

**REGISTRATION OPENING: June 29<sup>th</sup>, 2023 12:00 PM (CET)**  
**DEADLINE FOR APPLICATIONS: July 27<sup>th</sup>, 2023 1:00 PM (CET)**



Student Services Area  
PhD Office

Rector's Decree No. 658/2023  
Prot. No 155814 of 27/06/2023

THE RECTOR

HAVING CONSIDERED

- the Statute of the University of Modena and Reggio Emilia, enacted by Rector's Decree no. 3 of February 6<sup>th</sup>, 2012 and subsequent amendments and additions;
- the Italian Prime Minister's Decree of April 9<sup>th</sup>, 2001 on "*Uniform treatment regarding the right to higher education*", in accordance with art. 4 of Law no. 390 of December 2<sup>nd</sup>, 1991, and subsequent amendments and additions;
- art. 4 of Law no. 210 of July 3<sup>rd</sup>, 1998 on "*Guidelines for the recruitment of tenured university researchers and professors*", published in the Official Gazette of July 6<sup>th</sup>, 1998, General Series no. 155, and subsequent amendments and additions;
- Ministerial Decree no. 226 of December 14<sup>th</sup>, 2021, on "*Regulation on the procedures for the accreditation of seats and PhD programmes and criteria for establishment of the PhD programmes by the accredited institutions*", published in the Official Gazette of December 29<sup>th</sup>, 2021, General Series, no. 308;
- Rector's Decree no. 481 of May 12<sup>th</sup>, 2022, implementing the provisions contained in Ministerial Decree no. 226 of December 14<sup>th</sup>, 2021, to enact the University Regulations governing PhD studies, and subsequent amendments and additions;
- Law no. 240 of December 30<sup>th</sup>, 2010;
- the legislation regarding apprenticeship contract for advanced training;
- the legislation concerning the "Marie Curie" programmes, with which the European Union allocates funds for graduates selected in the programmes themselves intending to take part in PhD programmes;
- the resolution of the Academic Senate in its session of May 24<sup>th</sup>, 2017 and the Executive Board in its session of May 26<sup>th</sup>, 2017 approving the guidelines for the use of telematic methods for the selection procedures for admission to PhD programmes;
- Ministerial Decree no. 301 of March 22<sup>nd</sup>, 2022 on "*Guidelines for the accreditation of PhD programmes in accordance with art. 4, paragraph 3, of the Regulation as per Ministerial Decree no. 226 of December 14<sup>th</sup>, 2021*";
- the Note of the Ministry of University and Research of March 2<sup>nd</sup>, 2023 which informed that the rules of Ministerial Decree no. 301 of March 22<sup>nd</sup>, 2021 also apply to the accreditation of courses for the XXXIX cycle;

- that the Department of Medical and Surgical Sciences, and Department of Education and Humanities, of the University were among the 180 Departments of Excellence, recipients of Ministry of Education, University and Research as part of the initiative concerning the Departments of Excellence 2023-2027;
- the resolution of the Emilia-Romagna Regional Council No. 509 of April 3<sup>rd</sup>, 2023, by which the research training projects and the relevant PhD scholarships presented following the Call for Proposals "Approval of training projects for research territory: technological, cultural, economic and social transition towards sustainability presented in accordance with the notice approved by the Regional Council resolution No. 154/2023. PR FSE+ 2021/2027;
- Ministerial Decree no. 118 of March 2<sup>nd</sup>, 2023 which set out for the academic year 2023/2024 the attribution on PNRR, Mission 4, Component 1 "Strengthening the offer of educational services: from Nursery to University" – Investment 3.4 "Didactics and advanced university skills" and Investment 4.1 "Extension of the number of the PhD programmes and innovative PhD Programmes for the Public Administration and the Cultural Heritage" of three-years PhD scholarships for the attendance of PhD courses;
- Ministerial Decree no. 117 of March 2<sup>nd</sup>, 2023 which set out for the academic year 2023/2024 the attribution on PNRR, Mission 4, Component 2 "From the research to the enterprise" - Investment 3.3 "Introduction of innovative PhD Programmes that meet the innovation needs of the enterprises and promote the recruitment of Researchers by the enterprises" of three-years PhD scholarships for the attendance of PhD courses;
- the resolutions of the Senate of May 9<sup>th</sup>, 2023 and of the Executive Boards of March 22<sup>nd</sup> and May 19<sup>th</sup>, 2023 which approved the planning and the establishment of PhD programmes, with administrative headquarters at the University of Modena and Reggio Emilia;
- the resolutions of the Senate of May 23<sup>rd</sup>, 2023 and of the Executive Boards of May 26<sup>th</sup>, 2023 which determined the contribution amounts for access and attendance to PhD courses for the academic year 2023/24;
- EU Regulation 2021/241 of the European Parliament and of the Council of February 12<sup>th</sup>, 2021 establishing the Recovery and Resilience Facility (RRF Regulation) with the specific objective of providing financial support to Member States in order to achieve the milestones and targets for reforms and investments set out in their Recovery and Resilience Plans;
- the ECOFIN Decision of July 13<sup>th</sup>, 2021, whereby the Council positively assessed Italy's Recovery and Resilience Plan, and notified to Italy by the General Secretariat of the Council by note LT161/21, dated July 14<sup>th</sup>, 2021;
- EU Regulation 2018/1046 of July 18<sup>th</sup>, 2018 on the financial rules applicable to the general budget of the Union, amending EU Regulations No. 1296/2013, No. 1301/2013, No. 1303/2013, No. 1304/2013, No. 1309/2013, No. 1316/2013, No. 223/2014, No. 283/2014 and Decision No. 541/2014/EU and repealing Regulation (EU, Euratom) No. 966/2012;
- Mission 4 "Education and Research" - Component 2 "From research to enterprise" - Investment 1.4 "Strengthening research structures and creation of "national R&D champions" on certain Key Enabling Technologies"; Investment 1.5 "Creating and strengthening "innovation ecosystems", building "territorial R&D leaders""; Investment Line 3.1, "Fund for the realisation of an integrated system of research and innovation infrastructures" – NextGenerationEU;
- Article 17 EU Regulation 2020/852, which defines environmental objectives, including the principle of "Do no significant harm" (DNSH), and the related European Commission Communication C (2021) 1054 final of February 12<sup>th</sup>, 2021, on "Technical

- guidance on the application of the principle of "Do no significant harm" under the Regulation on the Recovery and Resilience Facility";
- the National Recovery and Resilience Plan, officially submitted to the European Commission on April 30<sup>th</sup>, 2021 pursuant to Article 18 of EU Regulation No. 2021/241 and positively assessed by the ECOFIN Council Decision of July 13<sup>th</sup>, 2021 and notified to Italy by the General Secretariat of the Council by note LT161/21, dated July 14<sup>th</sup>, 2021;
  - the transversal principles set out in the NRRP, such as, inter alia, the principle of contribution to the climate and digital objective (so-called tagging), the principle of gender equality and the obligation to protect and enhance young people;
  - Investment 1.4 Line of M4C2 "Strengthening of research structures and creation of "national R&D champions" on certain Key Enabling Technologies", which aims at financing the creation of national research centres, selected through competitive procedures, that are able to reach, through the collaboration of universities, research centres and enterprises, a critical threshold of research and innovation capacity;
  - Investment Line 1.5 of M4C2 - Creation and strengthening of "Innovation Ecosystems", building "territorial R&D leaders", which aims at the creation and promotion of innovation and sustainability for an area/territory;
  - Investment Line 3.1 of the M4C2, which establishes the "Fund for the creation of an integrated system of research and innovation infrastructures" of the PNRR, which provides support for "the creation of research and innovation infrastructures linking the industrial sector with the academic sector;
  - Investment Line 1.3 of the M4C2 – Creation of "Partnerships extended to universities, research centres, companies for the financing of basic research projects", which aims to strengthen research chains at national level and promote their participation in strategic European and global value chains;
  - the Ministry of University and Research's Notice No. 3138 of December 16<sup>th</sup>, 2021 Corrected by directorial decree of December 18<sup>th</sup>, 2021 no. 3175, for the submission of Proposals for interventions to be financed under the National Recovery and Resilience Plan, Mission 4 Component 2 Investment 1. 4 "Strengthening of research structures and creation of "national R&D champions" on certain Key Enabling Technologies" financed by the European Union - NextGenerationEU, aimed at the creation of 5 (five) National Centres dedicated to frontier research related to technological areas consistent with the priorities of the European Research Agenda and with the contents of the National Research Plan 2021-2027;
  - the Notice of the Ministry of Universities and Research of December 30<sup>th</sup>, 2021 no. 3277 for the submission of Proposals for intervention for the creation and strengthening of "innovation ecosystems", construction of "territorial R&D leaders" - Ecosystems of Innovation - within the framework of the National Recovery and Resilience Plan, Mission 4 Education and Research - Component 2 From research to enterprise - Investment 1.5, funded by the European Union - NextGenerationEU, aimed at the creation of twelve Innovation Ecosystems on the national territory;
  - the Notice of the Ministry of Universities and Research of December 28<sup>th</sup>, 2021 no. 3264, for the submission of project proposals for "Strengthening and Creation of Research Infrastructures" to be financed under the PNRR Mission 4, "Education and Research" - Component 2, "From Research to Enterprise" - Investment Line 3. 1, "Fund for the realisation of an integrated system of research and innovation infrastructures", financed by the European Union - NextGenerationEU, which aims at implementing the reference action 3.1.1 "Creation of new RIs or reinforcement of existing ones that contribute to the objectives of Scientific Excellence of Horizon

- Europe and networking" referred to in Ministerial Decree no. 1141 of October 7<sup>th</sup>, 2021;
- the Directorial Decree no. 341 of March 15<sup>th</sup>, 2022, issuing a "Public Notice for the submission of Proposals for the creation of "Partnerships extended to universities, research centres, and companies for the funding of basic research projects" - within the framework of the National Recovery and Resilience Plan, Mission 4 "Education and Research" - Component 2 "From Research to Enterprise" - Investment 1.3, funded by the European Union - NextGenerationEU";
  - that, by virtue of the resolution passed by the Board of Directors on January 28<sup>th</sup>, 2022, the University participates as a founding HUB, leader of Spoke 1 and affiliated to Spoke 2 in CN3 - NATIONAL RESEARCH CENTRE FOR THE DEVELOPMENT OF GENE TECHNOLOGY THERAPY AND RNA TECHNOLOGY PHARMACIES (CUP: E93C22001080001), admitted for funding by grant decree no. 1035 of June 17<sup>th</sup>, 2022 and the relevant deed of obligation (code CN 00000041) of August 1<sup>st</sup>, 2022, for NEXTGENERATIONEU funds;
  - that, by virtue of the resolution of the Board of Directors of January 28<sup>th</sup>, 2022, the University participates as a founding HUB, leader of Spoke 6 and affiliated to Spokes 12 and 13 in CN\_4: NATIONAL CENTRE FOR SUSTAINABLE MOBILITY - CNMS (CUP: E93C22001070001) admitted for funding with concession decree no. 1033 of June 17<sup>th</sup>, 2022 and the related deed of obligation (code CN 00000023) of August 30<sup>th</sup>, 2022, for NEXTGENERATIONEU funds;
  - that, by virtue of the resolution of the Board of Directors of 18 February 18<sup>th</sup>, 2022, the University participates as a founding HUB and leader of Spoke 2 and affiliate of Spokes 1, 3, 4, 5, 6 in the innovation ecosystem "Ecosystem For Sustainable Transition of Emilia-Romagna (ECOSISTER) (CUP: E93C22001100001) admitted for funding with concession decree no. 1052 of 23/06/2022 and the related deed of obligation (ECS code 00000033) of 25/08/2022, for NEXTGENERATIONEU funds;
  - that, by virtue of the resolution passed by the Board of Directors on February 18<sup>th</sup>, 2022, the University participates as co-proponent, subject to the signing of the agreement pursuant to Article 15 of Law no. 241/90, in the research infrastructure "Italian Strengthening of Esfri RI Resilience (ITSERR)" (CUP: B53C22001770006) admitted to funding by concession decree no. 111 of June 20<sup>th</sup>, 2022 and related deed of obligation (code IR0000014) of August 9<sup>th</sup>, 2022, to be financed by NEXTGENERATIONEU funds;
  - that, by virtue of the resolution of the Board of Directors of May 20<sup>th</sup>, 2022, the University participates as a founding HUB and leader of Spoke 6 "Healthy Toolbox" and affiliate of Spokes 1 "Holistic Nosology", 2 "Intelligent Health", 3 "Prediction models", 4 "S4D Precision Diagnostics", 5 "Next-Gen Therapeutics", 7 "Prevention Strategies" and 8 "Clinical Exploitation" in the Extended Partnership "HEAL ITALIA", theme "6. Innovative diagnostics and therapies in precision medicine", (identification code PE000019), for the realisation of the Research and Innovation Programme entitled "HEAL ITALIA" Health Extended ALLiance For Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine (CUP: E93C22001860006) admitted for funding with concession decree no. 1559 of October 11<sup>th</sup>, 2022 and relevant deed of obligation of December 19<sup>th</sup>, 2022 to be validated on NEXTGENERATIONEU funds;
  - the NATIONAL PLAN FOR INVESTMENT COMPLEMENT TO THE NRP (PNC) Decree Law No. 59 of May 6<sup>th</sup>, 2021 "Urgent measures relating to the Supplementary Fund for the National Recovery and Resilience Plan and other urgent measures for investment".

- the Directorial Decree No. 931 of June 6<sup>th</sup>, 2022, Notice for the granting of funding for research initiatives for innovative technologies and pathways in the health and care sector under the Complementary Fund for the National Recovery and Resilience Plan and other urgent investment measures;
- that, by virtue of the resolution of the Board of Directors of November 18<sup>th</sup>, 2022, the University has undertaken to participate as a founding HUB and Affiliate in Mission 1 "Clinical Translation & Innovation" and Mission 3 "Next Generation components" in the initiative "Fit for Medical Robotics", acronym "Fit4MedRob", (identification code PNC\_0000007 - CUP UNIMORE: B53C22006810001) admitted to funding with concession decree no. 1984 of December 9<sup>th</sup>, 2022 and related deed of obligation of February 1<sup>st</sup>, 2023;
- the relevant Grant Terms and Conditions;
- the determinations of the competent University bodies in this regard;
- the activation and renewal proposals of the PhD programmes submitted by this University to the Ministry of Education, University and Research;

DEEMED it necessary to proceed with publication of the call for applications for the abovementioned courses pending the assessment of the Ministry of Education, University and Research on the activation of these courses, in order to respect the timetable envisaged by the Ministry of Education, University and Research for the publication of the rankings;

## D E C R E E S

### **ARTICLE 1 – Institution**

The University of Modena and Reggio Emilia hereby announces selection procedures for admission to the PhD programmes with triennial term as from November 1, 2023 listed in art. 17, which follows, for the XXXIX cycle, Academic Year 2023/2024.

**The actual activation of courses and registration are subject to the approval by the Ministry of University and Research upon positive opinion expressed by the National Agency for the Evaluation of the University System and Research (ANVUR), as indicated in the Ministerial Decree no. 301 of March 22, 2022, “Guidelines for the accreditation of PhD programmes” in accordance with art. 4, paragraph 3, of the Regulation as per Ministerial Decree no. 226 of December 14, 2021”.**

**PhD scholarships awarded by the founding of MD no. 117/2023 and MD no. 118/2023 are subject to the verification of eligibility and evaluation of the Ministry of University and Research.**

Additional scholarships and positions may become available, even in the event that funding is provided by public or private bodies subsequent to the publication of this call for applications, but not after the publication date of the final rankings.

The number of scholarships may also be increased should ministerial funding (“*Piano Giovani*”) become available throughout the project, and may be assigned to qualified ranked candidates without a scholarship or other types of incompatible funding, who have correctly registered by the deadline and in accordance with the regulations of this competition.

Those candidates who are awarded scholarships will be required to carry out the research projects assigned to them by the competent Board of the PhD Programme, with the exception of any changes as set by the authority.

The recipients of PhD scholarships awarded by the founding of MD no. 117/2023 and MD no. 118/2023, which provide the development of a specific research theme, are bound to conduct this activity.

The research activities financed by MD 117/2023 provide for study and research periods abroad of a minimum of six to a maximum of twelve, or eighteen months in the case of joint PhD, and a period in enterprises of a minimum of six to a maximum of eighteen months.

The research activities financed by MD 118/2023 “PNRR” provide for study and research periods abroad of a minimum of six to a maximum of twelve, or eighteen months in the case of joint PhD.

The research activities financed by MD 118/2023 “Public Administration” provide for study and research periods abroad of a minimum of six to a maximum of twelve, or eighteen months in the case of joint PhD, and a period in Public Administrations, enterprises or research centres of a minimum of six to a maximum of twelve months.

The research activities financed by MD 118/2023 “Cultural Heritage” provide for study and research periods abroad of a minimum of six to a maximum of twelve, or eighteen months in the case of joint PhD, and a period in enterprises, research centres or Public Administrations of a minimum of six to a maximum of twelve months.

The research activities financed by MD 118/2023 “Digital and environmental transitions” provide for study and research periods abroad of a minimum of six to a maximum of twelve, or eighteen months in the case of joint PhD, and a period in enterprises or research centres of a minimum of six to a maximum of twelve months.

Those candidates successfully ranked in the list of admitted students who, at the time of their enrolment on the Programme (as indicated in art. 7), express an interest in being considered for an apprenticeship contract for advanced training, may later be selected by the University, to firms, for such a contract, in accordance with Legislative Decree no. 81/2015 and Interministerial Decree 12/10/2015. Selection will be made on the basis of candidates’ specific qualifications.

There will be positions reserved for Industrial PhD programme for employees of the companies listed in art. 17, within the sections relating to Courses.

A candidate holding an apprenticeship contract or Industrial PhD programme may not at the same time hold a university scholarship or other types of awarded funding, this includes scholarships awarded by foreign Countries or those awarded within specific mobility programmes.

Apprenticeship contracts can be concluded only by candidates who have not yet reached their thirtieth year of age at the time of signing the contract.

**This call is equivalent to notification to all intents and purposes.** Any changes, updates or additions to the content of this call will be announced, **exclusively**, on the following website: <https://www.unimore.it/bandi/StuLau-Sdott.html> and on the online University notice board (<https://wss.unimore.it/public/albo/>).

## **ARTICLE 2 - Admission requirements**

The competition is open to any candidate, regardless of age or nationality, who as of **October 31, 2023**, holds an Italian degree obtained prior to D.M. 509/99 or an Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04), or an equivalent academic qualification from a foreign University, that has to be validated by the Selection Committee, following the legislation in force both in Italy and in the Country where the qualification was issued and within the international treaties or agreements on the recognition of international qualifications, in the case where degrees in specific subjects are required for admittance to the Programme.

Candidates who have a foreign academic qualification must submit any relevant documents useful for verifying equivalency: their degree certificate with a list of exams taken, along with an Italian or English translation, an authentication, and:

- for degrees obtained in European Union countries: Diploma supplement or certificate of comparability and verification issued by the CINEA, as a ENIC\_NARIC center
- for degrees obtained in countries outside the European Union: "declaration of validity" (dichiarazione di valore in loco") issued by the competent Italian consular or diplomatic representative for the country, or certificate of comparability and verification issued by the CINEA, as a ENIC\_NARIC center.

If not yet available, candidates must fill in the description of the degree with a list of exams passed, by using Annex A2, attaching the documents to the application for admission using the online procedure described in Art. 3.

Candidates who complete their degree after the deadline for this call must submit a Degree certificate or the form in Annex A2 (in case of degree awarded by a foreign institution) or a self-certification to prove that the degree has been conferred (using the form in Annex A1, in case of degree awarded by an Italian University):

- in case of degree completed before enrolment: by enclosing the form with the enrolment application form,
- in case of degree not yet completed when enrolling in the PhD Programme: by submitting the form to the PhD Office, by and no later than, October 31, 2023, via e-mail to the address [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it) .

For the purposes of admission to the doctorate course, in any case, Italian nationals and foreigners holding a foreign academic qualification must submit to the PhD Office, by and no later than, December 31, 2023, via e-mail to the address [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it), their degree certificate with a list of exams taken, along with an Italian or English translation, an authentication, and

- for degrees obtained in European Union countries: Diploma supplement or certificate of comparability and verification issued by the CINEA, as a ENIC\_NARIC center;
- for degrees obtained in countries outside the European Union: "declaration of validity" (dichiarazione di valore in loco") issued by the competent Italian consular or diplomatic representative for the country, or certificate of comparability and verification issued by the CINEA, as a ENIC\_NARIC center.

The University reserves the right to exclude from the competition any candidate who has not submitted the required documents by the deadline cited above without a justified reason.

Candidates who, at the date of the deadline of this call, are employed of the companies listed in Art. 17 within the sections relating to PhD Programmes, may take part in the selection process for Industrial PhD programme. For the purposes of registration to the Programme, suitable candidates must have a permanent or fixed-term contract of employment. In the case of fixed-term contracts, the duration of the contract, which is not relevant for the purposes of admission to the selection procedures, must in any case cover at least the official duration of the Programme (November 1, 2023 – October 31 2026).

Candidates who, at the date of the deadline of this call, are in possession of documentation proving the possession of the scholarship or the start of the procedure to obtain it, may take part in the selection process for scholarship holders of foreign States.



The competent offices will be checked the information sent by candidates in order to verify correctness.

All candidates are admitted to the selection conditional upon verification of the aforementioned requirements.

