short and long-term monitoring of dogs undergoing innovative and conventional therapeutic strategies for MCD. The application of this method in support of conventional ultrasound could be very useful for prognostic purposes in the clinical



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practice of all dogs with MCD and in particular could contribute to the evaluation of the effectiveness of the new innovative therapeutic strategies being studied on left ventricular function.

Short description of projects with a specific theme - DM 352/22:

1) **Role of nutritional therapy in patients with chronic kidney disease awaiting transplant**

Chronic kidney disease represents a significant risk factor for mortality and morbidity, as well as a growing public health problem. Dietary-nutritional therapy is an important component in the management of the patient with chronic kidney disease, which precedes and supplements drug therapies. The goals of dietary nutritional therapy include maintaining optimal nutritional status, prevention and / or correction of signs, symptoms and complications of chronic renal failure and possibly delay in initiation of dialysis. The program intends to enhance the prevention and treatment capacity of the national health system by promoting the use of innovative therapeutic approaches in the nephrology field.

2) **Transition and digital therapy in healthcare**

The new applications offered by emerging technologies are essential for improving patient care and making the operational and management organization of healthcare facilities more effective and efficient. However, the healthcare sector manifests a significant degree of difficulty in implementing the digital transformation process supported by new technologies. The experience of the pandemic has also highlighted the importance of being able to count on adequate exploitation of the most advanced technologies, on high digital, professional and managerial skills, on new processes for the provision of services and care and on a more effective link between research, data analysis, care and their system-level programming. The project aims to intensify the link between digital and health through the experimentation and study of innovative therapeutic approaches offered by digital technologies.

3) **Artificial Intelligence and new digital technologies applied to nephropathology and cognitive decline in chronic kidney disease**

Italy has adopted, with the passage to the Council of Ministers, the Strategic Program for Artificial Intelligence (AI) 2022-2024 in line with the European Strategy, the Program outlines twenty-four policies to be implemented in the next three years to strengthen the AI system in Italy, through the creation and enhancement of skills, research, development programs and applications in the AI field. AI is demonstrating a great impact in perfecting personalized care and effective management of the patient with chronic disease. New applications of AI to kidney disease have recently become available, driven by the successful implementations of AI in digital disease and the more widespread use of digital diagnostic imaging. The project aims to deepen the technical understanding of digital health technologies combined with the possibilities offered by AI.

The available positions will be assigned based on the order of classification, up to the end of the available candidates. The positions with scholarship will be primarily assigned based on the order of classification. Thereafter positions without scholarship will be assigned.

Modalities of admission:

The exam procedures will be taken in accordance with art. 6 lett. A) of the call.

The selection will be based on titles, the evaluation of the research project regarding the themes of the doctorate, a written examination on the topics covered by the PhD Course and an oral examination. The research project will be preventively sent by the candidate together with the admission documents. The research project (maximum 3000 words excluding the bibliography) **is mandatory for the admission** to the oral examination and should include at least the following fields: scientific background, aim of the study, methodology (including the statistical considerations), expected goals, perspectives and possible advantages.

The candidate will be admitted to the oral examination only if the evaluation of the research project and the written examination got a positive evaluation.

During the oral examination, the knowledge of the English language, will be also evaluated.



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Examination of foreign candidates:

Foreign candidates can choose to perform the admission examination in Italian or English language.

Positions reserved to candidates graduated in foreign universities:

The exam procedures will be carried out in accordance with art. 17 procedure 2

Selection will be based on titles and oral examination with the discussion of a project regarding the themes of the doctorate, preventively sent by the candidate together with the admission documents. The research project (maximum 3000 words excluding the bibliography) **is mandatory for the admission** to the oral examination and should include at least the following fields: scientific background, aim of the study, methodology (including the statistical considerations), expected goals, perspectives and possible advantages. The oral examination will be performed through a telematic platform (Microsoft Teams) based on the criteria contemplated in the call. A separated list will be formulated for the candidates graduated in foreign countries. If these positions will be not assigned to foreign candidates, they will be assigned to regular candidates.

Calendar and location for the admission examinations:

Written examination: July 27th 2022

Oral Examination July 28th 2022

Location and time:

The examinations will take place at the section of Veterinary Clinics and Animal Production of DETO, at 9:30

Calendar and location for the position reserved to candidates graduated at foreign universities

Oral examination: July 28th at 2 pm

For further information please check the website

<https://www.uniba.it/ricerca/dipartimenti/deto/ricerca/dottorato-di-ricerca-in-trapianti-di-tessuti-ed-organ-e-terapie-cellulari-1>