The University Administration reserves the right to exclude, at any time, candidates who have not the requirements for admission.

### **ARTICLE 3 – Admission applications**

Applications for admission to competitions and any required enclosures must be submitted following the online procedure by the final deadline of **July 27<sup>th</sup> 2023, at 1:00 p.m. (CET)**, when the competition closes. Candidates failing to comply will not be considered.

Candidates interested in a PhD Programme must submit an admission application, with a request to take part in the relevant selection procedure.

Candidates interested in more than one PhD Programme must submit a separate admission application for each individual Programme.

**Candidates interested in applying for more than one selection procedure must submit the application forms for each of the selections in which they want to take part. This applies in case of PhD Programmes where there are more than one selection procedures (as indicated in art. 17 in the paragraphs related to each Programme), because of the different types of available reserved places.**

Admission applications and any required enclosures (academic qualifications, documents and publications considered useful for competition purposes) must be submitted to this Administration before the final deadline for the competition, using the following method only:

- **by Internet**, on the University website <https://www.esse3.unimore.it/Home.do> (new users must register by selecting “Menu”, top right, and then “Registration”; those who have already registered should select “Menu”, and then “Login” with the credentials received following registration or with their SPID (Public Digital Identity System) credentials and proceed with the following steps: insert username and password, and then, select “Menu” – “Student Area/Registered Area” - “Admission” – “Admission Exams” – “Ph. D.”).

All academic qualifications, documents and publications considered useful for the application procedure must be attached in .pdf or .rtf file form with a maximum size of 20 MB. Attachments larger than 20 MB must be divided into smaller files.

**Each application must refer to a single selection procedure and will require a payment of € 25.00, not refundable, to cover administrative costs. Therefore, candidates wishing to apply to more than one selection procedure must submit a separate application and the € 25.00 fee for each selection procedure.**

**The pay slip will only be available at the end of the procedure with the final data saving.**

Payment must be made using the following method:

Access Esse3, by connecting to the University website at <https://www.esse3.unimore.it/Home.do> with your credentials, and under the menu item "Taxes" proceed with the payment through the PAGO PA circuit that allows to pay online (by choosing your Payment Service Provider – PSP) or alternatively to print the payment notice to be delivered personally to Banks and ATMS, SISAL, Lottomatica and ITB stores.



From your personal Esse3 page, under the menu item "Taxes", you can print the payment receipt. With the PagoPa circuit, the payment acquisition times in Esse3 are normally comparable to those of the credit card.

The payment of € 25.00 must be made before July 27<sup>th</sup>, 2023.

Candidates must keep the payment receipt for € 25.00. First year candidates should instead enclose it with the enrolment application form before the deadline and in accordance with the terms and conditions in art. 7.

**The application for admission will be considered to be correctly filed only by saving the data ("Save the data") after the "Explicit confirmation of the validity of the application" given by the candidate at the end of the online procedure mentioned above.**

Before the data saving ("Save the data") that follows the "Explicit confirmation of the validity of the application", and prior to the deadline for the competition, candidates may add, change or remove attached academic qualifications, documents and publications using the abovementioned website. The procedure is as follows: select "Menu", "Login", insert username, password, and then, in the Student area, select "Admission").

After the data saving ("Save the data") that follows the "Explicit confirmation of the validity of the application", in the case of errors or incomplete insertion of attachments using the online procedure, candidates can send an email to the PhD Office (segr.dottorati@unimore.it) within the peremptory deadline of the call deadline (July 27<sup>th</sup>, 2023, 1.00 pm CET) for requesting the reopening of the online procedure by attaching a scanned copy of an identity document. The candidate must make the corrections / additions he deems appropriate within the same deadline (July 27<sup>th</sup>, 2023, 1.00 pm CET). In this case, please note that the candidate will have to save the "Save data" data again following the explicit confirmation of the application.

At the end of the admission procedure a reminder summary of the application form is generated for each candidate. This document must be kept by its candidate and should not be transmitted to anyone else.

Applications and supporting enclosures may not be submitted by e-mail or fax.

The University Administration reserves the right to exclude, at any time, candidates who have not paid the fee of € 25.00 referred to in this Article.

The University Administration does not respond in the event that the candidate incurs errors in the choice of selection of his interest. In this case the candidate must produce new instance and provide for the payment of the contribution provided by the deadlines of this call.

Any communications to candidates concerning this call are made by e-mail. For this purpose, is used e-mail address indicated by the candidate during the registration procedure referred in Article. 3. Candidates, whose email addresses are already present in the registry, are asked to want to update data if necessary.

**In the event of any technical and/or operating difficulties, please write to the following e-mail address: [webhelp@unimore.it](mailto:webhelp@unimore.it).**

Admission applications, submitted in accordance with the indications given above, will be considered valid only if they reach this Administration before the final deadline.

Therefore, any applications arriving after the deadline, or not submitted in accordance with above requirements, will not be considered.

As part of the procedural information in making the application, the candidate takes personal responsibility for declarations in relation to:

- a) name and surname;
- b) place and date of birth;
- c) residential address, telephone/cell number, elected domicile for the purposes of this competition, and e-mail address;
- d) tax identification number (“codice fiscale”- if candidates have one. Candidates who do not have a tax identification number need only to confirm the one that will automatically be assigned to them by the system);
- e) citizenship;
- f) possession of a secondary school qualification;
- g) possession of an Italian old ordinance degree or second level degree (laurea specialistica or laurea magistrale), or an equivalent academic qualification issued by a foreign University;
- h) the exact title of the PhD Programme chosen by the candidate;
- i) knowledge of a second foreign language (either French, German or Spanish), in addition to English;
- j) curriculum vitae;
- k) academic qualifications and any other documents;
- l) publications;
- m) in the case of candidates with disabilities, in accordance with Law no. 104 of February 5, 1992 or with diagnosis of SLD, in accordance with Law no.170 of October 8<sup>th</sup>, 2010, any accommodations required for taking the examinations. The same request for assistive devices to take the examinations must be sent by mail to: [disabilita@unimore.it](mailto:disabilita@unimore.it) and [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it) . (subsequently the candidate will be contacted by the *Welcome Office for Students with Disability* to agree on the methods of transmission of the relative medical certification).

By submitting the application, the candidate agrees:

- 1) to attend the PhD programme on a full-time basis, in accordance with the conditions established by the Teaching Committee;
- 2) to notify the University immediately of any changes in residence or address;
- 3) in the case of Italian nationals or foreign citizens holding a foreign degree, to send the degree certificate, with a list of exams taken, along with an Italian or English translation, an authentication and “declaration of validity” issued by a competent Italian diplomatic-consular representative for the country, or Diploma supplement or certificate of comparability and verification issued by the Cimea as a ENIC\_NARIC center, in accordance with the regulations governing the admission of foreign students to Italian university degree courses, by the final deadline of December 31<sup>st</sup>, 2023;
- 4) in the case of candidates who complete their degree after the deadline for this call, but before October 31<sup>st</sup>, 2023, to send their degree certificate or facsimile attachment A2 (if awarded by a foreign university) or a self-certification to prove that the degree has been conferred (if awarded by an Italian university, please use form in Annex A1), by the final deadline and in accordance with the conditions indicated in art. 2 of this competition. Candidates failing to comply will not be considered.

The Administration may decide, at any time, with its reasoned decision, the exclusion from the selection.

Admission applications and or related attachments will not be considered for any of the following reasons: submission or receipt of applications after the deadline or non-compliance with the procedural requirements of the competition.

The Administration cannot be held responsible for any loss of correspondence due to the following situations: incorrect contact details, failure or delay in notification of a change in address, technical errors, negligence of third parties, or a *force majeure*. Furthermore, the Administration shall assume no responsibility for attachments not received as a result of third-party involvement, faulty attachment of documents by the candidate, or any type of network failure.

### **ACADEMIC QUALIFICATION CERTIFICATES, DOCUMENTS AND PUBLICATIONS:**

Candidates with any academic qualification certificates, documents or publications considered useful for the purposes of the competition procedures must attach the following certificates, documents and publications, except in the cases stipulated in Art. 17, for each Programme:

1) (for candidates holding an Italian degree) a self-certification to prove to meet the requirements (using the form in Annex A1) in accordance with articles 46 and 47 of the Presidential Decree 445/2000;

2) (for candidates holding a foreign degree) degree certificate with a list of exams taken, along with an Italian translation, an authentication, and a “declaration of validity” “dichiarazione di valore in loco” issued by the competent Italian consular or diplomatic representative for the country, or Diploma supplement or certificate of comparability and verification issued by the Cimea as a ENIC\_NARIC center. If not yet available, candidates have to attach the description of the degree with a list of exams taken together with a statement of truth of the certificates attached, by means of a self-certification in accordance with Articles 46 and 47 of the Presidential Decree 445/2000 using Annex A2;

3) scanned copy of a valid identity card or passport;

4) curriculum of research and teaching activities;

5) academic qualification certificates and documents considered useful for the purposes of evaluation with corresponding list;

6) letter/letters of presentation/reference/recommendation (maximum 3); in the online admission application candidates must enter name, surname, e-mail address, status, Institution/Organization of affiliation of the academic/researcher/expert for the letter of presentation/reference/recommendation. After the data saving (“Save the data”) that follows the “Explicit confirmation of the validity of the application” by candidates, the computer system will send an e-mail to the referent to request to insert a presentation/reference/recommendation letter and containing the instructions for the upload. The deadline for the referent to upload the letter is July 30<sup>th</sup>, 2023, at 11:59 pm (CET); the candidates can check on the summary page of the application form (can be reached by accessing the University’s website at <https://www.esse3.unimore.it/Home.do> and making the "Login") if the presentation/reference/recommendation letter was sent by the referent. Within the abovementioned deadline, the candidates can send to the referent who has not yet completed a reminder by selecting the item "reminder" from the summary page of the application form.

7) academic publications with corresponding list;

8) document in which the candidate expresses his or her interest in one of the curricula within the PhD programme, provided they are indicated in Art. 17 in the sections dedicated to each Programme. This is purely for information purposes and therefore not binding;

9) document in which the candidate expresses his or her interest in applying primarily for one or more reserved places, where provided and mentioned in art. 17 in the sections related to each PhD Programme (by completing Annex D1, D2 or D3). Should the programmes have different types of reserved places the candidate may express interest for a single type of reservation.

Under article 15 of Law no. 183 of November 12<sup>th</sup>, 2011, certificates regarding personal qualities, status and facts issued by the public administration can be only used for private purposes. Self-certification, under articles 46 and 47 of Presidential Decree 445/2000, can replace attested declarations for public administration or public services purposes.

Publications in languages other than Italian, English, French, German or Spanish, or which do not include a summary in one of the abovementioned languages, must be produced in the original language and translated into Italian.

Certificates issued by the competent authorities of the foreign candidate's country of citizenship must comply with the provisions in force in the same country. Certificates in a language other than Italian, English, French, German or Spanish, must also be translated and authenticated by the competent Italian diplomatic or consular authorities.

An Italian translation must be attached to all documents written in a language other than Italian, English, French, German or Spanish and must be certified as conforming to the foreign text by a competent Italian diplomatic authority or an official translator.

#### **ARTICLE 4 – Selection Committee**

Each committee responsible for the evaluation of candidates will be appointed by a Rector's decree and composed of three permanent members and one or more substitute members. They will be selected from the University's tenured professors and researchers. A maximum of two Italian and/or foreign experts may be chosen from public and private research bodies or institutions. An administrative staff clerk may be called to verbalize.

#### **ARTICLE 5 – Admission procedures**

The selection procedure and schedule of examinations, where applicable, are indicated in art.17, in the sections relating to each PhD Programme.

In the event of selection procedures requiring an interview and written test, the interview procedures are indicated in art.17, in the sections relating to each PhD Programme

Where specified in the selection procedure, the required interview will include a language proficiency test in English and in another optional foreign language indicated by the candidate at the time of application.

In the event of selection procedures requiring an interview, candidates may choose whether to take the exam in presence or on-line at the link that will be provided by the Selection Committee.

The programs used for the interview are indicated in the section relating to each PhD programme in art.17. The operational indications will be illustrated by the Selection Committee by email sent to the candidates at the end of the evaluation of academic and research records. Candidates may take the interview in presence or online on-line at the link that will be provided by the Selection Committee.

In the event of selection procedures requiring examinations or academic and research records and exams, candidates will be admitted subject to presentation of a valid identification document.

## **ARTICLE 6 – Ranking**

At the end of the selection process, each committee will publish a final merit-based list ranking the candidates.

The final merit list will be approved by a Rector's Decree, once all documentation has been declared valid.

Candidates will be admitted to Programmes according to their positioning on the merit list until all available places have been allocated for each PhD Programme. In case of a tie, preference is given to the younger candidate.

The final rankings of candidates will be announced publicly exclusively by:

- publication on the University website at <https://www.unimore.it>, under: ("Academic programmes"/"Doctorate Programmes"), within the designated section for each PhD Programme;
- publication on the online University notice board (<https://wss.unimore.it/public/albo/>).

Should a candidate qualify for a place in more than one ranking, he/she may register for only one PhD Programme.

The concurrent enrollment in several study programmes is ruled by Law no. 33 of April 12<sup>th</sup>, 2023 and by MD 930/2023.

The joint attendance of the PhD programme and a medical specialisation school is allowed in compliance with the following general criteria:

- a) compatibility, also in consideration of the distance between the seats, of the activities and commitment provided by the graduate school and the PhD programme, certified by the board of the medical specialisation school and by the PhD Teaching Body;
- b) incompatibility between the PhD scholarship and fees, however denominated, received in relation to the activities of the specialisation school.

In cases of joint attendance referred to in this article, the request for reduction of doctoral activities is accepted by the faculty of the doctoral programme, after positive evaluation of the consistency of the research activities already carried out in the medical specialisation course, with the doctoral project. For the purposes of accepting the application referred to in this paragraph, the opinion of compatibility, expressed by the board of the specialisation school, of the doctoral project with the educational purposes of the graduate school itself is also required. If the application referred to in this paragraph is accepted, the PhD programme has a duration of no less than two years.

## **ARTICLE 7 – Enrolment**

Within the mandatory seven-day time limit, starting from the day after the publication of the final rankings on the online University notice board as mentioned above in Art. 6, those candidates qualifying for a place on the merit list must enrol in the first year of the PhD Programme, using the method mentioned below (Failure to comply will result in the loss of right to admission):

connect to the University website <https://www.esse3.unimore.it/Home.do> (new users must register by selecting "Menu", top right, and then "Registration"; those who have already registered should select "Menu", and then "Login" with the credentials received following registration or with their SPID (Public Digital Identity System) credentials, follow the instructions: "Student Area" - "Enrolment" – "Enrolment according to ranking"; if an applicant has forgotten his/her username and password, assistance is available via email at [webhelp@unimore.it](mailto:webhelp@unimore.it)).

Candidates will be asked to enclose the digital copy of the following documents:

- a) digital passport photo: a colour passport photo, showing a frontal view of your face, with a neutral or uniform background (in JPEG or BITMAP format);
- b) scanned copy an identity document, duly signed;
- c) scanned copy of the tax identification card;
- d) scanned copy of the receipt for the payment of € 25.00 required for participation in the competition, in accordance with art. 3;
- e) self-certification to prove the possession of a university degree (using the form in Annex A1 for Italian degrees or the form in Annex A2 for foreign degrees), in case of degree already awarded;
- f) in case of applicants with scholarship, Annex G “Declaration accompanying application for enrolment on a PhD Programme” - part 1 and part 2;
- g) in case of applicants without scholarship, Annex H “Declaration accompanying application for enrolment on a PhD Programme”;
- h) declaration of interest in a possible apprenticeship contract for advanced training to be drawn up in accordance with Legislative Decree no. 81/2015 and Interministerial Decree 12/10/2015 in conjunction with any interested firms (using Annex E). This is purely for information purposes and is, therefore, not binding;
- i) (in case of students of specialization schools in the medical area) a written permission issued by the Specialization School Committee, following previous art. 6.
- j) (in case of students awarded a position reserved for applicants for the doctoral programme in collaboration with enterprises) the copy of their job contract or a declaration by their employer or self-certification under articles 46 and 47 of Presidential Decree 445/2000 regarding the type and length of contract, in accordance with article 2 of this Call. Candidates not already in possession of the above documentation must submit it by October 31<sup>st</sup>, 2023 via e-mail to [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it)
- k) (in case of students awarded a position reserved or of selection process for scholarship holders of foreign States) copy of de document proving the possession of the scholarship. In case the candidate is not yet in possession of it, the aforementioned documentation must be submitted by email to [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it) not later than October 31<sup>st</sup>, 2023.

Please note that the mere completion of the online form is NOT sufficient for enrolment. PhD students must pay the single tuition payment by the aforementioned deadline date (i.e. within seven days of the publication of the rankings). Failure to comply within this deadline will result in exclusion from the PhD program.

Payment must be made at the end of the enrolment procedure using one of the following methods:

Access Esse3, by connecting to the University website at <https://www.esse3.unimore.it/Home.do> with your credentials, and under the menu item "Taxes" proceed with the payment through the PAGO PA circuit that allows to pay online (by choosing your Payment Service Provider – PSP) or alternatively to print the payment notice to be delivered personally to Banks and ATMS, SISAL, Lottomatica and ITB stores. From your personal Esse3 page, under the menu item “Taxes”, you can print the payment receipt. With the PagoPa circuit, the payment acquisition times in Esse3 are normally comparable to those of the credit card.

The print copy of the enrolment application and receipt of payment must be kept by the applicant and not submitted to the Office.



Candidates gaining their academic qualification after the date of enrolment must send Annex 1 (if the qualification is conferred in Italy) or Annex 2 (if the qualification is conferred abroad) to the PhD Office (Via Università n.4, 41121-Modena) no later than October 31<sup>st</sup>, 2023, via e-mail to the address [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it).

**Italian nationals and foreigners holding a foreign academic qualification must present to the PhD Office (Via Università 4, 41121 Modena), no later than December 31<sup>st</sup>, 2023, via e-mail to the address [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it), their degree certificates with a list of exams taken, along with an Italian or English translation, an authentication, and**

**- for degrees obtained in European Union countries: Diploma supplement or certificate of comparability and verification issued by ENIC\_NARIC centers;**

**- for degrees obtained in countries outside the European Union: "declaration of validity" (dichiarazione di valore in loco) issued by the competent Italian consular or diplomatic representative for the country, or certificate of comparability and verification issued by the Cimea as a ENIC\_NARIC center.**

**Failure to submit the above documentation may result, at the sole discretion of this Administration, in the failure to pay the scholarship until it is presented. It is understood that, if the documentation, once submitted, should highlight the lack of access requirements, the doctoral student will be excluded.**

As soon as the registration procedure has been completed, all recipients of scholarships must register with the I.N.P.S. Separate Management Fund ("Gestione Separata") and forward a self-certification to prove registration (using ANNEX F "Self-certification of subscription to Gestione Separata Inps") to the Salaries Office ("Ufficio Contabilità") by October 31<sup>st</sup>, 2023, by sending a scanned copy via e-mail to [ufficiostipendi@unimore.it](mailto:ufficiostipendi@unimore.it). If PhD students are already registered with the I.N.P.S. (Italian Social Security Institute) Separate Management Fund as a result of previous collaboration with other institutions, they merely need to forward the self-certification confirming the registration with the I.N.P.S. (in the same way as indicated above).

Foreign citizens who do not yet have a tax identification number must apply to the "Agenzia delle entrate" (Italian Revenue Agency) after their arrival in Italy, and must forward a copy of the card issued by the Agency before October 31<sup>st</sup>, 2023, to the PhD Office, by sending a scanned copy via mail to [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it).

**For information and assistance concerning the Tax ID code, housing, residence permit, entry visa, registration with the I.N.P.S. Separate Management Fund ("Gestione Separata"), foreign nationals may submit a request to the International Welcome Desk Office, at: [internationalwelcomedesk@unimore.it](mailto:internationalwelcomedesk@unimore.it) .**

Any candidates who have not completed their enrolment in accordance with the terms and conditions indicated above will be considered as withdrawn.

In the case of, from the documentation presented by the candidate, false or misleading declarations are found, relevant for the purposes of enrolment, without prejudice to the penal sanctions referred to in Article 76 of the D.P.R. n.445 dated 28/12/2000 and subsequent modifications, the candidate automatically expired from any enrollment and the fees paid by the interested party will not be refunded.

The university administration reserves the right to ask enrolled students to complete the enrolment documentation if incomplete and/or to provide payment receipt of the single or first instalment.



Any remaining places will be assigned to alternate candidates, according to their positioning on the final merit list.

Vacant reserved places can be filled by other selected candidates or, when there are more than one selection procedures, they will be added to the number of available places of the main selection.

### **ARTICLE 8 – Reassignment of Places**

In the event of vacancies, eligible candidates will be contacted by e-mail and will be invited to enrol, in accordance with the requirements indicated in the preceding article, within two days from the time of receipt of the email. Failure to comply will result in loss of the right to admission.

The procedure will be considered complete within 90 days from the day the list of admitted candidates for the academic year 2023/2024 is published on the University website, under art. 6. For the PhD scholarships awarded by the founding of MD no. 117/2023 and MD no. 118/2023, the procedure shall be considered completed not later than October 20<sup>th</sup>, 2023.

### **ARTICLE 9 - Scholarships**

The number of study scholarships assigned is indicated in art. 17, divided by courses; these scholarships will be awarded according to the positioning of candidates on the final merit list.

In the case of candidates of equal merit, a decision will be made on the basis of the candidates' financial situation, determined in accordance with the Italian Prime Minister's Decree of April 30<sup>th</sup>, 1997 and subsequent amendments. Candidates of equal merit will be requested by e-mail to submit for the purposes of evaluating their financial situation:

- Receipt of submission of the Single Sworn Declaration for calculating the ISEE bracket (DSU); this must be forwarded within the final deadline of two days from the day the e-mail was sent. Failure to comply will result in loss of the right to admission.
- The formal I.S.E.E. (Indication of Equivalent Financial Situation) by I.N.P.S.; this must be forwarded within the final deadline of five days from the day the e-mail was sent. Failure to comply will result in loss of the right to admission.

If the ISEE indicator is equal, the female candidate takes precedence.

In the event of a tied ISEE indicator, the youngest candidate takes precedence.

The annual amount of a study scholarship is € 16.243,00 (barring subsequent regulatory amendments) and is subject to the I.N.P.S. social security contribution under the separate management fund.

Study scholarships are automatically renewed when PhD students continue in the following year, unless a motivated ruling to the contrary is made by the Teaching Committee.

Study scholarships will be paid in monthly deferred instalments.

PhD scholarships cannot be combined with other scholarships or other forms of financial assistance paid by the University and/or the State, with the exception of those designed to be integrated with PhD student research activities, for periods spent abroad.

Scholarship amounts will be increased by 50% for periods spent abroad of no longer than 12 months. This period may be extended up to a maximum of 18 months for doctoral students under joint guidance or Double Degree program with foreign institutions. This increase may be granted to students awarding positions without scholarship too.

From the first year, each PhD student (with or without scholarship) is guaranteed a budget for an amount not less than 10% of the annual amount of the study scholarship.

## **ARTICLE 10 - Fees for PhD Programmes**

Fees for PhD programs in "Clinical and experimental medicine (CEM)", "Molecular and regenerative medicine" and "Neurosciences" which must be paid in one instalment to the enrolment by those who enrol are € 180.48 (the amount of the payment slip that can be downloaded online includes the regional tax, the stamp duty and the insurance coverage with medical fault and contagion risk).

Fees for other PhD programs which must be paid in one instalment to the enrolment by those who enrol are € 159.67 (the amount of the payment slip that can be downloaded online includes the regional tax, the stamp duty and the insurance coverage).

Candidates, if in possession of the provided requirements, can apply to Er.GO (Regional Agency for the Right to Higher Education) for the following benefits:

- Scholarship (financial support to the study, with admission by ranking list) incompatible with other types of scholarships awarded for any purpose;
- Accommodation facilities, (with admission by ranking list) for non-resident students "Fuorisede";
- Subsidies for catering service.
- Contributions for international mobility;
- Peer tutoring collaborations in favor of disabled students or students with Specific Learning Disabilities.

Therefore, anyone intending to apply for one of the aforementioned benefits must exclusively refer to the Announcement and to the Application procedure of the Regional Agency for the Right to Higher Education – District headquarters of Modena and Reggio Emilia for the 2023/2024 academic year, that will be available at [www.er-go.it](http://www.er-go.it) (selecting "Servizi" – "Diritto allo studio") starting from July 2023.

To request interventions for the right to study it is necessary to be in possession of the ISEE Certification 2023 for subsidized services for the right to university study and of the digital identity system SPID.

International students, to request interventions for the right of study, must be in possession of the documentation referred to at the link: <https://www.er-go.it?id=6545>.

**Applications can be submitted even if not yet enrolled on a PhD Programme. Therefore, applications can be submitted even if the final rankings of candidates for admission to PhD Programmes have not yet been announced publicly.**

For information and advice exclusively in completing the online application contact:

- "Parla con ER.GO" 051.19907580 or 051.0185268 – available every day from Monday to Friday - from 9.30 am to 4.00 pm

Yearly fees for PhD students awarded with places reserved for "apprenticeship contract for advanced training" (Emilia-Romagna Region), under Legislative Decree no. 81/2015 and Interministerial Decree 12/10/2015, are Euro 2,500.00.

These fees will be entirely covered by the Emilia-Romagna Region, which will directly pay the University of Modena and Reggio Emilia on behalf of the students.

The student must make the payment of fees with the amount and in the manner and time allowed as indicated above by the call for regular enrolment in a PhD.

The University will only refund the money to the PhD student once it has received payment from the regional authority.

Should the amount paid by the regional authority be higher than the one that paid by the student, the remaining amount will be kept by the University to cover expenses related to the PhD Programme.

Should the regulations set for the “apprenticeship contract for advanced training and research” not be observed and the regional authority thus fail to cover the fees, the University will not refund students.

The amounts, and the deadlines for the contribution for the following years will be determined from year to year and will be notified on the web page <http://www.unimore.it/didattica/dottorati.html> (approximately towards the end of July).

### **ARTICLE 11 - Rights and Responsibilities of PhD Students**

PhD Programmes require a full-time and exclusive commitment. PhD students may accept forms of employment, pending authorization from the PhD Programme Teaching Committee, related to work activities useful for the acquisition of skills pertaining to the PhD research area, after evaluation of compatibility of those activities with the fruitful development of the educational, didactic and research activities of the doctoral course. Research grants to PhD students without scholarships are allowed, provided the Teaching Committee deems the research area compatible with topic of the doctoral thesis. PhD students are required to perform the research projects assigned to them and to be involved in related study, further research, periods abroad, teaching, as well as any internships affiliated with public or private bodies, in accordance with the requirements set by the competent Teaching Committee. Students who fail to comply may be withdrawn from the programme.

The provisions in art.16 regulate the other responsibilities and rights of doctoral students, including incompatibility, exemption from the obligation to attend, and the conditions of exclusion, as well as the procedure for awarding the PhD of this competition. Further specific obligations may be assigned to the recipients of PhD scholarships awarded by the founding of MD no. 117/2023 and MD no. 118/2023, that may be notified by the Ministry of University and Research. Specifically, they must report their activities every six months in the ministerial database. Failure to do so in the ministerial database may result in the University requesting the return of the scholarship awarded during the last year.

PhD students receiving scholarships from PNRR funds may be subject to further specific obligations which may be communicated by the MUR.

### **ARTICLE 12 – Public employees**

In accordance with the law, a public employee admitted to a PhD course is placed on special leave for study purposes without allowance for the duration of the course and is entitled to a scholarship if the required conditions are met. In the event of admission to a PhD course without a scholarship, or if the scholarship is renounced, the person on leave retains the salary, social security and pension benefits enjoyed by the public administration with which the employment relationship is established. If, following the award of the doctorate, the employment relationship with the public administration is terminated at the employee's request within the following two years, the sums paid pursuant to the second sentence shall be refunded.

A public employee who has already obtained a doctoral degree or has been enrolled on PhD courses for at least one year, benefiting from the leave, shall not be entitled to extraordinary leave with or without pay.

The period of special leave is useful for the purposes of career progression, retirement and social security.

### **ARTICLE 13 – Awarding of the PhD**

The PhD is awarded upon completion of the PhD Programme, when students pass their final examination that consists in the presentation of a PhD Thesis on an original research, carried out meticulously and where results are adequately and scientifically relevant. Should the assessment be negative, the final examination cannot be repeated.

Thesis defense will take place before an Examination Board appointed in compliance with the University PhD Research Program Regulations.

The Rector awards the title of PhD. The issue of the above title is dependent upon the candidate's submission to the competent office of the copy of the final thesis in digital format, which will be guaranteed to be kept and publicly accessible in the special open access archive of the University, as well as to be deposited in the ministerial database, in compliance with the regulations in force concerning thesis embargo and copyright.

Upon completion of the PhD programme, graduates will be invited to fill out a "Questionnaire on the opinions of programme attendees" for the Alma Laurea database. This will enable the Alma Laurea Inter-University Consortium to monitor the training of doctoral students.

### **ARTICLE 14 – Handling of personal data**

The University Administration, in accordance with EU Regulation 2016/679 and Legislative Decree 196/03, as amended by Legislative Decree 101/2018, will use the applicant's personal data solely for the fulfilment of the selection procedures and for administrative purposes.

In accordance with the principles to mentioned rules, by participating in the competition, the candidate authorizes the University of Modena and Reggio Emilia to publish his/her personal data as well as information relating to the admissions examinations on the University website.

The University of Modena and Reggio Emilia adopts equal opportunity principles in its selection procedures and rejects any type of discrimination based on sex, gender identity, nationality, ethnicity, religious belief, sexual orientation, state of health, and any other status or quality that is not strictly relevant to the call outlined in this document.

### **ARTICLE 15 – Publication**

This call is equivalent to notification to all intents and purposes. It will be published on the online University notice board (<https://wss.unimore.it/public/albo/>), on the website of the University <https://www.unimore.it/bandi/StuLau-Sdott.html>, and on the Website of the Ministry of University and Research:

<http://bandi.miur.it/doctorate.php/public/cercaFellowship>.

Any changes, updates or additions to the content of this call will be announced, exclusively, on the online University notice board (<https://wss.unimore.it/public/albo/>) and on the following website: <https://www.unimore.it/bandi/StuLau-Sdott.html>.

### **ARTICLE 16 – Additional Regulations and Director responsible for overseeing all procedures**

For matters not explicitly covered in this application procedure, refer to the provisions contained in art. 4 of Law no. 210 of July 3, 1998, art. 19 of Law no. 240 of December 30, 2010, Ministerial Decree no. 226 of December 14, 2021 and to the University regulations in force governing PhD Programmes and to the Teaching Regulations of the University of Modena and Reggio Emilia.

The Director responsible for overseeing all procedures is the Representative of the PhD Office (Dr. Filippo Cavazzuti - Via Università, 4 – Modena - e-mail: [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it)).

For further information, candidates may contact the PhD Office - Via Università 4, 41121 Modena - phone +39 059/2056423 - e-mail: [segr.dottorati@unimore.it](mailto:segr.dottorati@unimore.it).

## **ARTICLE 17 – List of PhD Courses**

### **1) PhD Programme in “CLINICAL AND EXPERIMENTAL MEDICINE (CEM)”**

#### **Places with scholarship:**

- 5 without specific topic;
- 1\* with topic “The non-alcoholic fatty liver disease (NAFLD) complicates metabolic disorders and it leads to progressive liver disease, namely non-alcoholic steatohepatitis (NASH) and liver fibrosis. A multi-OMICS approach on liver, blood and urine samples will be used to identify new biomarkers for NASH with significant liver fibrosis among dysmetabolic patients at high risk of NASH submitted to liver biopsy”;
- 1\* with topic “The use of statistical methodologies to analyse retrospective and prospective data, within information technology platforms, to answer clinical questions on efficacy, prognosis and diagnosis”;
- 1\* with topic “To investigate new diagnostic pathways using non-invasive and advanced imaging tools acquired with Confocal Laser Microscopy in a selected population of melanocytic lesions in order to obtain an in vivo detection of different type and behavior of melanocytic lesions”;
- 1\* with topic “Artificial Intelligence for the interpretation of pathology and clinical data in renal diseases”;
- 1\* with topic “Data gathering, decision support systems and technical/economical/social analysis on the use of AI-based solutions for research and applications in Health Management Systems”;
- 1\* with topic “Predictive modeling has become a distinct subdiscipline of reproductive medicine. The performance of models and their potential clinical utility is based on the quality and size of the databases used and the particular method applied. Established and new predictors will be analyzed with conventional and new (AI-based) statistical approach in order to obtain and validate predictive models for human fertility”;
- 1\*\* with topic “Innovative Gene Therapies for Solid Tumours”
- 1\*\*\* with topic “Clinical and biomolecular characterization of gynecological tumours in view of personalization of therapeutic strategies”
- 1\*\*\* with topic “Outdoor air and health: an integrated atlas to support decision and research”
- 1\*\*\* with topic “Incidence of malignant neoplasms in patients affected by Parkinson’s Disease: analysis of the role of genetic and environmental factors”
- 1\*\*\* with topic “LART phase II trial: LAttice Radiation Therapy for large lesions management”
- 1\*\*\* with topic “Study of new therapeutic strategies in lung tumour”
- 2\*\*\* with topic “Innovation of precision medicine in onco-emathology through the development of studies on lymphomas, leukaemia, and myeloma prognosis and therapies, with reference also to cell therapy”
- 2 with topic “Nursing Sciences”

- 1 with topic “Innovative approaches for prevention, diagnosis and therapy of human diseases” (with PNRR DM118/2023, Mission 4, Component 1, Investment 4.1, “PNRR”);

**Places without scholarship: 4**

\*financed with EU funds - NextGenerationEU - DD. 341/2022, within the PNRR, Mission 4 Education and Research - Component 2 From research to enterprise - Investment 1.3 - Extended partnership project "HEAL ITALIA" CUP E93C22001860006. Respectively with Spoke:1, 2, 4, 4, 7.

\*\*financed with funds from MUR Call "Department of Excellence 2023-2027" - Department of Medical and Surgical Sciences – University of Modena and Reggio Emilia - CUP: E53C23000170001

\*\*\*The person awarded the PhD scholarship financed by the AUSL-IRCCS of Reggio Emilia must meet the requirements established for the employees of the AUSL-IRCCS of Reggio Emilia by Law Decree no. 44 of 01 April 2021, converted into Law no. 76/2021 and subsequent amendments and integrations, including those established by Law Decree no. 26 November 2021, no. 172 "Urgent measures for the containment of the COVID-19 epidemic and for the safe performance of economic and social activities", being equated to such personnel pursuant to Article 2 of Legislative Decree 81/08.

The person awarded the PhD scholarship financed by the AUSL-IRCCS of Reggio Emilia may also carry out research activities at the structures of the AUSL itself, according to the indications that will be provided by the PhD Course Coordinator and/or the Board of teachers.

**Selection Procedure (for every selection procedures):** The Course provides for sixteen selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates may submit the following documents:

- 1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved;
- 2) curriculum vitae of the scientific and teaching activities written in Italian or English;
- 3) copy in Italian or English of the final thesis;
- 4) short text in English (Research Statement) outlining the candidate's motivations for attending the Course and research interests, with specific reference to the selection the candidate is taking part in, if any;
- 5) Certification attesting the knowledge of the English language, or self-certification;
- 6) letters of presentation/reference/recommendation of the candidate written by researchers of particular scientific qualification, in accordance with the procedure indicated in Article 3 of the notice;
- 7) proof of periods of training and scientific activities carried out at qualified national or foreign scientific institutions, including the possible award of scholarships and/or contracts for research and training activities;
- 8) List and copy of the scientific publications proposed for this evaluation.

**1) Main selection procedure (for places with scholarship without specific topic and places without scholarship): based on academic and research record**

**Admission requirements:** every Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 270/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;

- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
  - Up to 5 points for publications (also considering the candidate's academic age).
- Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**2) Selection procedure for a place with scholarship with topic “The non-alcoholic fatty liver disease (NAFLD) complicates metabolic disorders and it leads to progressive liver disease, namely non-alcoholic steatohepatitis (NASH) and liver fibrosis. A multi-OMICS approach on liver, blood and urine samples will be used to identify new biomarkers for NASH with significant liver fibrosis among dysmetabolic patients at high risk of NASH submitted to liver biopsy”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-13 Pharmacy and industrial pharmacy, or “Laurea specialistica” (under D.M. 509/99) in degree class 14/S Pharmacy and industrial pharmacy, or Italian degree obtained prior to D.M. 509/99 in Pharmacy or Pharmaceutical Chemistry and Technology, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**3) Selection procedure for a place with scholarship with topic “The use of statistical methodologies to analyse retrospective and prospective data, within information technology platforms, to answer clinical questions on efficacy, prognosis and diagnosis”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-82 Statistics, or “Laurea specialistica” (under D.M. 509/99) in degree classes 91/S Economic, financial and actuarial statistics, 90/S Demographic and social statistics, 48/S Methods for the evaluative analysis of complex system, 92/S Statistics for experimental research or Italian degree obtained prior to D.M. 509/99 in Economic, Statistical and Social Sciences, in Demographic and Social Statistics, in Statistical and Actuarial Sciences, in Statistical and Economic Sciences, in Statistics, in Statistics and Business Informatics, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);



- Up to 5 points for publications (also considering the candidate's academic age).  
Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**4) Selection procedure for a place with scholarship with topic “To investigate new diagnostic pathways using non-invasive and advanced imaging tools acquired with Confocal Laser Microscopy in a selected population of melanocytic lesions in order to obtain an in vivo detection of different type and behavior of melanocytic lesions”: based on academic and research record**

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-41 Medicine and Surgery, or “Laurea specialistica” (under D.M. 509/99) in degree class 46/S Medicine and Surgery, or Italian degree obtained prior to D.M. 509/99 in Medicine and Surgery, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**5) Selection procedure for a place with scholarship with topic “Artificial Intelligence for the interpretation of pathology and clinical data in renal diseases”: based on academic and research record**

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree classes LM-6 Biology, LM-9 Pharmaceutical, Veterinary and Medical biotechnologies, LM-41 Medicine and Surgery or “Laurea specialistica” (under D.M. 509/99) in degree classes 6/S Biology, 9/S Pharmaceutical, Veterinary and Medical biotechnologies, 46/S Medicine and Surgery, or Italian degree obtained prior to D.M. 509/99 in Biological Sciences, in Biotechnology – Medical Biotechnology, in Biotechnology – Pharmaceutical Biotechnology, in Biotechnology – Veterinary Biotechnology, in Medicine and Surgery, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**6) Selection procedure for a place with scholarship with topic “Data gathering, decision support systems and technical/economical/social analysis on the use of AI-based solutions for research and applications in Health Management Systems”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-31 Management engineering, or “Laurea specialistica” (under D.M. 509/99) in degree class 34/S Management Engineering, or Italian degree obtained prior to D.M. 509/99 in Management Engineering, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**7) Selection procedure for a place with scholarship with topic “Predictive modeling has become a distinct subdiscipline of reproductive medicine. The performance of models and their potential clinical utility is based on the quality and size of the databases used and the particular method applied. Established and new predictors will be analyzed with conventional and new (AI-based) statistical approach in order to obtain and validate predictive models for human fertility”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree classes LM-6 Biology, LM-9 Pharmaceutical, Veterinary and Medical biotechnologies, or “Laurea specialistica” (under D.M. 509/99) in degree classes 6/S Biology, 9/S Pharmaceutical, Veterinary and Medical biotechnologies, or Italian degree obtained prior to D.M. 509/99 in Biological Sciences, in Biotechnology – Medical Biotechnology, in Biotechnology – Pharmaceutical Biotechnology, in Biotechnology – Veterinary Biotechnology,, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**8) Selection procedure for a place with scholarship with topic “Innovative Gene Therapies for Solid Tumours”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree classes LM-41 Medicine and Surgery, LM-9 Medical, Veterinary, Pharmaceutical Biotechnologies, or “Laurea specialistica” (under D.M. 509/99) in degree

classes 46/S Medicine and Surgery, 9/S Medical, Veterinary, Pharmaceutical Biotechnologies, or Italian degree obtained prior to D.M. 509/99 in Medicine and Surgery, Biotechnologies - Pharmaceutical Biotechnologies, Biotechnologies - Medical Biotechnologies, Biotechnologies - Veterinary Biotechnologies, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**9) Selection procedure for a place with scholarship with topic “Clinical and biomolecular characterization of gynecological tumours in view of personalization of therapeutic strategies”: based on academic and research record**

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-41 Medicine and Surgery, or “Laurea specialistica” (under D.M. 509/99) in degree class 46/S Medicine and Surgery, or Italian degree obtained prior to D.M. 509/99 in Medicine and Surgery, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**10) Selection procedure for a place with scholarship with topic “Outdoor air and health: an integrated atlas to support decision and research”: based on academic and research record**

**Admission requirements:** every Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 270/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**11) Selection procedure for a place with scholarship with topic “Incidence of malignant neoplasms in patients affected by Parkinson’s Disease: analysis of the role of genetic and environmental factors”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-41 Medicine and Surgery, or “Laurea specialistica” (under D.M. 509/99) in degree class 46/S Medicine and Surgery, or Italian degree obtained prior to D.M. 509/99 in Medicine and Surgery, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**12) Selection procedure for a place with scholarship with topic “LART phase II trial: Lattice Radiation Therapy for large lesions management”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-41 Medicine and Surgery, or “Laurea specialistica” (under D.M. 509/99) in degree class 46/S Medicine and Surgery, or Italian degree obtained prior to D.M. 509/99 in Medicine and Surgery, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**13) Selection procedure for a place with scholarship with topic “Study of new therapeutic strategies in lung tumour”:** based on academic and research record

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree classes LM-6 Biology, LM-7 Agrarian Biotechnologies, LM-8 Industrial Biotechnologies, LM-9 Pharmaceutical, Veterinary and Medical biotechnologies or “Laurea specialistica” (under D.M. 509/99) in degree classes 6/S Biology, 7/S Agrarian Biotechnologies, 8/S Industrial Biotechnologies, 9/S Pharmaceutical, Veterinary and Medical biotechnologies or Italian degree obtained prior to D.M. 509/99 in Biological sciences, in Agro-industrial Biotechnology, in Biotechnology – Agricultural Plant Biotechnology, in Biotechnology – Industrial Biotechnology, in Biotechnology –

Pharmaceutical Biotechnology, in Biotechnology – Medical Biotechnology, in Biotechnology – Veterinary Biotechnology or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**14) Selection procedure for two places with scholarship with topic “Innovation of precision medicine in onco-emathology through the development of studies on lymphomas, leukaemia, and myeloma prognosis and therapies, with reference also to cell therapy”: based on academic and research record**

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-41 Medicine and Surgery, or “Laurea specialistica” (under D.M. 509/99) in degree class 46/S Medicine and Surgery, or Italian degree obtained prior to D.M. 509/99 in Medicine and Surgery, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**15) Selection procedure for two places with scholarship with topic “Nursing Sciences”: based on academic and research record**

**Admission requirements:** Italian second level degree “Laurea Magistrale” (under D.M. 270/04) in degree class LM-SNT1 Nursing and Obstetric Sciences, or “Laurea specialistica” (under D.M. 509/99) in degree class SNT/01/S Nursing and Obstetric Sciences, or equivalent qualification obtained abroad in accordance with the provisions in art. 2 of this application procedure

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**16) Selection procedure for a place with scholarship with topic “Innovative approaches for prevention, diagnosis and therapy of human diseases”:** based on academic and research record

**Admission requirements:** every Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 270/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Up to 30 points for the candidate's research project proposal (research statement), including a summary of its methodology and underlying scientific rationale;
- Up to 25 points for the candidate's scientific-professional curriculum (including thesis and degree mark, letters of presentation and knowledge of English and other qualifications, excluding publications);
- Up to 5 points for publications (also considering the candidate's academic age).

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

**Areas of the PhD Programme:** The Doctorate is organized in 3 curricula: - Public Health - Translational medicine – Nanomedicine, Medicinal and pharmaceutical sciences.

Official course language: English.

Further information on research lines for each curriculum and the relative tutor is available on the PhD Programme website: <http://www.cem-phdschool.unimore.it/>

## **2) PhD Programme in “COMPUTER AND DATA SCIENCE FOR TECHNOLOGICAL AND SOCIAL INNOVATION”**

### **Places with scholarship:**

- 4 scholarships without specific topic;
- 1 with topic **“Optimized smart mobility planner leveraging Open Data and Crowdsensing”** (financed by Regione Emilia Romagna in implementation of the programme "Territory: technological, cultural, economic and social transition towards sustainability" - ESF+ PR 2021/2027 - CUP E83C23000510002);
- 1 with topic **“Novel Driver Monitoring Systems (DMS) for driver empowerment in partially automated vehicles”** financed with EU funds - NextGenerationEU - DD. 3175/2021 AND DD. 3138/2021, within the framework of the PNRR, Mission 4 Component 2 Investment 1.4 "Strengthening of research structures and creation of "national R&D champions" on certain Key Enabling Technologies" - Project: CN\_4: NATIONAL CENTRE FOR SUSTAINABLE MOBILITY - CNMS - Spoke 6 - CUP: E93C22001070001;
- 1 with topic **“Safe and Reliable Platform Software for High-Performance Embedded Computers Targeting Software-Defined Autonomous Systems”** (with PNRR DM 117/2023 funds Mission 4, Component 2, Investment 3.3) for research activities at Minerva Systems Srl.;
- 1 with topic **“Vehicle Motion Control for Autonomous Driving Systems”** (with PNRR DM 117/2023 funds Mission 4, Component 2, Investment 3.3) for research activities at Danisi Engineering Srl.;
- 1 with thematic **“Real-Time Vehicle Steering System”** (with PNRR DM 117/2023 funds Mission 4, Component 2, Investment 3.3) for research activities at Danisi Engineering Srl.;
- 1 with topic **“Dataset For The City Science: Designing Data Analysis Tools To Improve Urban Public Policies”** (with PNRR DM 118/2023 funds Mission 4, Component

1, Investment 4.1 “Public Administration”) for research activities at Municipality of Reggio Emilia;

- **1 with topic “Developing, Managing, And Maintaining A Digital Municipal Platform To Foster Urban Hybrid Proximity”** (with PNRR DM 118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at Municipality of Reggio Emilia;

- **1 with topic “Monitoring The Mechatronic Industry In Reggio Emilia: Database, Dashboards, And Data Analysis For Public Policy Design To Support The Sustainable Growth Of Its Supply Chain”** (with PNRR DM 118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at Municipality of Reggio Emilia;

- **1 with topic “Efficient Intelligent Algorithms and Systems for Smart-City Edge Computing Applications”** (with PNRR DM 118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at Municipality of Modena;

- **1 with topic “Legal Profiles of the Digital Transformation of Infrastructures and Road Testing of Autonomous Driving Solutions”** (with PNRR DM 118/2023 funds “Public Administration” Mission 4, Component 1, Investment 4.1) for research activities at Municipality of Modena;

- **1 with topic “Digital Transition for a Smart Municipality”** (with PNRR DM 118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at Municipality of Mantova;

- **1 with topic “Novel challenges in the Digital Transition Era”** (with PNRR DM 118/2023 funds Mission 4, Component 1, Investment 3.4 “Digital and Environmental Transitions”) for research activities at Minerva Systems Srl.;

**Places without scholarship: 2**

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection Procedure (for all the selection procedures):** The Course provides for thirteen selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates may submit the following documents:

1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved, in the case of candidates who have not yet completed the final graduation exam, must be presented the list of the examinations and the votes given;

2) curriculum vitae of research and teaching activities, written in Italian or English, indicating university degree qualifications obtained;

3) a summary of the master thesis, in Italian or English – minimum of three and maximum of six pages – organised under the following headings: thesis motivations, research methodology used, results obtained;

4) a brief statement of no more than two pages written in English, outlining the candidate’s motivation for attending the PhD Programme and a description of his/her research



interests (Statement of Research Interest). the candidate must choose the research topic from those available on the Course website <https://www.cds.unimore.it/tesi-di-ricerca/>, possibly indicating a second one in addition to the main one;

5) any certification attesting the knowledge of the English language (TOEFL, Proficiency or other);

6) any GRE (Graduate Record Examination) certificates.

7) up to three letters of reference written by experts in the fields of research of the Course, with an indication of the public or private structure at which these experts work, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

### **1) Main selection procedure (for places with scholarship without specific topic and places without scholarship): based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points

- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;

- Publications, conference presentations, patents: from 0 to 10 points;

- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;

- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **2) Selection procedure for a place with scholarship with topic “Optimized smart mobility planner leveraging Open Data and Crowdsensing”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points

- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **3) Selection procedure for a place with scholarship with topic “Novel Driver Monitoring Systems (DMS) for driver empowerment in partially automated vehicles”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University

website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

#### **4) Selection procedure for a place with scholarship with topic “Safe and reliable platform software for high-performance embedded computers targeting software-defined autonomous systems”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points

- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;

- Publications, conference presentations, patents: from 0 to 10 points;

- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;

- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **5) Selection procedure for a place with scholarship with topic “Vehicle Motion Control for Autonomous Driving Systems”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **6) Selection procedure for a place with scholarship with topic “Real-Time Vehicle Steering System”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **7) Selection procedure for a place with scholarship with topic “Dataset for the city science: designing data analysis tools to improve urban public policies”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points

- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;

- Publications, conference presentations, patents: from 0 to 10 points;

- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;

- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points



Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

**8) Selection procedure for a place with scholarship with topic “Developing, managing, and maintaining a digital municipal platform to foster urban hybrid proximity”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

**- Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

**9) Selection procedure for a place with scholarship with topic “Monitoring the Mechatronic Industry in Reggio Emilia: database, dashboards and data analysis for public policy design to support the sustainable growth of its supply chain”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course

(<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;

- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

#### **10) Selection procedure for a place with scholarship with topic “Efficient intelligent algorithms and systems for Smart-city Edge computing applications”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points

- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;

- Publications, conference presentations, patents: from 0 to 10 points;

- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;

- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course



(<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **11) Selection procedure for a place with scholarship with topic “Legal profiles of the digital transformation of infrastructures and road testing of autonomous driving solutions”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **12) Selection procedure for a place with scholarship with topic “Digital Transition for a Smart Municipality”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;

- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

**- Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

**13) Selection procedure for a place with scholarship with topic “Novel challenges in the Digital Transition Era”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 120 points in the evaluation of candidate qualifications, as follows:

- **Academic and research records:** from 0 to 60 points
- Curriculum vitae of studies and congruity of the exams taken and the topics of the dissertation respect to the PhD topics: from 0 to 30 points;
- Publications, conference presentations, patents: from 0 to 10 points;
- Statement of Research Interest - description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>), to assess his/her motivation and aptitude for research: from 0 to 10 points;
- Other qualifications (certification of proficiency in English, letters of introduction, study periods abroad, research grants or other collaborations with research groups, etc.): from 0 to 10 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The list of those admitted to the interview, as well as any changes in the methods and timing of the selection procedure, will be published on a date between August 25<sup>th</sup> and 28<sup>th</sup>, 2023 exclusively at <https://www.unimore.it/didattica/dottorati.html> on the University website, within the tab dedicated to the Course in Computer and Data Science for Technological and Social Innovation.

- **Interview:** 0 to 60 points

The interview will focus on the description of a hypothetical research project of the candidate's choice among the theses and topics offered by the course (<https://www.cds.unimore.it/tesi-di-ricerca/>). The assessment will focus on the project's scientific soundness, feasibility and congruity with the themes of the PhD course.

Any publications by the candidate will also be discussed. Part of the interview will be conducted in English.

Minimum score for passing the interview: 40 points

Once the evaluation of the qualifications and the interview have been completed, the Commission will draw up a merit-based ranking list on the basis of the marks awarded to the candidates. Candidates who obtain a minimum score of 80/120 are deemed eligible.

### **EXAM SCHEDULE – (for all selection procedures)**

**In-person interview:** August 31<sup>st</sup> 2023, 9:00 starting for candidates of the main selection. Interviews could continue on September 1<sup>st</sup> 2023, 9:00 a.m., should there be a high number of candidates. The test will take place at the premises of the Department of Physical, Computer and Mathematical Sciences, Via Giuseppe Campi 213/A, Modena (the classroom will be communicated at the same time as the results of the selection based on qualifications).

**Remote interview (allowed for each candidate, regardless of residence):** August 31<sup>st</sup> 2023, after the in-person interviews. The precise timetable will be established following the selection procedure on the basis of academic and research records. Interviews could continue on September 1<sup>st</sup> 2023, after in-person interviews and with an agreed timetable as already specified, should there be a high number of candidates. The test will take place via Microsoft Teams.

The operational indications on how to conduct the interview via Microsoft Teams will be communicated at the time of publication of candidates admitted to the interview.

## **3) PhD Programme in “HUMANITIES, TECHNOLOGY AND SOCIETY”**

### **Places with scholarship:**

- 4 without specific topic

- 1 with topic “Cultural heritage management in the digital age” (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4,1);

**Places without scholarship: 1**

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection procedure (for all selection procedures):** The Course provides for two selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selection is intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates may submit the following additional documents:

- 1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved;
- 2) curriculum vitae of one's research and teaching activities written in Italian or English indicating university degree qualifications obtained;
- 3) a copy of the degree dissertation in electronic form, degree obtained prior to D.M. 509/99 or second level degree ("laurea specialistica / magistrale") or equivalent degree (if obtained abroad), or an abstract of the degree dissertation;
- 4) a short essay written in English – no longer than two pages – which illustrates the reasons why the candidate wishes to attend the PhD Programme and describes his/her specific research interests (Statement of Research Interest);
- 5) any certification attesting to knowledge of the English language (TOEFL, CAE/Proficiency or other) or other languages, indicating the level achieved by the candidate;
- 6) a research project, in Italian or English, in one of the subject areas of the PhD Programme. The project will be a description – between four and ten pages in length – with: aim of the research, literature review, materials and methods, results, references. The project will not be binding for the Teaching Committee in terms of the possible attribution of a thesis title, regarding the scholarships without specific topic.

**1) Main selection procedure (for places with scholarship without specific topic and place without scholarship): based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 10 points,
- Master thesis/abstract and other qualifications: from 0 to 10 points,
- Publications: from 0 to 10 points,
- Research project: from 0 to 30 points.

Candidates will be accepted for interview where the evaluation of qualifications presented has a score of at least 40 points out of the 60 available. A list of the candidates admitted to interview, and any variation in the selection procedure, will be published between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 on the University website at page <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Humanities, Technology and Society.

For the interview, the Examiners may award a score of up to 60 points. Candidates may opt to have their interview in English. The interview, as well as the candidate's knowledge of the English language and of another language the candidate may have indicated in the application, will focus on the scientific methodologies used for the research project proposed by candidates and on the objectives the project aims to achieve, as well as on the research experience and the professional profile of the candidates.

A pass is achieved where candidates are awarded a minimum score of 40/60.

**2) Selection procedure for a place with scholarship with topic “Cultural heritage management in the digital age”’: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 10 points,
- Master thesis/abstract and other qualifications: from 0 to 10 points,
- Publications: from 0 to 10 points,
- Research project: from 0 to 30 points.

Candidates will be accepted for interview where the evaluation of qualifications presented has a score of at least 40 points out of the 60 available. A list of the candidates admitted to interview, and any variation in the selection procedure, will be published between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 on the University website at page <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Humanities, Technology and Society.

For the interview, the Examiners may award a score of up to 60 points. Candidates may opt to have their interview in English. The interview, as well as the candidate's knowledge of the English language and of another language the candidate may have indicated in the application, will focus on the scientific methodologies used for the research project proposed by candidates and on the objectives the project aims to achieve, as well as on the research experience and the professional profile of the candidates.

A pass is achieved where candidates are awarded a minimum score of 40/60.

### **Areas of the PhD Programme:**

The PhD course, in partnership with Fondazione Collegio San Carlo of Modena and Almo Collegio Borromeo of Pavia, integrates theoretical and methodological skills typical of the human and social sciences, combines them with technological and computer knowledge, and orients them, including with application in mind, towards both frontier and current areas and issues, such as sustainability, green transition, and the governance of new technologies. Therefore, the course is inspired in all its articulations to a logic of interdisciplinary hybridization and involves the humanities (history, philosophy, philology, the science of books, etc.), socio-economic disciplines (economics, sociology, law, organizational sciences, management, etc.) and computer science disciplines. Language required is Italian. English language proficiency is required as the teaching activities may be conducted in English. theses may be written in Italian or English. On the basis of adequately motivated requests by the PhD student, the PhD Board may authorize the writing of theses in languages other than Italian or English.

Further information is available on the PhD Programme website at:

<https://www.phdhumantechsociety.unimore.it/>

### **EXAM SCHEDULE**

**In-person interview:** August 31<sup>st</sup>, 2023, 10:00 a.m. Interviews could continue on September 1<sup>st</sup>, 2023 10:00 a.m., should there be a high number of candidates, The examination will take place in Aula 40, Fondazione Collegio San Carlo, via San Carlo 5, Modena.

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):** August 31<sup>st</sup>, 2023, 10:00 a.m. Interviews could continue on September 1<sup>st</sup>, 2023 10:00 a.m., should there be a high number of candidates.

The operational indications on how to conduct the interview via Microsoft Teams will be communicated at the time of publication of candidates admitted to the interview.

## **3) PhD Programme in “INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)”**

### **Places with scholarship:**

- 4 scholarships without specific topic
- 1 with topic “Continual Knowledge transfer across different deep learning architectural paradigms” (with PNRR DM117/2023 – Investment 3.3 for research activities at Deep Vision Consulting Srl);

- 1 with topic **“More-electric tractors for a more sustainable agriculture”** (with PNRR DM117/2023 – Investment 3.3 for research activities at CNH Industrial Italia SpA);
- 1 with topic **“Control algorithms for autonomous off-road navigation of heavy, multi-axle wheeled vehicles in varying- and high-slope environments (flat and rolling)”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Iveco Defense Vehicle SpA);
- 1 with topic **“Supervised and self-supervised AI and deep learning for animal analysis”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Farm4Trade Srl);
- 1 with topic **“Continual Supervised and self-supervised Learning applied to image and video analysis”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Leonardo SpA);
- 1 with topic **“Continual Federated Learning for industry”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Tetra Pak Packaging Solutions SpA);
- 1 with topic **“Scalable HPC Data Integration for Very Large Heterogeneous Data Sources”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Leonardo SpA);
- 1 with topic **“Use of LoRaWAN and ultrawideband technologies for precise localization applications”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Embit SpA);
- 1 with topic **“Methodologies for the Study of State-of-The-Art Microelectronics Materials and Devices”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Applied Materials Italia Srl);
- 1 with topic **“Development of innovative sensing technology for biomedical applications”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Fondazione Democenter-Sipe);
- 1 with topic **“Innovative electronic measurement systems for the management of electrical energy storage”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Aton Green Storage SpA);
- 1 with topic **“Leveraging High-Performance Computing for enhancing Data Quality in AI Training”** (with PNRR DM118/2022 funds, Mission 4, Component 1, Investment 3.4 “Digital and Environmental Transitions” for research activities at Datariver Srl);
- 1 with topic **“Development, implementation and testing of techniques based on time series and data mining to environmental, hydrological and hydraulic data”** (with PNRR DM118/2022 funds, Mission 4, Component 1, Investment 3.4 “Digital and Environmental Transitions” for research activities at Po River Basin District Authority);
- 1 with topic **“High performance computing and new industries: analysis of application areas and effects on regional supply chains”** (with PNRR DM118/2022 funds, Mission 4, Component 1, Investment 3.4 “Public Administration” for research activities at Regione Emilia Romagna);
- 1 with topic **“Wide-bandgap based devices for efficient power conversion”** (financed with EU funds - NextGenerationEU - DD. 3175/2021 AND DD. 3138/2021, within the framework of the PNRR, Mission 4 Component 2 Investment 1.4 "Strengthening of research structures and creation of "national R&D champions" on certain Key Enabling Technologies" - Project: CN\_4: NATIONAL CENTRE FOR SUSTAINABLE MOBILITY - CNMS - Spoke 13 - CUP: E93C22001070001);
- 1 with topic **“Computer Vision and Natural Language Processing Technologies for Analysis and Understanding of Cultural and Historical Archives”** (financed with EU funds - NextGenerationEU - DD. 3264/2021, within the framework of the PNRR, Mission 4, "Education and Research" - Component 2, "From research to enterprise" - Investment Line 3.1, "Fund for the realisation of an integrated system of research and innovation



infrastructures" - Project: Italian Strengthening of Esfri RI Resilience (ITSERR): CUP: B53C22001770006);

- **1 with topic “Exploring the Potential of Large Language Models for Multilingual Historical Document Analysis and Semantic Cataloguing in Digital Libraries”** (financed with EU funds - NextGenerationEU - DD. 3264/2021, within the framework of the PNRR, Mission 4, "Education and Research" - Component 2, "From research to enterprise" - Investment Line 3.1, "Fund for the realisation of an integrated system of research and innovation infrastructures" - Project: Italian Strengthening of Esfri RI Resilience (ITSERR): CUP: B53C22001770006);

- **1 with topic “Knowledge Graphs and Distributed Machine Learning Techniques to Manage the Data Lake of multilingual and multi-alphabetic heritages”** (financed with EU funds - NextGenerationEU - DD. 3264/2021, within the framework of the PNRR, Mission 4, "Education and Research" - Component 2, "From research to enterprise" - Investment Line 3.1, "Fund for the realisation of an integrated system of research and innovation infrastructures" - Project: Italian Strengthening of Esfri RI Resilience (ITSERR): CUP: B53C22001770006);

- **1 with topic “Deep Learning techniques and multimodal learning in Biomedical Sciences and Medical Robotics”** (financed by project National Plan for Complementary Investments to the PNRR (PNC) - 'FIT for Medical Robotics' initiative - FIT4MEDROB (PNC00007) - CUP B53C22006810001);

- **1 with topic “Human-AI Robot Interaction in Indoor Environments”** (financed by project National Plan for Complementary Investments to the PNRR (PNC) - 'FIT for Medical Robotics' initiative - FIT4MEDROB (PNC00007) - CUP B53C22006810001);

- **1 with topic “Development of hardware platforms and simulation tools for label free biosensing based on micro- and nano-electronic devices and circuits”** financed by the European Union - NextGenerationEU, PNRR - HUB Foundation "HEAL ITALIA" (CF 97370050821) - Mission 4, Component 2, Investment 1.3 (MUR Directorial Decree of 15 March 2022, no. 341) - Research and Innovation Programme entitled "Health Extended ALLiance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine - HEAL ITALIA" – Spoke 6 - identification code PE000019 - CUP E93C22001860006);

- **1 place funded by a three-year research grant with topic “Wide-bandgap based Power converters for improved efficiency and reliability in Automotive”** – Tutor: Prof. Davide Barater – SSD: ING/IND 32 Electrical converters, machines and drives – yearly amount of the grant (gross amount): € 19.367,00 with funds project SCAPE-Switching-Cell-Array-based Power Electronics conversion for future electric vehicles (HORIZON EUROPE - Project number: G.A. no. 101056781, CUP: E93C22000650006)

- **1 place funded by a three-year research grant with topic “Power converter architecture for multi-source, fault-tolerant multiphase machine drives”** – Tutor: Prof. Davide Barater – SSD: ING/IND 32 Electrical converters, machines and drives – yearly amount of the grant (gross amount): € 19.367,00 with funds project SCAPE-Switching-Cell-Array-based Power Electronics conversion for future electric vehicles (HORIZON EUROPE - Project number: G.A. no. 101056781, CUP: E93C22000650006);

- **1 place funded by a three-year research grant with topic “Diagnosis and Control of IPM Motors based on quantum sensors”** – Tutor: Prof. Giovanni Franceschini – SSD: ING/IND 32 Electrical converters, machines and drives – yearly amount of the grant (gross amount): € 19.367,00 with funds project A-IQready - Artificial Intelligence using Quantum measured Information for realtime distributed systems at the edge (HORIZON-KDT-JU) - Project number: G.A. n. 101096658 CUP: CUP: E93C21003990007)

- **1 with topic “Next Generation of Connected Vehicles”** (with PNRR DM117/2023 – Investment 3.3 for research activities at Ferrari SpA);

## **Places without scholarship: 5**

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection Procedure (for all the selection procedures): based on academic and research record.** The Course provides for twenty-seven selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates have to submit the following documents:

- 1) self-certification of the degree (or degree certificate in the case of a degree obtained abroad) showing the list of examinations taken and grades obtained; in the case of candidates who have not yet taken their final degree examination, the list of examinations taken and grades obtained must be presented;
- 2) curriculum vitae of research and teaching activities, written in Italian or English, indicating university degree qualifications obtained;
- 3) a summary of the master thesis, in Italian or English – minimum of three and maximum of six pages – organised under the following headings: motivations, research methodology used, results obtained, in the case of candidates who have not yet graduated, a written presentation of the thesis that will be discussed;
- 4) a brief statement of no more than two pages written in English, outlining the candidate's motivation for attending the PhD Programme (Motivation) and a description of his/her research interests (Statement of Research Interest). The candidate should express a maximum of two preferences among the research topics available on the Course website <http://www.ict.unimore.it/> - 'Research Topics';
- 5) certification of English language skills (TOEFL, Proficiency or others) if possessed;
- 6) proof of passing the GRE (Graduate Record Examination) test if possessed;
- 7) up to three letters of reference which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

**1) Main selection procedure (for places with scholarship without specific topic and places without scholarship: based on academic and research record**

**2) Selection procedure for a place with scholarship with topic “Continual Knowledge transfer across different deep learning architectural paradigms”:** based on academic and research record

**3) Selection procedure for a place with scholarship with topic “More-electric tractors for a more sustainable agriculture”:** based on academic and research record

**4) Selection procedure for a place with scholarship with topic “Control algorithms for autonomous off-road navigation of heavy, multi-axle wheeled vehicles in varying- and high-slope environments (flat and rolling)”:** based on academic and research record



- 5) Selection procedure for a place with scholarship with topic “Supervised and self-supervised AI and deep learning for animal analysis”: based on academic and research record
- 6) Selection procedure for a place with scholarship with topic “Continual Supervised and self-supervised Learning applied to image and video analysis”: based on academic and research record
- 7) Selection procedure for a place with scholarship with topic “Continual Federated Learning for industry”: based on academic and research record
- 8) Selection procedure for a place with scholarship with topic “Scalable HPC Data Integration for Very Large Heterogeneous Data Sources”: based on academic and research record
- 9) Selection procedure for a place with scholarship with topic “Use of LoRaWAN and ultrawideband technologies for precise localization applications”: based on academic and research record
- 10) Selection procedure for a place with scholarship with topic “Methodologies for the Study of State-of-The-Art Microelectronics Materials and Devices”: based on academic and research record
- 11) Selection procedure for a place with scholarship with topic “Development of innovative sensing technology for biomedical applications”: based on academic and research record
- 12) Selection procedure for a place with scholarship with topic “Innovative electronic measurement systems for the management of electrical energy storage”: based on academic and research record
- 13) Selection procedure for a place with scholarship with topic “Development of design and measurement techniques for EMC-resilient electronic systems”: based on academic and research record
- 14) Selection procedure for a place with scholarship with topic “Leveraging High-Performance Computing for enhancing Data Quality in AI Training”: based on academic and research record
- 15) Selection procedure for a place with scholarship with topic “Development, implementation and testing of techniques based on time series and data mining to environmental, hydrological and hydraulic data”: based on academic and research record
- 16) Selection procedure for a place with scholarship with topic “High performance computing and new industries: analysis of application areas and effects on regional supply chains”: based on academic and research record
- 17) Selection procedure for a place with scholarship with topic “Wide-bandgap based devices for efficient power conversion”: based on academic and research record

**18) Selection procedure for a place with scholarship with topic “Computer Vision and Natural Language Processing Technologies for Analysis and Understanding of Cultural and Historical Archives”:** based on academic and research record

**19) Selection procedure for a place with scholarship with topic “Exploring the Potential of Large Language Models for Multilingual Historical Document Analysis and Semantic Cataloguing in Digital Libraries”:** based on academic and research record

**20) Selection procedure for two places with scholarship with topic “Knowledge Graphs and Distributed Machine Learning Techniques to Manage the Data Lake of multilingual and multi-alphabetic heritages”:** based on academic and research record

**21) Selection procedure for a place with scholarship with topic “Deep Learning techniques and multimodal learning in Biomedical Sciences and Medical Robotics”:** based on academic and research record

**22) Selection procedure for a place with scholarship with topic “Human-AI Robot Interaction in Indoor Environments”:** based on academic and research record

**23) Selection procedure for a place with scholarship with topic “Development of hardware platforms and simulation tools for label free biosensing based on micro- and nano-electronic devices and circuits”:** based on academic and research record

**24) Selection procedure for a place funded by a three-year research grant with topic “Wide-bandgap based Power converters for improved efficiency and reliability in Automotive”:** based on academic and research record

**25) Selection procedure for a place funded by a three-year research grant with topic “Power converter architecture for multi-source, fault-tolerant multiphase machine drives”:** based on academic and research record

**26) Selection procedure for a place funded by a three-year research grant with topic “Diagnosis and Control of IPM Motors based on quantum sensors”:** based on academic and research record

**27) Selection procedure for a place with scholarship with topic “Next Generation of Connected Vehicles”:** based on academic and research record

**Methods of evaluation (for all the selective procedures):**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum vitae including research and teaching activities, and description of motivation (Motivation) and research interests (Statement of Research Interest): 0 to 35 points,
- Exams taken and grades achieved: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Other qualifications: from 0 to 5 points.

The Commission has the option of conducting a cognitive interview by videoconference (via Skype), which purpose is to examine in depth the qualifications submitted by candidates. This interview does not involve the awarding of a mark.

The Commission may express an opinion in relation to the aptitude of candidates to follow a curriculum or a research theme.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

**Areas of the PhD Programme:** The Doctorate offers three curricula: 1) Computer engineering and Science; 2) Electronics and Telecommunications; 3) Industrial Applications of ICT). The topics of the ICT Doctorate concern the disciplines of Computer Engineering and Science, Electronics, Electronic Measurements, Telecommunications, Electromagnetic Fields, Control Theory and Automation and Electrical Engineering, as well as industrial applications of the aforementioned disciplines in the strategic priority areas defined by the Horizon Europe programs, the National Research Program and the National Recovery and Resilience Plan (PNRR).

The Teaching Committee may propose to one or more students enrolled, considered suitable, a programme of study and research in collaboration with the Federal University of Technology – Paraná (Brasil) that will result in the achievement also of the title of Brazilian PhD in "*Doctor in Electrical and computer engineering*", or a study and research path in collaboration with the University of Nottingham (United Kingdom) which will also lead to the achievement of the title of English PhD in "*Engineering PhD*", or a study and research path in collaboration with the Technische Universität Wien (Austria) which will also lead to the achievement of the title of Austrian PhD as "*Doktor der Technischen Wissenschaften*" or "*Doktor der Naturwissenschaften*".

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study.

Further information is available from the PhD Programme website at: <http://www.ict.unimore.it/> (entry "Research Topics").

The Course is inside del Doctoral School in "E4E (Engineering for Economics – Economics for Engineering)".

## 5) PhD Programme in CIVIL, ENVIRONMENTAL AND MATERIALS ENGINEERING

**Places with scholarship:**

- 7\* without specific topic;
- 1 with topic "**Design and fabrication of a novel system to produce and use hydrogen**" (with PNRR DM 117/2023 funds - Investment 3.3 for research activities at Athena S.p.A.);
- 1 with topic "**Management, risk assessment and resilience of infrastructures: implementation of data-driven decision-making processes in the public administration for the use of critical structures**" (con PNRR DM 118/2023 funds – Mission 4, Component 1, Investment 4.1 "Public Administration") for research activities at Provincia di Modena)
- 1 with topic "**The environmental transition by means of the circularity in waste management and of the national raw materials**" (con PNRR DM 118/2023 funds, Mission 4, Component 1, Investment 3.4 "Digital and Environmental Transition") for research activities at Stelmond Bio Srl;
- 1 with topic "**Fabrication of fuel cells and electrolysers**" (con European Union funds – NextGenerationEU - DD. MUR n. 3277/2021, in the field of PNRR, Mission 4, Component 2, Investment 1.5 Proposals for intervention for the creation and

strengthening of "innovation ecosystems", construction of "territorial R&D leaders" – Project: Ecosystem for Sustainable Transition in Emilia-Romagna (ECOSISTER) (codice ECS00000033) – Spoke 2 "Clean energy production, storage and saving" - CUP: E93C22001100001);

**Places without scholarships: 2**

**Reserved Places:**

- **1** for apprenticeship contract for advanced training funded by **Società Kosme Srl** for carrying out work, training and research activities on the subject of the use of additive manufacturing processes in the field of the food industry, with the following characteristics: design, development, prototyping and testing of parts/components in direct contact with beverages and processes for the surface treatment of components produced by additive manufacturing techniques. The apprentice will be hired at the establishment of the Company for treatment in Parma (PR), Piazza B. Lunardi, 5/a, as B2 level employee with functions of R&D researcher, full-time with application of the regulations and economics required by the current National Collective Labor Agreement relating to the Metal-mechanical industry sector, in which the Company operates.

- **1** for scholarship holders from foreign Countries

\*one of the fellowships is funded by the PRIN 2020 project "Multiscal modelling/characterisation and fabrication of nanocomposite ceramics with improved toughness (CONCERTO)" - CUP E93C22000110001.

The Course provides for five selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates are required to submit the following additional documents:

- 1) list of exams taken, inclusive of related credits and grades;
- 2) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), in both cases the final mark for the degree must be clearly indicated, as well as the maximum mark envisaged for this qualification by the University awarding the degree;
- 3) curriculum vitae written in Italian or English indicating higher education qualifications;
- 4) a summary of final thesis in Italian or English, or equivalent – minimum of three and maximum of six pages – organised under the following headings: thesis motivations, research methodology used, results obtained;
- 5) a short essay written in English – no longer than two pages – which illustrates the reasons why the candidate wishes to attend the PhD Programme and describes his/her specific research interests (Statement of Research Interest);
- 6) any certification attesting to knowledge of the English language (TOEFL, Proficiency or other);
- 7) any GRE (Graduate Record Examination) certificates;
- 8) any recommendation/reference letters (maximum three) written by experts in the field of research of the PhD Programme, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

Referring to selection procedure n. 1 mentioned below, candidates who wish to apply primarily for the place reserved for the three-year advanced training apprenticeship contract, must fill in the facsimile "*Annex D2*" of this call and attach it to the online application form.

Referring to the selection procedure n. 1 indicated below, candidates who meet the requirement, (holding a scholarship from foreign Countries) and wish to apply primarily for the reserved place for candidates with scholarship of foreign Countries must fill in and attach to the online application form the facsimile "*Annex D3*" of this call.

The Selection Commission will examine the presentation of the above documents for those who have expressed their interest in competing primarily for the reserved places.

**Admission requirements (for all selection procedures):** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**1) Main selection procedure (for places with scholarship without specific topic, places without scholarship, place reserved for scholarship holders from foreign Countries and the place for apprenticeship contract for advanced training funded): based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

The places reserved for scholarship holders from foreign countries will be allocated, among the candidates who have expressed priority interest, and have submitted appropriate documentation of possession of the scholarship or the application to obtain it, to those with the highest score on the ranking list.

The Commission will assign a judgement of suitability or otherwise limited to those who have expressed their interest in competing with priority for the reserved place covered by the advanced training apprenticeship contract at **Kosme Srl**, on the basis of the following assessable aspects:

- Master's Degree (or equivalent Certification) in Materials Engineering
- Knowledge in the field of plastic, thermoplastic and thermosetting materials,
- Knowledge in the field of surface and overlay engineering,
- Experience in using additive manufacturing machinery,
- Experience in Thermodynamics and Thermal Management,
- Experience using finite element simulation software.

The judgment of suitability for the reserved place does not affect the score assigned to the candidates, but is only useful to assign the reserved place; this place will be assigned, among the candidates who have expressed priority interest and have been considered eligible, to the one who will have the highest score in the ranking.

**2) Selection procedure for a place with scholarship with topic "Design and fabrication of a novel system to produce and use hydrogen": based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,

- Master Thesis (topic and grade): from 0 to 25 points,
  - Candidate motivation (Statement of Research Interest), from 0 to 5 points;
  - Publications, other qualifications and various attestations: from 0 to 5 points,
- Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**3) Selection procedure for a place with scholarship with topic “Management, risk assessment and resilience of infrastructures: implementation of data-driven decision-making processes in the public administration for the use of critical structures”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**4) Selection procedure for a place with scholarship with topic “The environmental transition by means of the circularity in waste management and of the national raw materials”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**5) Selection procedure for a place with scholarship with topic “Fabrication of fuel cells and electrolysers”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**Areas of the PhD Programme:**

The Course aims to train high-profile figures with a solid multidisciplinary background in the field of Civil, Environmental and Materials disciplines and topics closely related to the Sustainable Development Goals (SDGs) jointly endorsed by the European Commission (European Skills Agenda) and by the United Nations (United Nations 2030 Agenda).

The course objectives aim to:

1) train theoretical/modelling, technological and design skills aimed at the conception, design, work management, development, verification, testing, management and decommissioning of building and soil protection works, structures and infrastructures and, in general, of civil and environmental and territorial systems and plants, in compliance with the regulatory requirements in force and through the use of modern and interoperable tools (BIM, CAD, FEM);

2) develop theories and innovative methods for the study and modelling of pollution phenomena and the dynamics of pollutants in the environment and in the atmosphere, to the analysis of environmental impact and health, eco-toxicological and major accident risk, to the design, management and verification of water, waste water and sludge treatment and recovery plants; to optimize waste management to improve products and processes sustainability to reach a circular economy;

3) foster the design, synthesis/production, characterisation and scaling-up of new materials in applications belonging to multiple sectors (mechanical engineering, ceramics, biomedical, aerospace, renewable energy, etc.).

In order to best achieve these objectives, the PhD course is structured through 3 curricula: one dedicated to Civil Engineering topics, a second one focused on Environmental Engineering topics and a third one focused on Materials Engineering topics. The research paths covered in this PhD Course will be integrated with the cross-curricular nature of the topics that distinguish the E4E (Engineering for Economics - Economics for Engineering) Doctoral School, to which this Course belongs.

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study.

Further information is available on the PhD Programme website at: <https://www.phd-dcem.unimore.it/>.

## **6) PhD Programme in “INDUSTRIAL INNOVATION ENGINEERING” (Main venue: Reggio Emilia)**

### **Places with scholarship:**

- **5** scholarships without specific topic;

- **1** with topic **“Predictive maintenance for industrial plants and energy saving”** (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3) for research activities at Logos Srl;

- **1** with topic **“Digitalization of supply chains: opportunity, risks, and implementation approaches”** (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3) for research activities at Makeltalia Srl;

- **1** with topic **“Modeling and development of high efficiency refrigeration systems”** (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3) for research activities at Smeg SpA;

- **1** with topic **“Control methodologies and distributed estimation for connected autonomous vehicles”** (financed with EU funds - NextGenerationEU - DD. 3175/2021 AND DD. 3138/2021, within the framework of the PNRR, Mission 4 Component 2 Investment 1.4 "Strengthening of research structures and creation of "national R&D champions" on certain Key Enabling Technologies" - Project: CN\_4: NATIONAL CENTRE FOR SUSTAINABLE MOBILITY - CNMS - Spoke 6 - CUP: E93C22001070001);

- **1** with topic **“Algorithms and Data Analysis in Edge-Cloud Systems for Intelligent Mobility Application”** (financed with EU funds - NextGenerationEU - DD. 3175/2021 AND DD. 3138/2021, within the framework of the PNRR, Mission 4 Component 2 Investment



1.4 "Strengthening of research structures and creation of "national R&D champions" on certain Key Enabling Technologies" - Project: CN\_4: NATIONAL CENTRE FOR SUSTAINABLE MOBILITY - CNMS - Spoke 6 - CUP: E93C22001070001);

- **1 with topic "Collaborative robotics for rehabilitation"** (financed by project National Plan for Complementary Investments to the PNRR (PNC) - 'FIT for Medical Robotics' initiative - FIT4MEDROB (PNC00007) - CUP B53C22006810001);

- **1 with topic "Analysis of integrated production process optimization of laser cutting machines and press brakes"** (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 3.4) for research activities at Esautomotion SpA;

**Reserved places:**

- **1** covered by a three-year high apprenticeship contract, funded by **Coopservice Scpa**, for carrying out work, training and research activities on the subject of Development of models and optimisation methods for real applications in distributed logistics contexts, with the following characteristics;

- Design and development of mathematical models and heuristic optimisation methods in logistics systems;

- Development of VRP models for the optimisation of vehicle routes and for the creation of complex transport plans with numerous constraints;

- Development of scheduling algorithms for the creation of optimal operator shifts in complex hospital environments;

- Prediction and configuration models for the analysis of large databases using state-of-the-art Machine Learning approaches and Data Science techniques unified with traditional mathematical optimisation and operations research techniques for the creation of decision support tools from a Data Driven perspective.

The apprentice will be hired at the Company's plant located in Reggio Emilia, via Rochdale n. 5 with a functional qualification equal to R&D Engineer, on a full-time basis and required by the current National Collective Labor Agreement relating to Staff employed by cleaning and integrated services/multi-service companies', in which the company operates.

The Course provides for eight selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

**Admission requirements (for all selection procedures):** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection Procedure (for all selection procedures):** In addition to the provisions of the art. 3 of this application procedure, candidates may present additional documents:

1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved;

2) curriculum vitae of research and teaching activities, written in Italian or English, indicating university degree qualifications obtained;

3) a summary of the master thesis, or equivalent, in Italian or English – minimum of three and maximum of six pages – organised under the following headings: thesis motivations, research methodology used, results obtained;

4) a brief statement of no more than two pages written in English, outlining the candidate's motivation for attending the PhD Programme and a description of his/her specific areas of research interest (Statement of Research Interest).

5) certification attesting the knowledge of the English language (TOEFL, Proficiency or other);

6) GRE (Graduate Record Examination) certificates;

7) reference/recommendation letters (between one and three) written by experts in the fields of research of the PhD Programme, indicating the public or private institution/organization he/she is affiliated with, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

Referring to the selection procedure n. 1 indicated below, candidates who wish to apply primarily for the reserved place for the three-year high apprenticeship contract, must fill in and attach to the online application form the facsimile "*Annex D1*" of this call.

### **1) Main selection procedure (for places with scholarship without specific topic and place reserved for the three-year high apprenticeship contract): based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

For the reserved place for the three-year high apprenticeship contract, the Commission will assign a judgement of suitability or otherwise, limited to those who have expressed their interest, based on the following assessable aspects

- Master's Degree (or equivalent qualification) in Management Engineering (class LM-31 Management Engineering);
- Knowledge in Operations Research related to algorithms and models for staff rostering and logistics;
- Experience in the combined use of Data Science and optimisation techniques;
- Experience in programming in Python.

The judgement of suitability or otherwise for the reserved place does not affect the marks awarded to the candidates but is useful only for the purposes of the assignment of the reserved place. The above-mentioned place will be allocated, among the candidates who have expressed priority interest and have been deemed suitable, to the one with the highest score in the ranking list.

### **2) Selection procedure for a place with scholarship with topic "Predictive maintenance for industrial plants and energy saving": based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,

- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**3) Selection procedure for a place with scholarship with topic “Digitalization of supply chains: opportunity, risks, and implementation approaches”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**4) Selection procedure for a place with scholarship with topic “Modeling and development of high efficiency refrigeration systems”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**5) Selection procedure for a place with scholarship with topic “Control methodologies and distributed estimation for connected autonomous vehicles”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**6) Selection procedure for a place with scholarship with topic “Algorithms and Data Analysis in Edge-Cloud Systems for Intelligent Mobility Application”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**7) Selection procedure for a place with scholarship with topic “Collaborative robotics for rehabilitation”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**8) Selection procedure for a place with scholarship with topic “Analysis of integrated production process optimization of laser cutting machines and press brakes”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Grades of the exams, including the final degree: from 0 to 10 points,
- Motivation for attending the PhD Programme and research project: from 0 to 25 points,
- Other qualifications: from 0 to 5 points.

Once the qualifications have been assessed, the Selection committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 30/60 will be considered eligible.

**Areas of the PhD Programme:** The PhD Programme in Industrial Innovation Engineering (I3) comprises two different cultural strands, developed in two different curricula, the one relating to Management Engineering and the one relating to Mechatronics and Energy Engineering. All curricula are characterised by a strong innovation orientation.

The Teaching Committee may propose to one or more students enrolled, considered suitable, a programme of study and research in collaboration with the Federal University of Viçosa (Brasile) that will result in the achievement also of the title of Brazilian PhD in "*Computer Science*".

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study.

Further information is available from the PhD Programme website at: [www.iii.unimore.it](http://www.iii.unimore.it)  
The Course is inside the Doctoral School in “E4E (Engineering for Economics – Economics for Engineering)”.

## **7) PhD Programme “Enzo Ferrari” in “MECHANICAL AND VEHICLE ENGINEERING”**

### **Places with scholarship:**

- 7 scholarships without specific topic;
- **1 with topic “Analysis and definition of models for the most relevant technologies for hydrogen vehicles propulsion”** (financed by Regione Emilia Romagna in implementation of the programme "Territory: technological, cultural, economic and social transition towards sustainability" - ESF+ PR 2021/2027 - CUP E83C23000510002);
- **1 with topic “Thermal management of electric and hybrid vehicles through fluid dynamics simulations”** (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3) for research activities at CNH Industrial SpA;
- **1 with topic “CFD simulation of hydrogen combustion”** (with PMRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3) for research activities at R&D CFD Srl;
- **1 with topic “Development of digital technologies for the analysis of the impact of the architecture of "green" propulsion systems on the life cycle”** (with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at the Municipality of Modena;
- **1 with topic “Study of new solutions to support green mobility through the use of hydrogen as an energy vector”** (with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at the Municipality of Modena;
- **1 with topic “Study of new technologies for the thermostructural optimization of light and intelligent vehicles”** (with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at the Municipality of Modena;
- **1 with topic “Study of new technologies for electric mobility with reduced environmental impact”** (with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1 “Public Administration”) for research activities at the Municipality of Modena;
- **1 with topic “Study of new technologies for the ecological transition of the economic and social system”** (with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1 “PNRR”) for research activities at the Municipality of Modena;

### **Places without scholarships: 2**

### **Places reserved:**

- **4** industrial PhD for employees of Ferrari SpA
- **1** for scholarship holders from foreign Countries

The Course provides for nine selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates are required to submit the following additional documents:

- 1) list of exams taken, inclusive of related credits and grades;
- 2) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), in both cases the final mark for the degree must be clearly indicated, as well as the maximum mark envisaged for this qualification by the University awarding the degree;
- 3) curriculum vitae written in Italian or English indicating higher education qualifications;
- 4) a summary of final thesis in Italian or English, or equivalent – minimum of three and maximum of six pages – organised under the following headings: thesis motivations, research methodology used, results obtained;
- 5) a short essay written in English – no longer than two pages – which illustrates the reasons why the candidate wishes to attend the PhD Programme and describes his/her specific research interests (Statement of Research Interest);
- 6) any certification attesting to knowledge of the English language (TOEFL, Proficiency or other);
- 7) any GRE (Graduate Record Examination) certificates;
- 8) any recommendation/reference letters (maximum three) written by experts in the field of research of the PhD Programme, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

Referring to the selection procedure n. 1 indicated below, candidates who meet the requirement (being an employee of the enterprise) and wish to apply primarily for the reserved places for the Industrial PhD, must fill in and attach to the online application form the facsimile "*Annex D2*" of this call.

Referring to the selection procedure n. 1 indicated below, candidates who meet the requirement (holding a scholarship from foreign Countries), and wish to apply primarily for the reserved place for candidates with scholarship of foreign Countries must fill in and attach to the online application form the facsimile "*Annex D3*" of this call.

The Selection Commission will examine the presentation of the above documents for those who have expressed their interest in competing primarily for the reserved places.

**Admission requirements (for all selection procedures):** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**1) Main selection procedure (for places with scholarship without specific topic, place without scholarship, places reserved for industrial PhD, and place reserved for scholarship holders from foreign Countries): based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

The reserved places for Industrial PhD will be allocated to the candidates reaching the best ranking positions among those who have applied primarily for the reserved places.

The place reserved for scholarship holders from foreign countries will be allocated, among the candidates who have expressed priority interest, and have submitted appropriate documentation of possession of the scholarship or the application to obtain it, to the one with the highest score on the ranking list.

**2) Selection procedure for a place with scholarship with topic “Analysis and definition of models for the most relevant technologies for hydrogen vehicles propulsion”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**3) Selection procedure for a place with scholarship with topic “Thermal management of electric and hybrid vehicles through fluid dynamics simulations”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**4) Selection procedure for a place with scholarship with topic “CFD simulation of hydrogen combustion”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**5) Selection procedure for a place with scholarship with topic “Development of digital technologies for the analysis of the impact of the architecture of “green” propulsion systems on the life cycle”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;



- Publications, other qualifications and various attestations: from 0 to 5 points,  
Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**6) Selection procedure for a place with scholarship with topic “Study of new solutions to support green mobility through the use of hydrogen as an energy vector”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**7) Selection procedure for a place with scholarship with topic “Study of new technologies for the thermostructural optimization of light and intelligent vehicles”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**8) Selection procedure for a place with scholarship with topic “Study of new technologies for electric mobility with reduced environmental impact”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,
- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
- Publications, other qualifications and various attestations: from 0 to 5 points,

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**9) Selection procedure for a place with scholarship with topic “Study of new technologies for the ecological transition of the economic and social system”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum and relevance to the topics of the PhD Programme: from 0 to 25 points,
- Master Thesis (topic and grade): from 0 to 25 points,

- Candidate motivation (Statement of Research Interest), from 0 to 5 points;
  - Publications, other qualifications and various attestations: from 0 to 5 points,
- Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 36/60 will be considered eligible.

**Areas of the PhD Programme:** The course deals with subjects on Mechanical and Vehicle Engineering.

In the present Cycle, the Course is structured around two curricula: the first one is named "Mechanical Engineering", another is named "Vehicle Engineering".

These are the educational objectives, common to all PhD students: advanced training in the various areas of mechanical and vehicle engineering; education to the scientific and technological research; development of the attitude to international scientific cooperation; ability to interact with the industrial and economic district. More specifically, the issues considered fall within the specific areas listed below. The particular "Mechanical Engineering" curriculum characterizes the transversal nature of the issues that distinguish the E4E Doctoral School (Engineering for Economics – Economics for Engineering), of which this Course is part.

The Teaching Committee may propose to one or more students enrolled, considered suitable, a program of study and research in collaboration with the Chinese University of Fuzhou that will result in the achievement also of the title of Chinese PhD in "Doctor in Engineering" as well as with the Federal University of Technology del Paraná (Brazil) that will result in the achievement also of the Brazilian PhD title in "Doctor in Mechanical Engineering and Materials".

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study.

Further information is available on the PhD Programme website at: <http://www.phd-enzoferrari.unimore.it/site/home/research.html>

The Course is inside the Doctoral School in "E4E (Engineering for Economics – Economics for Engineering)".

## 8) PhD Programme in "LABOUR, DEVELOPMENT AND INNOVATION"

### Places with scholarship:

- **9** without specific topic (of which 7 are financed by the University of Modena and Reggio Emilia, 1 by Modena Foundation ("Fondazione di Modena"), 1 by external public and private institutions)
- **1 with topic "Gender budgeting and gender impact of public policies. Theoretical foundations, expenditure reclassification methodologies and applications to the State Budget"** (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1 "Public Administration") for research activities at the Ministry of Economy and Finance - Department of State General Accounting - General Budget Inspectorate;
- **1 with topic "The digital transition of Law Offices: redesigning and simplifying organizational models through the adoption of enabling digital technologies and solutions"** (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1 "Public Administration") for research activities at the Court of Modena;
- **1 with topic "Attractiveness of supply chains and territories: comparison between regional policies and European level"** (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1 "Public Administration") for research activities at the Emilia Romagna Region;

- 1 with topic “The ex ante and ex post evaluation of public policies with respect to the Data Valley” (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1 "Public Administration") for research activities at the Emilia Romagna Region;
- 1 with topic “The impact of policies on ecological transition and regional society” (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1 "Public Administration") for research activities at the Emilia Romagna Region.

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 270/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection Procedure (for all the selection procedures):** The Course provides for six selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

For the purposes of assessment, candidates are required to submit as an attachment to the application form, a research project, written in Italian or English, relating to one of the research areas of the two curricula Programme into which the course is divided.

Knowledge of English is required.

The project will not be binding for the Board of teachers for the purposes of awarding the title of the thesis.

In addition to the provisions of the art. 3 of this application procedure, candidates are required to submit the following additional documents:

1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved;

2) CV based on the form in *Annex B1* herewith, available on the website dedicated to the PhD Program in Labour, Development and Innovation:

<https://www.phdlavorosviluppoinnovazione.unimore.it/en/homepage-english/>;

3) copy of the research project outline, written in Italian or English. This outline should be no more than 15,000 typed characters, including blank spaces, written in accordance with the form in *Annex C1* herewith, dedicated to the PhD Program in Labour, Development and Innovation: <https://www.phdlavorosviluppoinnovazione.unimore.it/en/homepage-english/>.

The research project may be freely chosen by the candidate within the research areas of the PhD Programme, as specified on the website dedicated: <https://www.phdlavorosviluppoinnovazione.unimore.it/en/homepage-english/>.

4) presentation/reference letter signed by one academic or researcher or expert in the field of the research topics included in the PhD programme, or other professional in the field of the research topics included in the PhD programme, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call;

5) any academic publications along with a list of these publications.

### **1) Main selection procedure (for places with scholarship without specific topic): based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Degree final mark, if already achieved, and grades reported in exams: from 0 to 16 points
- Publications: from 0 to 3 points,
- Research project: from 0 to 30 points,
- Postgraduate and/or professional teaching and training in the research field, as included in the CV: from 0 to 5 points,
- Foreign language skills in the CV: from 0 to 6 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The interview will focus on the research methodology and research objectives, as indicated in the project, as well as the candidate's motivation.

A pass is achieved where candidates are awarded a score of 40/60 or above in the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Labour, development and innovation.

Candidates may opt to have their interview in English.

### **2) Selection procedure for a place with scholarship with topic “Gender budgeting and gender impact of public policies. Theoretical foundations, expenditure reclassification methodologies and applications to the State Budget”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Degree final mark, if already achieved, and grades reported in exams: from 0 to 16 points
- Publications: from 0 to 3 points,
- Research project: from 0 to 30 points,
- Postgraduate and/or professional teaching and training in the research field, as included in the CV: from 0 to 5 points,
- Foreign language skills in the CV: from 0 to 6 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The interview will focus on the research methodology and research objectives, as indicated in the project, as well as the candidate's motivation.

A pass is achieved where candidates are awarded a score of 40/60 or above in the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Labour, development and innovation.

Candidates may opt to have their interview in English.

**3) Selection procedure for a place with scholarship with topic “The digital transition of Law Offices: redesigning and simplifying organizational models through the adoption of enabling digital technologies and solutions”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Degree final mark, if already achieved, and grades reported in exams: from 0 to 16 points
- Publications: from 0 to 3 points,
- Research project: from 0 to 30 points,
- Postgraduate and/or professional teaching and training in the research field, as included in the CV: from 0 to 5 points,
- Foreign language skills in the CV: from 0 to 6 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The interview will focus on the research methodology and research objectives, as indicated in the project, as well as the candidate's motivation.

A pass is achieved where candidates are awarded a score of 40/60 or above in the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2023, only on the University website at <https://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Labour, development and innovation.

Candidates may opt to have their interview in English.

**4) Selection procedure for a place with scholarship with topic “Attractiveness of supply chains and territories: comparison between regional policies and European level”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Degree final mark, if already achieved, and grades reported in exams: from 0 to 16 points
- Publications: from 0 to 3 points,
- Research project: from 0 to 30 points,
- Postgraduate and/or professional teaching and training in the research field, as included in the CV: from 0 to 5 points,
- Foreign language skills in the CV: from 0 to 6 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The interview will focus on the research methodology and research objectives, as indicated in the project, as well as the candidate's motivation.

A pass is achieved where candidates are awarded a score of 40/60 or above in the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Labour, development and innovation.

Candidates may opt to have their interview in English.

**5) Selection procedure for a place with scholarship with topic “The ex ante and ex post evaluation of public policies with respect to the Data Valley”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Degree final mark, if already achieved, and grades reported in exams: from 0 to 16 points
- Publications: from 0 to 3 points,
- Research project: from 0 to 30 points,
- Postgraduate and/or professional teaching and training in the research field, as included in the CV: from 0 to 5 points,
- Foreign language skills in the CV: from 0 to 6 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The interview will focus on the research methodology and research objectives, as indicated in the project, as well as the candidate's motivation.

A pass is achieved where candidates are awarded a score of 40/60 or above in the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Labour, development and innovation.

Candidates may opt to have their interview in English.

**6) Selection procedure for a place with scholarship with topic “The impact of policies on ecological transition and regional society”: based on academic and research record and interview**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Degree final mark, if already achieved, and grades reported in exams: from 0 to 16 points
- Publications: from 0 to 3 points,
- Research project: from 0 to 30 points,
- Postgraduate and/or professional teaching and training in the research field, as included in the CV: from 0 to 5 points,
- Foreign language skills in the CV: from 0 to 6 points.

Candidates awarded at least 35/60 in the assessment of academic and research record will be admitted to the interview.

The interview will focus on the research methodology and research objectives, as indicated in the project, as well as the candidate's motivation.

A pass is achieved where candidates are awarded a score of 40/60 or above in the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Labour, development and innovation.

Candidates may opt to have their interview in English.

**Areas of the PhD Programme:** The course is divided into 2 curricula: Labor, Development and Innovation and Industry 4.0



The Work, Development and Innovation curriculum will train in the understanding and governance of labor relations and processes of socio-economic change by focusing on the main regulatory planes (law, management, economics and organization) and levels of analysis involved (micro-the individual work situations; meso-the organization as a whole; macro- the relationships with organizations, institutions and external stakeholders), developing research tools and interdisciplinary modes of intervention suitable for jointly thematizing the regulation, legal and non-legal, of work, the processes of business innovation (industrial, service, public) and the dynamics of economic and territorial development.

The Industry 4.0 curriculum will train in the understanding of the dynamics of the digital transformation of organizations and the elaboration of legal, economic-financial and managerial tools to govern the transformation of enterprises under Industry 4.0. The research path privileges the aspect of datafication of work and production processes, consequent to digitalization, and having important transformative effects. The coordination, in the E4E School, with the doctoral courses: "Enzo Ferrari" in Industrial and Territorial Engineering, in Information and Communication Technologies, in Industrial Innovation Engineering and in Civil, Environmental and Materials Engineering will increase interdisciplinarity with training activities on the main technologies and technological trajectories in Industry 4.0.

Both curricula address the research areas found at the dedicated web address: <https://www.phdlavorosviluppoinnovazione.unimore.it/en/research-areas/>

Official languages: Italian and English. Please refer to the educational programme of the course for details on the languages used in each course: <https://www.phdlavorosviluppoinnovazione.unimore.it/en/homepage-english/>

Both curricula and research areas can be found in the web site: <https://www.phdlavorosviluppoinnovazione.unimore.it/en/homepage-english/>

### **EXAM SCHEDULE – MAIN SELECTION**

**In-person interview:** September 4<sup>th</sup> 2023, 10:00 a.m. Interviews could continue on September 5<sup>th</sup> 2023, 10:00 a.m., should there be a high number of candidates.

The examination will take place in Lecture Room of the Marco Biagi Foundation, Largo Marco Biagi 10, Modena.

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):** September 4<sup>th</sup> 2023, 9:00 a.m. until 10:00 a.m. The examination will take place in Lecture Room of the Marco Biagi Foundation, Largo Marco Biagi 10, Modena.

For information on how to conduct the interview via Microsoft Teams, see Article 5 of this Call.

### **EXAM SCHEDULE – SELECTION PROCEDURES 2, 3, 4, 5, 6**

**In-person interview:** September 5<sup>th</sup> 2023, 12:00 a.m.

The examination will take place in Lecture Room of the Marco Biagi Foundation, Largo Marco Biagi 10, Modena.

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):** September 5<sup>th</sup> 2023, 9:00 a.m. until 10:00 a.m.

The examination will take place in Lecture Room of the Marco Biagi Foundation, Largo Marco Biagi 10, Modena.

For information on how to conduct the interview via Microsoft Teams, see Article 5 of this Call.

## 9) PhD Programme in “MODELS AND METHODS FOR MATERIAL AND ENVIRONMENTAL SCIENCES”

### Places with scholarship:

- 7 without specific topic;
- 1 with topic: “**Earthquake-induced Liquefaction Phenomena (Co-seismic effects) and experimental Blast Test**”;
- 1 with topic: “**Melissopalynology and Biodiversity**”;
- 1 with topic: “**Eco-sustainability and chemistry of olefins: development of "green" organometallic compounds for homogenous catalysis**” (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3 for research activities at Versalis S.p.A.)
- 1 with topic: “**Synthesis, characterization and application of new raw materials for bio-based polyester resins** (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3 for research activities at Carlo Riccò & F.lli S.p.A.);
- 1 with topic: “**Development of advanced biomedical devices for hard and soft tissue applications**” (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 3.4, “PNRR”);

\*two of the grants are financed by the Department of Chemical and Geological Sciences in part from the RESEARCH FUND FAR DIPARTIMENTAL PROJECTS - 2022 - CUP E93C22000590005

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection procedures (for all selection procedures):** The Course provides for six selection procedures depending on the type of positions available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates must submit the following additional documents:

- 1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved; students who have not yet completed the final degree examination, must submit a list of exams taken and grades achieved;
- 2) curriculum vitae of the candidate’s research and teaching activities written in Italian or English indicating university degree qualifications obtained. The academic and research records have to be certified /self-certified;
- 3) a summary of final thesis in Italian or English, or equivalent – minimum of two and maximum of three pages – organised under the following headings: statement of purpose, research methodology used, results obtained;
- 4) Statement of Research Interest: a short text, of no more than two pages and written in English, consisting of two sections:
  - a) Motivation, which illustrates the candidate's motivations for attending the Course (max 1/2 page);
  - b) the description of a hypothetical research project based on one of the topics of the doctorate, listed on the website: <http://www.m3es.unimore.it/site/home/research/phd->

[thesis-proposals.html](#), which reports the theses proposed for the XXXIX cycle, which the candidate would like to carry out, based to his specific research interests;

5) any certification attesting to knowledge of the English language (TOEFL, Proficiency or other).

### **1) Main Selection Procedure (for places with scholarship without specific topic): based on academic and research record and interview**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

#### **- Academic and research record: from 0 to 30 points:**

- study curriculum and relevance of exams taken and the subject of the Master thesis and relevance to the area of study of the PhD programme: from 0 to 15 points,
- publications, conference papers, certifications: from 0 to 5 points
- other qualifications (certificate of knowledge of English, letters of reference, and descriptions of specific research interests (Statement of Research Interest), periods of study abroad): from 0 to 10 points.

#### **- Interview: from 0 to 30 points**

It is necessary to present a valid ID card or a passport.

The interview will focus on the description of a hypothetical research project chosen by the candidate. The evaluation will focus on the scientific soundness of the project, feasibility and appropriateness with the PhD course. Part of the interview will be carried out in English.

Candidates obtaining a minimum of 20 points will be allowed to interview. The list of candidates admitted to the interview, and any variations in the methods and terms of the selection procedure, will be announced publicly in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Models and methods for material and environmental sciences. Candidates may opt to have their interview in English.

Once the qualifications and the interview have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

### **2) Selection procedure for a place with scholarship with topic “Earthquake-induced Liquefaction Phenomena (Co-seismic effects) and experimental Blast Test”: based on academic and research record and interview**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

#### **- Academic and research record: from 0 to 30 points:**

- study curriculum and relevance of exams taken and the subject of the Master thesis and relevance to the area of study of the PhD programme: from 0 to 15 points,
- publications, conference papers, certifications: from 0 to 5 points
- other qualifications (certificate of knowledge of English, letters of reference, and descriptions of specific research interests (Statement of Research Interest), periods of study abroad): from 0 to 10 points.

#### **- Interview: from 0 to 30 points**

It is necessary to present a valid ID card or a passport.

The interview will focus on the description of a hypothetical research project chosen by the candidate. The evaluation will focus on the scientific soundness of the project, feasibility and appropriateness with the PhD course. Part of the interview will be carried out in English.

Candidates obtaining a minimum of 20 points will be allowed to interview. The list of candidates admitted to the interview, and any variations in the methods and terms of the selection procedure, will be announced publicly in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Models and methods for material and environmental sciences. Candidates may opt to have their interview in English.

Once the qualifications and the interview have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

### **3) Selection procedure for a place with scholarship with topic “Melissopalynology and Biodiversity”: based on academic and research record and interview**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

#### **- Academic and research record: from 0 to 30 points:**

- study curriculum and relevance of exams taken and the subject of the Master thesis and relevance to the area of study of the PhD programme: from 0 to 15 points,
- publications, conference papers, certifications: from 0 to 5 points
- other qualifications (certificate of knowledge of English, letters of reference, and descriptions of specific research interests (Statement of Research Interest), periods of study abroad): from 0 to 10 points.

#### **- Interview: from 0 to 30 points**

It is necessary to present a valid ID card or a passport.

The interview will focus on the description of a hypothetical research project chosen by the candidate. The evaluation will focus on the scientific soundness of the project, feasibility and appropriateness with the PhD course. Part of the interview will be carried out in English.

Candidates obtaining a minimum of 20 points will be allowed to interview. The list of candidates admitted to the interview, and any variations in the methods and terms of the selection procedure, will be announced publicly in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Models and methods for material and environmental sciences. Candidates may opt to have their interview in English.

Once the qualifications and the interview have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

### **4) Selection procedure for a place with scholarship with topic “Eco-sustainability and olefin chemistry: development of "green" organometallic compounds for homogeneous catalysis”: based on academic and research record and interview**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

#### **- Academic and research record: from 0 to 30 points:**

- study curriculum and relevance of exams taken and the subject of the Master thesis and relevance to the area of study of the PhD programme: from 0 to 15 points,
- publications, conference papers, certifications: from 0 to 5 points
- other qualifications (certificate of knowledge of English, letters of reference, and descriptions of specific research interests (Statement of Research Interest), periods of study abroad): from 0 to 10 points.

#### **- Interview: from 0 to 30 points**

It is necessary to present a valid ID card or a passport.

The interview will focus on the description of a hypothetical research project chosen by the candidate. The evaluation will focus on the scientific soundness of the project, feasibility and appropriateness with the PhD course. Part of the interview will be carried out in English.

Candidates obtaining a minimum of 20 points will be allowed to interview. The list of candidates admitted to the interview, and any variations in the methods and terms of the selection procedure, will be announced publicly in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Models and methods for material and environmental sciences. Candidates may opt to have their interview in English.

Once the qualifications and the interview have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

**5) Selection procedure for a place with scholarship with topic “Synthesis, characterization and application of new raw materials for bio-based polyester resins”: based on academic and research record and interview**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Academic and research record: from 0 to 30 points:
- study curriculum and relevance of exams taken and the subject of the Master thesis and relevance to the area of study of the PhD programme: from 0 to 15 points,
- publications, conference papers, certifications: from 0 to 5 points
- other qualifications (certificate of knowledge of English, letters of reference, and descriptions of specific research interests (Statement of Research Interest), periods of study abroad): from 0 to 10 points.
- Interview: from 0 to 30 points

It is necessary to present a valid ID card or a passport.

The interview will focus on the description of a hypothetical research project chosen by the candidate. The evaluation will focus on the scientific soundness of the project, feasibility and appropriateness with the PhD course. Part of the interview will be carried out in English.

Candidates obtaining a minimum of 20 points will be allowed to interview. The list of candidates admitted to the interview, and any variations in the methods and terms of the selection procedure, will be announced publicly in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Models and methods for material and environmental sciences. Candidates may opt to have their interview in English.

Once the qualifications and the interview have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

**6) Selection procedure for a place with scholarship with topic “Development of advanced biomedical devices for hard and soft tissue applications”: based on academic and research record and interview**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Academic and research record: from 0 to 30 points:
- study curriculum and relevance of exams taken and the subject of the Master thesis and relevance to the area of study of the PhD programme: from 0 to 15 points,
- publications, conference papers, certifications: from 0 to 5 points



- other qualifications (certificate of knowledge of English, letters of reference, and descriptions of specific research interests (Statement of Research Interest), periods of study abroad): from 0 to 10 points.

- Interview: from 0 to 30 points

It is necessary to present a valid ID card or a passport.

The interview will focus on the description of a hypothetical research project chosen by the candidate. The evaluation will focus on the scientific soundness of the project, feasibility and appropriateness with the PhD course. Part of the interview will be carried out in English.

Candidates obtaining a minimum of 20 points will be allowed to interview. The list of candidates admitted to the interview, and any variations in the methods and terms of the selection procedure, will be announced publicly in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023 only on the University website at <https://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Models and methods for material and environmental sciences. Candidates may opt to have their interview in English.

Once the qualifications and the interview have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 40/60 will be considered eligible.

**Areas of the PhD Programme:** The Course aims to train experts in advanced research methodologies in environmental and material sciences, in respect of the research fields of the teaching staff (<http://www.m3es.unimore.it/site/home.html>). The research doctor will be able to operate in one or more of the following fields: processes regulating the transfer of elements and compounds from geosphere to hydro- and biosphere forecasting; prevention and mitigation of natural risks; identification and optimal use of resources; study, conservation and appraisal of cultural assets; environmental impact of human activities; chemical sustainable strategies; preparation and characterization of materials with innovative functional properties; devices and methodologies for electrochemical sensing suitable to work in real systems; computational multi-scale strategies; chemometrics, multivariate analysis of signals and images and themes related to Big Data and 'Industry 4.0'.

The professors board may propose to one or more of the enrolled PhD students, who are deemed suitable, a study and research programme collaboration with the French University of Lille that will also allow them to obtain the French title of PhD in "*Sciences de la matière, du rayonnement et de l'environnement*".

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study.

Further information is available on the PhD Programme website at:

<http://www.m3es.unimore.it/site/home/research/phd-thesis-proposals.html> which contains the theses proposed for cycle XXXVIII.

## **EXAM SCHEDULE – MAIN SELECTION**

**In-person interview:** August 30<sup>th</sup> 2023, 9:30 a.m. Interviews could continue on August 31<sup>st</sup> 2023, 9:30 a.m., should there be a high number of candidates.

The examination will take place in the room U1.2 at the Department of Chemical and Geological Sciences, Via Giuseppe Campi, 103, Modena.

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):** August 30<sup>th</sup> 2023, 9:30 a.m. Interviews could continue on August 31<sup>st</sup> 2023, 9:30 a.m., should there be a high number of candidates.

The examination will take place in the room U1.2 at the Department of Chemical and Geological Sciences, Via Giuseppe Campi, 103, Modena.

For information on how to conduct the interview via Microsoft Teams, see Article 5 of this Call.

#### **EXAM SCHEDULE – SELECTION PROCEDURES 2, 3, 4, 5, 6**

**In-person interview:** August 30<sup>th</sup> 2023, 2.00 p.m. Interviews could continue on August 31<sup>st</sup> 2023, 2.00 p.m., should there be a high number of candidates.

The examination will take place in the room U1.2 at the Department of Chemical and Geological Sciences, Via Giuseppe Campi, 103, Modena.

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):** August 30<sup>th</sup> 2023, 2.00 p.m., interviews could continue on August 31<sup>st</sup> 2023, 2.00 p.m., should there be a high number of candidates.

The examination will take place in the room U1.2 at the Department of Chemical and Geological Sciences, Via Giuseppe Campi, 103, Modena.

For information on how to conduct the interview via Microsoft Teams, see Article 5 of this Call.

### **10) PhD Programme in “MOLECULAR AND REGENERATIVE MEDICINE”**

#### **Places with scholarship:**

- 4 without specific topic;

- 1 with topic **“Characterization of stem and progenitor cells for the development of cell and gene therapy of stratified epithelia”** (with PNRR DM118/2023 funds, “PNRR”);

- 1 with topic **“Preclinical studies and development of phase 1/2 clinical studies for the treatment of the recessive dystrophic form of epidermolysis bullosa (EB) and lamellar ichthyosis (LI)”** funded by the European Union – NextGenerationEU (PNRR), Mission 4, Component 2, Investment 1.4 – Research program from title: “National Center for Gene Therapy and Drugs based on RNA Technology” (code CN00000041) - Spoke 1: Genetic Diseases - CUP E93C22001080001;

- 1 with topic **“Small Molecule (SM) therapy in hemochromatosis and Ferroportin Disease”** funded by the European Union - NextGenerationEU (PNRR), Mission 4, Component 2, Investment 1.4 – Research program entitled: “National Center for Gene Therapy and Drugs based on RNA Technology” (code CN00000041) - Spoke 1: Genetic Diseases - CUP E93C22001080001;

- 1 with topic: **“In silico strategies for the design/optimization of dialysis devices, including identification of functionalization strategies for personalized medicine approaches. Development of platforms for data analysis and support for clinical decision making”** funded by the European Union – NextGenerationEU, PNRR - HUB “HEAL ITALIA” Foundation (CF 97370050821) – Mission 4, Component 2, Investment 1.3 (MUR Directorial Decree of 15 March 2022, n. 341) - Research and Innovation Program entitled “Health Extended Alliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine - HEAL ITALIA” – Spoke 6 – identification code PE00000019 – CUP E93C22001860006.

- 1 with topic: **“Development of antibiotic-free patient-personalized therapeutic platforms for the management of infections”** funded by the European Union – NextGenerationEU, PNRR - HUB “HEAL ITALIA” Foundation (CF 97370050821) – Mission 4, Component 2, Investment 1.3 (MUR Directorial Decree of 15 March 2022, n. 341) - Research and Innovation Program entitled “Health Extended Alliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine - HEAL ITALIA” – Spoke 6 - identification code PE00000019 – CUP E93C22001860006.

**Places without scholarship: 3**



One additional place is reserved for a candidate already selected in a specific international mobility programme in which the University of Modena and Reggio Emilia participates (HORIZON 2021 - Marie Skłodowska Curie Actions - REGENERATE-IT).

**Selection Procedure (for all selective procedures):** The Course includes six selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates may submit the following additional documents:

- 1) self-certification of the master/specialist degree and first degree or Italian degree obtained prior to D.M. 509/99 (in case of degree obtained in Italy) or certificate of first and second degree (in the case of degree obtained Abroad), showing a list of exams taken and grades achieved;
- 2) curriculum vitae written in English containing their scientific experience;
- 3) a summary in Italian or English of the thesis, or equivalent – no longer than two pages -, and divided into the following points: purpose of the thesis, methods of investigation, results obtained;
- 4) a short essay, no longer than two pages, written in English that illustrates the reasons why the candidate wishes to attend the PhD Programme in “Molecular and Regenerative Medicine” and describes his/her specific research interests (Statement of Research Interest);
- 5) certification attesting to knowledge of the English language (FIRST, TOEFL, Proficiency or other);
- 6) GRE (Graduate Record Examination) certificates;
- 7) One recommendation/reference letter written by experts in the fields of research of the PhD Programme, indicating the public or private institution/organization he/she is affiliated with, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

**1) Main Selection Procedure (for places with scholarship without specific topic and place without scholarship): based on academic and research record and interview**

**Admission requirements:** Italian second level degree (“laurea magistrale”, under D.M. 270/04) in the following disciplines: LM-6 Biology, LM-8 Industrial biotechnology, LM-9 Medical, veterinary and pharmaceutical biotechnology, LM-13 Pharmacy and industrial pharmacy, LM-21 Biomedical Engineering, LM-41 Medicine and surgery, LM-54 Chemical Sciences; or equivalent: Italian second level degree (“laurea specialistica”, under D.M. 509/99) in one of the following disciplines: 6/S Biology, 8/S Industrial biotechnology, 9/S Medical, veterinary and pharmaceutical biotechnology, 14/S Pharmacy and industrial pharmacy, 26/S Biomedical Engineering, 46/S Medicine and surgery, 62/S Chemical Sciences; Italian degree (obtained prior to D.M. 509/99) in Biological Sciences, in Agro-industrial Biotechnology, in Biotechnology (curriculum Industrial Biotechnology or Pharmaceutical Biotechnology or Medical Biotechnology or Veterinary Biotechnology), in Chemistry and Pharmaceutical Technologies or Pharmaceutical Chemistry and Technology, in Pharmacy, in Medicine and Surgery, in Biomedical Engineering, in Medical Engineering, in Chemistry or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of the Call.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- degree mark, if already obtained, or marks obtained in the exams: from 0 to 30 points,
- curriculum and professional experience: from 0 to 10 points,
- publications: from 0 to 5 points,
- Statement of Research Interest: from 0 to 15 points.

Candidates awarded at least 40/60 in the assessment of academic and research record will be admitted to the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced in a date between September 12<sup>th</sup> and 13<sup>th</sup>, 2023 on the University website at <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Molecular and regenerative medicine.

Candidates may opt to have their interview in English.

The interview consists of:

- an evaluation of basic knowledge of cell biology, molecular biology, chemistry, biochemistry, genetics, general pathology,
- a discussion on the research activity previously carried out,
- a discussion on the research interests expressed in the Statement of Research Interest,
- verification of knowledge of the English language.

Candidates obtaining a minimum score of 40/60 on the interview will be considered eligible.

## **2) Selection procedure for a place with scholarship on the topic: "Characterization of stem and progenitor cells for applications of gene and cell therapies of lining epithelia": based on academic and research record and interview**

**Admission requirements:** Italian second level degree ("laurea magistrale", under D.M. 270/04) in the following disciplines: LM-6 Biology, LM-8 Industrial biotechnology, LM-9 Medical, veterinary and pharmaceutical biotechnology; or equivalent: Italian second level degree ("laurea specialistica", under D.M. 509/99) in one of the following disciplines: 6/S Biology, 8/S Industrial biotechnology, 9/S Medical, veterinary and pharmaceutical biotechnology; Italian degree (obtained prior to D.M. 509/99) in Biological Sciences, in Agro-industrial Biotechnology, in Biotechnology (curriculum Industrial Biotechnology or Pharmaceutical Biotechnology or Medical Biotechnology or Veterinary Biotechnology), or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of the Call.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- degree mark, if already obtained, or marks obtained in the exams: from 0 to 30 points,
- curriculum and professional experience: from 0 to 10 points,
- publications: from 0 to 5 points,
- Statement of Research Interest: from 0 to 15 points.

Candidates awarded at least 40/60 in the assessment of academic and research record will be admitted to the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced in a date between September 12<sup>th</sup> and

13<sup>th</sup>, 2023 on the University website at <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Molecular and regenerative medicine. Candidates may opt to have their interview in English.

The interview consists of:

- an evaluation of basic knowledge of cell biology and molecular biology
- a discussion on the research activity previously carried out and on the research interests expressed in the Statement of Research Interest.
- an evaluation of basic knowledge on stem cell biology, cell and gene therapy principles.
- verification of knowledge of the English language.

Candidates obtaining a minimum score of 40/60 on the interview will be considered eligible.

### **3) Selection procedure for a place with scholarship on the topic "Preclinical studies and development of phase 1/2 clinical studies for the treatment of the recessive dystrophic form of epidermolysis bullosa (EB) and lamellar ichthyosis (LI)". based on academic and research record and interview**

**Admission requirements:** Italian second level degree ("laurea magistrale", under D.M. 270/04) in the following disciplines: LM-6 Biology, LM-8 Industrial biotechnology, LM-9 Medical, veterinary and pharmaceutical biotechnology, or equivalent Italian second level degree ("laurea specialistica", under D.M. 509/99) in one of the following disciplines: 6/S Biology, 8/S Industrial biotechnology, 9/S Medical, veterinary and pharmaceutical biotechnology; Italian degree (obtained prior to D.M. 509/99) in Biological Sciences, in Agro-industrial Biotechnology, in Biotechnology (curriculum Industrial Biotechnology or Pharmaceutical Biotechnology or Medical Biotechnology or Veterinary Biotechnology), or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of the Call.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- degree mark, if already obtained, or marks obtained in the exams: from 0 to 30 points,
- curriculum and professional experience: from 0 to 10 points,
- publications: from 0 to 5 points,
- Statement of Research Interest: from 0 to 15 points.

Candidates awarded at least 40/60 in the assessment of academic and research record will be admitted to the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced in a date between September 12<sup>th</sup> and 13<sup>th</sup>, 2023 on the University website at <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Molecular and regenerative medicine. Candidates may opt to have their interview in English.

The interview consists of:

- an evaluation of basic knowledge of cell biology and molecular biology
- a discussion on the research activity previously carried out and on the research interests expressed in the Statement of Research Interest.
- an evaluation of basic knowledge on stem cell biology, cell and gene therapy principles, viral vector production and cell line engineering methods.
- verification of knowledge of the English language.

Candidates obtaining a minimum score of 40/60 on the interview will be considered eligible.

**4) Selection procedure for a place with scholarship on the topic "Small Molecule (SM) therapy in hemochromatosis and Ferroportin Disease": based on academic and research record and interview.**

**Admission requirements:** Italian second level degree ("laurea magistrale", under D.M. 270/04) in the following discipline: LM-9 Medical, veterinary and pharmaceutical biotechnology or equivalent; Italian second level degree ("laurea specialistica", under D.M. 509/99) in one of the following disciplines: 9/S Medical, veterinary and pharmaceutical biotechnology; Italian degree (obtained prior to D.M. 509/99) in Biotechnology (curriculum Industrial Biotechnology or Pharmaceutical Biotechnology or Medical Biotechnology or Veterinary Biotechnology), or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of the Call).

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- degree mark, if already obtained, or marks obtained in the exams: from 0 to 30 points,
- curriculum and professional experience: from 0 to 10 points,
- publications: from 0 to 5 points,
- Statement of Research Interest: from 0 to 15 points.

Candidates awarded at least 40/60 in the assessment of academic and research record will be admitted to the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced in a date between September 12<sup>th</sup> and 13<sup>th</sup>, 2023 on the University website at <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Molecular and regenerative medicine.

Candidates may opt to have their interview in English.

The interview consists of:

- an evaluation of basic knowledge of cell biology and molecular biology
- a discussion on the research activity previously carried out and on the research interests expressed in the Statement of Research Interest.
- an assessment of the knowledge on the regulation of iron metabolism and on hereditary iron storage diseases
- verification of knowledge of the English language.

Candidates obtaining a minimum score of 40/60 on the interview will be considered eligible.

**5) Selection procedure for a place with scholarship on the topic: "In silico strategies for the design/optimization of dialysis devices, including identification of functionalization strategies for personalized medicine approaches. Development of platforms for data analysis and support for clinical decision making": based on academic and research record and interview.**

**Admission requirements:** Italian second level degree ("laurea magistrale", under D.M. 270/04) in the following disciplines: LM-21 Biomedical Engineering, LM-29 Electronic Engineering, LM-32 Computer Engineering, LM-33 Mechanical Engineering, LM-9 Medical, veterinary and pharmaceutical biotechnologies; Italian second level degree

("laurea specialistica", under D.M. 509/99) in one of the following disciplines: 26/S Biomedical Engineering, 32/S Electronic Engineering, 35/S Computer Engineering, 36/S Mechanical Engineering, 9/S Medical, veterinary and pharmaceutical biotechnologies; italian degree (obtained prior to D.M. 509/99) in Biomedical Engineering, Medical Engineering, Electronic Engineering, Computer Engineering, Mechanical Engineering, Industrial Engineering, Biotechnology with a specialization in Medical, Pharmaceutical or Veterinary Biotechnology; equivalent qualification obtained abroad in accordance with the provisions of art. 2 of this notice.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- degree mark, if already obtained, or marks obtained in the exams: from 0 to 30 points,
- curriculum and professional experience: from 0 to 10 points,
- publications: from 0 to 2 points,
- Statement of Research Interest: from 0 to 18 points.

Candidates awarded at least 40/60 in the assessment of academic and research record will be admitted to the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced in a date between September 12<sup>th</sup> and 13<sup>th</sup>, 2023 on the University website at <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Molecular and regenerative medicine.

Candidates may opt to have their interview in English.

The interview consists of:

- an evaluation of basic knowledge of biomedical engineering
- a discussion on the research activity previously carried out and on the research interests expressed in the Statement of Research Interest.
- an assessment of knowledge on computational modeling as a support to the design of biomedical devices and the analysis of biomedical data
- verification of knowledge of the English language.

Candidates obtaining a minimum score of 40/60 on the interview will be considered eligible.

**6) Selection procedure for a place with scholarship on the topic: "Development of antibiotic-free patient-personalized therapeutic platforms for the management of infections: based on academic and research record and interview.**

#### **Admission requirements:**

Italian second level degree ("laurea magistrale", under D.M. 270/04) in the following disciplines: LM-21 Biomedical Engineering, LM-53 Materials Science and Engineering, LM-6 Biology, LM-8 Industrial Biotechnologies, LM-9 Medical, veterinary and pharmaceutical biotechnologies; Italian second level degree ("laurea specialistica", under D.M. 509/99) in one of the following disciplines: 26/S Biomedical Engineering, 61/S Materials Science and Engineering, 6/S Biology, 8/S Industrial Biotechnologies, 9/S Medical, veterinary and pharmaceutical biotechnologies; italian degree (obtained prior to D.M. 509/99) in Biomedical Engineering, in Materials Science and Engineering, in Biological Sciences, in Agro-industrial Biotechnologies, Biotechnologies with Industrial Biotechnologies, in Biotechnologies with Pharmaceutical Biotechnologies, in Biotechnologies with Medical Biotechnologies, in Biotechnology specialization Veterinary

biotechnology; equivalent qualification obtained abroad in accordance with the provisions of art. 2 of this call.

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- degree mark, if already obtained, or marks obtained in the exams: from 0 to 30 points,
- curriculum and professional experience: from 0 to 10 points,
- publications: from 0 to 3 points,
- Statement of Research Interest: from 0 to 17 points.

Candidates awarded at least 40/60 in the assessment of academic and research record will be admitted to the interview.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced in a date between September 12<sup>th</sup> and 13<sup>th</sup>, 2023 on the University website at <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Molecular and regenerative medicine. Candidates may opt to have their interview in English.

The interview consists of:

- an evaluation of basic knowledge of biomedical engineering
- a discussion on the research activity previously carried out and on the research interests expressed in the Statement of Research Interest.
- an assessment of knowledge on computational modeling as a support to the design of biomedical devices and the analysis of biomedical data
- verification of knowledge of the English language.

Candidates obtaining a minimum score of 40/60 on the interview will be considered eligible.

**Areas of the PhD Programme:** The doctoral course includes two training courses: the curriculum in Molecular and Regenerative Medicine and the curriculum in Nanotechnologies and Modeling for Industrial Biomedical Applications. The courses include, in addition to research and laboratory activities, lectures and seminars on molecular and cellular mechanisms of human diseases, mechanisms of cell differentiation and gene therapy, structural biology, computational biology, biomaterials.

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study

Further information is available from the PhD Programme website at:

<http://www.mrm.unimore.it/site/home.html>

### **EXAM SCHEDULE – (for all the selective procedures)**

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):**

September 21<sup>st</sup>, 2023, 9:00 am. In the event of a large number of candidates, the interview will continue on September 22<sup>nd</sup>, 2023, 9:00 am

The operational indications on how to carry out the interview via Microsoft Teams will be communicated at the time of publication of those admitted to the interview.

## **11) PhD Programme in “NEUROSCIENCES”**

**Places with scholarship:**

- 4 without specific topic;

- 1 with topic **“Development of neuromorphic systems for energy efficient artificial intelligence platforms”** (financed by Regione Emilia Romagna in implementation of the programme "Territory: technological, cultural, economic and social transition towards sustainability" - ESF+ PR 2021/2027 - CUP E83C23000510002);

- 1 with topic **“Evaluation of patients at all ages with reduced sensorimotor and/or cognitive functions requiring for rehabilitation, assistance and/or support”** funded by National Plan for Complementary Investments project (PNC) – “FIT for Medical Robotics” Initiative – FIT4MEDROB (PNC0000007) – CUP B53C22006810001

- 1 with topic **“Research project in the field of basic and computational neuroscience, or clinical neuroscience, or cognitive neuroscience and psychology”** (with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1, “PNRR”)

**Places without scholarship: 2**

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection Procedure: based on academic and research record, written test and interview**

The course includes four selection procedures depending on the type of places available. Candidates interested in several selective procedures must submit the application for admission and pay the relative contribution of € 25.00 for each of the procedures in which they intend to participate. The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course.

**1) Main selection procedure (for places covered by scholarships without a specific topic and for places without scholarships)**

**2) Selection procedure for a place with scholarship on the topic “Development of neuromorphic systems for energy efficient artificial intelligence platforms”**

**3) Selection procedure for a place with scholarship on the topic “Evaluation of patients at all ages with reduced sensorimotor and/or cognitive functions requiring for rehabilitation, assistance and/or support”**

**4) Selection procedure for a place with scholarship on the topic “Research project in the field of basic and computational neuroscience, or clinical neuroscience, or cognitive neuroscience and psychology”**

The selections are made up of 3 phases: evaluation of qualifications, written examination and oral examination. The evaluation of qualifications and the written examination are carried out in the same way for all candidates. The oral examination will be carried out in a differentiated manner depending on the selection(s) in which the candidate has chosen to participate.

Evaluation of qualification (60 points):

Without prejudice to the provisions of art. 3 of this announcement, for the purpose of evaluating qualifications, candidates may submit the following additional documents:

1) degree score or document certifying the list of exams and the scores obtained, up to a maximum of 15 points;



- 2) thesis, up to a maximum of 10 points;
- 3) publications, up to a maximum of 10 points;
- 4) synthesis of the research project (3 pages), up to a maximum of 15 points;
- 5) other qualifications (including specialties and experiences post-graduate), up to a maximum of 10 points.

Written examination (60 points):

The Written Exam is a written report on any of these topics belonging to one of the following groups of topics:

*Group 1*

- 1) The genesis of nerve impulses: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 2) The synapse: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 3) The reflexes: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 4) Molecular and cellular basis of signal transduction: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 5) The motor system: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 6) The visual system: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 7) The somatosensory system: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
- 8) The systems that regulate alertness, consciousness and sleep: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.

*Group 2*

- 9) Social cognition: introduce the topic in a general way and explain in detail a research topic in the field of social cognition;
- 10) Visualization techniques of mental activities: introduce the topic in a general way and explain in detail a visualization technique;
- 11) The relationship between perception and action: introduce the topic in a general way and explain in detail a research topic in the field of the relationship between perception and action;
- 12) The emotional experience: introduce the topic in a general way and explain in detail a research topic in the field of emotional experience;
- 13) Attention and executive functions: introduce the topic in a general way and explain in detail a research topic in the field of attention and executive functions;
- 14) Language: introduce the topic in a general way and explain in detail a research topic in the field of the mental mechanisms involved in linguistic processing.

15) The mind-brain relationship: describe from a historical point of view the developments of the relationship between mind and brain up to the present day, possibly also using the knowledge deriving from clinical neuropsychology.

16) Inter-individual differences and personality traits: introduce the topic in a general way and explain in detail a research topic in the field of the mental mechanisms involved in linguistic processing.

### *Group 3*

17) Describe genetic and epigenetic factors in childhood trauma and their implications for adult psychopathology

18) Describe the bio-psycho-social paradigm, its scientific foundations and the impact in contemporary clinical practice

19) Describe medical-psychiatric comorbidity from a psycho-neuro-endocrine-immunological perspective;

20) Describe the neurobiological bases of stress

21) Describe genetic and environmental factors underpinning the onset of neurodevelopmental disorders in early childhood

22) Describe the neural and cognitive mechanisms involved in Autism Spectrum Disorder and ADHD

23) Describe the psychological and neurobiological mechanisms underlying change during psychotherapy and/or psychiatric rehabilitation

24) Describe the psychological and neurobiological characteristics of adolescence

At the beginning of the examination (which will last a maximum of one hour) two topics for each Group of topics among those listed above are randomly chosen, one of which can be chosen by the candidate for her/his written report.

### Oral examination (80 points):

The oral examination in the presence of the candidate will focus on the report of the Written Exam, the brief description of the candidate of his research project and the discussion of the candidate's motivations for attending the PhD in Neuroscience and its specific research interests. If the candidate has chosen to participate in more than one selection, s/he will be examined more times on the specific topics of each selection procedure. It will also check the verification of the English language and any foreign language optional declared by the applicant at the time of submitting the application.

Once the evaluation of qualifications and the written and oral examinations have been assessed, the Committee will compile four merit-based rankings respectively for the four selections, based on the scores assigned to the candidates participating in the 4 selection procedures. Candidates obtaining a minimum score of 100/200 will be considered eligible.

**Programme topics:** The training and research activities will be divided into the following three macro-areas, including also cross-cutting topics, methodologies and technologies:

- *Basic and computational neuroscience:* Study of the central and peripheral nervous system in humans through the following techniques: neuroanatomy, neuropharmacology, molecular and cellular biology, electrophysiology, behavioral, neurocomputational and brain imaging. Laboratory animals (rodents), and cellular models including induced pluripotent stem cells and organoids are also used.

- *Clinical neuroscience:* Study of clinical research topics in the field of neurological and psychiatric disorders across the lifespan; particular relevance will be given to genetic and

epigenetic risk factors using specific experimental approaches, as well as to broad-spectrum omics methods.

- *Cognitive neuroscience and psychology*: Study of human cognitive functions through the evaluation of mental operations and their neural substrate, using behavioral and testistic methodologies, as well as psychophysiological and neuroimaging techniques, on healthy subjects or patients with cognitive/affective disorders.

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study

Further information is available from the PhD Programme website at: <http://www.dottorato-neuroscienze.unimore.it>

## EXAM SCHEDULE

**Written examination:** August 29<sup>th</sup>, 2023, 9:00 a.m. Laboratorio M0.2 - [MO 18 - Matematica] - Via Campi 213/B, Modena;

**Interview in presence:** August 29<sup>th</sup>, 2023, 2:00 p.m., Aula di Farmacologia - [MO 15 – Scienze Biomediche, floor 3], Via Giuseppe Campi 287, Modena. Interviews could eventually continue on August 30<sup>th</sup> 2023, 9:00 a.m., Aula di Farmacologia - [MO 15 – Scienze Biomediche, floor 3], Via Giuseppe Campi 287, Modena, should there be a high number of candidates.

## 12) PhD Programme in “PHYSICS AND NANO SCIENCES”

### Places with scholarship:

- 4 without specific topic;

- 1 with topic “**Green Innovative and sustainable devices for circular electronics**” (financed by Regione Emilia Romagna in implementation of the programme "Territory: technological, cultural, economic and social transition towards sustainability" - ESF+ PR 2021/2027 - CUP E83C23000510002);

- 1 with topic “**HPC materials design for clean energy applications**” financed with EU funds - NextGenerationEU - DD. 3277/2021, within the PNRR, Mission 4, Component 2, Investment 1.5 - Project: Ecosystem for Sustainable Transition of Emilia-Romagna (ECOSISTER) - Spoke 6 - CUP: E93C22001100001;

- 1 with topic “**Materials and Nanosystems for Digital Technologies**” with PNRR DM118/2023 funds Mission 4, Component 1, Investment 4.1, “PNRR”);

- 1 with topic “**Computational Materials Science for Energy Sustainability and Quantum technologies**”.

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection procedures (for all selection procedures):** The Course opens five selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course (<https://www.nano-phdschool.unimore.it/site/home/topics.html>).

In addition to the provisions of the art. 3 of this application procedure, candidates may submit the following additional documents:

1a) Self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved; students who have not yet completed the final degree examination, must submit a list of exams taken and grades achieved;

1b) List of research and teaching activities (curriculum vitae) indicating all the qualifications obtained. This can be written either in Italian or in English;

1c) A summary of the thesis/diploma work, from a minimum of three to a maximum of six pages, with the following headings: state of the art and interests of the topic, research methodology and results. This summary can be written either in Italian or in English;

1d) certificates of knowledge of English language (TOEFL, Proficiency or others); certificate of Graduate Record Examination (GRE);

2) Letters of presentation (up to three) written by experts in the fields of this PhD course, indicating the public or private institution in which they serve as experts, which must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call;

3) Statement of Research Interest: a short text, of no more than two pages and written in English, consisting of two parts:

- **Motivation**, which illustrates the candidate's reasons for attending the Course (max 1/2 page)

- Description of a short research project (**Statement of Research Interest**)- divided into introduction, state of the art, and possible lines of development - based on:

**for selection 1):** the research topics proposed for the XXXIX cycle and listed on the website: <http://www.nano-phdschool.unimore.it/site/home/topics.html> with reference to the page: "themes proposed for the XXXIX Edition (2023)";

**for selection 2):** the research topic "*Green: Innovative and sustainable devices for circular electronics*";

**for selection 3):** the research topic "*HPC materials design for clean energy applications*";

**for selection 4):** the research topic "*Materials and Nanosystems for Digital Technologies*";

**for selection 5):** the research topic "*Computational Materials Science for Energy Sustainability and Quantum technologies*".

Further information on the topics indicated for selections 2), 3), 4), 5) can be found at the link: <http://www.nano-phdschool.unimore.it/site/home/topics.html> with reference to the page: "themes proposed for the XXXIX Edition (2023)"

**1) Main Selection Procedure (for places covered by scholarships without a specific topic): based on academic and research records and interview.**

**2) Selection procedure for a place with scholarship on the topic "Green Innovative and sustainable devices for circular electronics": based on academic and research records and interview**

**3) Selection procedure for a place with scholarship on the topic "HPC materials design for clean energy applications": based on academic and research records and interview**

**4) Selection procedure for a place with scholarship on the topic "Materials and Nanosystems for Digital Technologies": based on academic and research records and interview**

## **5) Selection procedure for a place with scholarship on the topic “Computational Materials Science for Energy Sustainability and Quantum technologies”: based on academic and research records and interview**

For the evaluation, the Board of Examiners, based on a comparative assessment of the documents submitted by the candidates, assigns a score up to a maximum of 60 points, according to the following criteria:

1) Previous experience of the candidate, up to a maximum of 30 points awarded considering:

- Curriculum studiorum, indicating the examinations passed during the previous courses (evaluation criteria: score of the final degree –if already achieved-, list of exams taken and grades received, degree of relevance of previous studies to this PhD course).

- List of activities (experiences and activities of internship, job opportunities, scholarships, grants, publications, training periods abroad, participation to Summer Schools and conferences).

- Summary of the thesis/diploma work-completed or in progress- (evaluation criteria: motivations and state of the art of the field, methods of investigation, results obtained).

- Knowledge of the English Language (documented by exams and certificates).

2) Independent evaluation of the potentialities of the candidate, up to a maximum of 10 points. To evaluate this, the following will be considered: one to three letters of recommendation from experts who have had the opportunity to assess the candidate in research. Prizes and awards given to the candidate by external commissions. The letters of recommendation must be produced directly by the referents and exclusively according to the procedure indicated in art. 3 of this Call.

3) Evaluation of the Statement of Research Interest: The commission, based on this text, will evaluate the technical and scientific motivations and specific research interests of the candidate as well as their potentialities for the development of the PhD programme. Up to a maximum of 20 points.

After the assessment, the Commission shall prepare a ranking list based on the scores assigned to each candidate. Candidates who obtain a score lower than 40/60 will not be admitted to the interview and not considered eligible for admission to the course.

The list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure will be announced publicly in a date between August 28<sup>th</sup> and 29<sup>th</sup>, 2022 on the University website at <http://www.unimore.it/didattica/doctorates.html> in the section relating to the PhD Programme in Physics and Nano-sciences.

### Subjects to be covered by the interview

The interview is intended to clarify and verify the candidate's past experience as set out in the documentation submitted by the candidate, and his/her scientific interests and possible lines of career development within the possibilities offered by the PhD Course, as expressed by the candidate in the Statement of Research Interest.

Maximum score for the interview is 40 points.

Candidates who obtain an overall mark of less than 60/100 will not be considered eligible for admission to the course.

**Areas of the PhD Programme:** Main topics include: quantum sciences and technologies; nanofabrication, microscopy and spectroscopy; nano-systems for energy conversion; nanostructured, low-dimensional, graphene and 2D systems; functional surfaces and

molecules; physics and chemistry of bio-nano systems; nano-scale tribology; advanced computational theory and methods for materials and nanosystems; fields and strings theory. Further information is available from the PhD-PNS website at: <http://www.nano-phdschool.unimore.it/site/home/topics/>.

Official course language: English. However, foreign PhD students are encouraged to learn the Italian language during the PhD Course.

## EXAM SCHEDULE

### Selection 1 – Main Selection:

**In-person interview**, in room L1.3 Department of Physics, via G. Campi 213/A, Modena, or via **Microsoft Teams platform for candidates who explicitly request it**: September 1<sup>st</sup>, 2023, 9.00 am. Interviews could continue on September 4<sup>th</sup>, 2023 9:00 am, should there be a high number of candidates.

### Selection 2, 3, 4, 5:

**In-person interview**, in room L1.3 Department of Physics, via G. Campi 213/A, Modena, or via **the Microsoft Teams platform for candidates who explicitly request it**: September 1<sup>st</sup>, 2023, 12.00 pm. Interviews could continue on September 4<sup>th</sup>, 2023 9:00 am, should there be a high number of candidates.

The operational indications on how to conduct the interview via **Microsoft Teams** will be communicated at the time of publication of candidates admitted to the interview.

## 13) PhD Programme in “REGGIO CHILDHOOD STUDIES” (Main venue: Reggio Emilia)

### Places with scholarship:

- 7 without specific topic (1 of which is financed with funds from MIUR Call "Department of Excellence 2023-2027" - Department of Education and Human Sciences - CUP: E83C22006680001);

- 1 on topic “**The art of understanding**” (financed by Regione Emilia Romagna in implementation of the programme "Territory: technological, cultural, economic and social transition towards sustainability" - ESF+ PR 2021/2027 - CUP E83C23000510002);

- 1 on topic “**Re-imagining learning environments**” (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1, “PNRR”);

- 1 on topic “**The Eurac corpus of Academic Cover Letters (Italian, German, English): Linguistic success in cover letter writing in academia and beyond**”;

### Reserved places:

- 1 industrial PhD for employees of the Reggio Children Foundation - Loris Malaguzzi Centre.

### Places without scholarship: 1

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection procedure (for all selection procedures):** The Course provides for four selection procedures depending on the type of positions available. Candidates interested



in more than one selection procedure must apply for each procedure in which they wish to participate and pay a € 25.00 fee.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates may submit the following additional documents:

- 1) self-certification of the degree (in the case of a degree obtained in Italy) or degree certificate (in the case of a degree obtained abroad) showing the list of exams taken and related marks;
- 2) curriculum vitae in Italian or English with indication of the university level qualifications;
- 3) a digital copy of the degree thesis (obtained prior to D.M. 509/99), or master's degree (D.M. 270/04), specialist degree (D.M. 509/99), or equivalent degree obtained abroad; alternatively, an abstract of the degree thesis;
- 4) a letter of motivation written in English – no longer than two pages – which illustrates the reasons why the candidate wishes to attend the PhD course and describes his/her specific research interests (Statement of Research Interest);
- 5) any certification attesting the knowledge of the English language (TOEFL, CAE/Proficiency or other) and other languages (if any) indicating the level achieved by the candidate;
- 6) a research project, written in Italian or English, related to one of the themes of the Course (<https://www.phdreggiochildhoodstudies.unimore.it/en/research-areas/>). The document, which will be between 2000 and 4000 words wide, must identify: i) a specific subject; ii) a working hypothesis; iii) a reference bibliography.

Referring to the selection procedure n. 1 indicated below, candidates who meet the requirement (being an employee of the enterprise) and wish to apply primarily for the reserved places for the PhD in collaboration with companies, must fill in and attach to the online application form the facsimile "*Annex D2*" of this call.

The Commission will verify whether or not those who have expressed an interest in competing for the reserved position have met the requirement.

### **1) Main selection procedure (for places with scholarship without specific topic, places without scholarship and places reserved for industrial PhD): based on academic and research record**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- exams taken, degree mark, degree thesis / abstract of the degree thesis (maximum 9 points)
- curriculum vitae and experience considered relevant (maximum 9 points),
- other qualifications, e.g. masters, courses, degrees (maximum 4 points),
- language skills (maximum 4 points),
- publications (maximum 4 points),
- research project (maximum 30 points); Evaluation criteria of the research project:
  - i) relevance of the proposal (maximum 9 points)
  - ii) feasibility in the space of the doctoral course (maximum 3 points)
  - iii) knowledge of the scientific framework (maximum 9 points)
  - iv) innovativeness of the proposal (maximum 9 points)

Candidates obtaining a minimum of 40 points will be allowed to interview.

Only on the University website (<https://www.unimore.it/didattica/doctorates.html>) in the section relating to the PhD Programme in Reggio Childhood Studies, it will be published



the list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure, in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023.

The Selection committee has the capacity to assign scores up to 60 points in the interview. Candidates may opt to have their interview in Italian or English. Knowledge of the English language will be assessed during the interview; candidates will discuss the research project and they will be given the opportunity to deepen or further develop it orally (please, note that no attachments or additional written documentation will be accepted).

Evaluation criteria:

- a) basic knowledge (maximum 25 points)
- b) argumentation skills (maximum 30 points)
- c) knowledge of languages (maximum 5 points)

Candidates with a score of at least 40 points will pass the interview.

The judgement of suitability or otherwise for the reserved place does not affect the marks awarded to the candidates but is useful only for the purposes of the assignment of the reserved place. The sub-mentioned place will be assigned to the candidate reaching the best ranking position, among those who have applied primarily for the reserved place.

## **2) Selection procedure for a position with scholarship with topic “The art of understanding”: based on academic and research record**

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- exams taken, degree mark, degree thesis / abstract of the degree thesis (maximum 9 points)
- curriculum vitae and experience considered relevant (maximum 9 points),
- other qualifications, e.g. masters, courses, degrees (maximum 4 points),
- language skills (maximum 4 points),
- publications (maximum 4 points),
- research project (maximum 30 points); Evaluation criteria of the research project:
  - i) relevance of the proposal (maximum 9 points)
  - ii) feasibility in the space of the doctoral course (maximum 3 points)
  - iii) knowledge of the scientific framework (maximum 9 points)
  - iv) innovativeness of the proposal (maximum 9 points)

Candidates obtaining a minimum of 40 points will be allowed to interview.

Only on the University website (<https://www.unimore.it/didattica/doctorates.html>) in the section relating to the PhD Programme in Reggio Childhood Studies, it will be published the list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure, in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023.

The Selection committee has the capacity to assign scores up to 60 points in the interview. Candidates may opt to have their interview in Italian or English. Knowledge of the English language will be assessed during the interview; candidates will discuss the research project and they will be given the opportunity to deepen or further develop it orally (please, note that no attachments or additional written documentation will be accepted).

Evaluation criteria:

- a) basic knowledge (maximum 25 points)
- b) argumentation skills (maximum 30 points)
- c) knowledge of languages (maximum 5 points)

Candidates with a score of at least 40 points will pass the interview.

### **3) Selection procedure for a position with scholarship with topic “Re-imagining learning environments”:** based on academic and research record

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- exams taken, degree mark, degree thesis / abstract of the degree thesis (maximum 9 points)
- curriculum vitae and experience considered relevant (maximum 9 points),
- other qualifications, e.g. masters, courses, degrees (maximum 4 points),
- language skills (maximum 4 points),
- publications (maximum 4 points),
- research project (maximum 30 points); Evaluation criteria of the research project:
  - i) relevance of the proposal (maximum 9 points)
  - ii) feasibility in the space of the doctoral course (maximum 3 points)
  - iii) knowledge of the scientific framework (maximum 9 points)
  - iv) innovativeness of the proposal (maximum 9 points)

Candidates obtaining a minimum of 40 points will be allowed to interview.

Only on the University website (<https://www.unimore.it/didattica/doctorates.html>) in the section relating to the PhD Programme in Reggio Childhood Studies, it will be published the list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure, in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023.

The Selection committee has the capacity to assign scores up to 60 points in the interview. Candidates may opt to have their interview in Italian or English. Knowledge of the English language will be assessed during the interview; candidates will discuss the research project and they will be given the opportunity to deepen or further develop it orally (please, note that no attachments or additional written documentation will be accepted).

Evaluation criteria:

- a) basic knowledge (maximum 25 points)
- b) argumentation skills (maximum 30 points)
- c) knowledge of languages (maximum 5 points)

Candidates with a score of at least 40 points will pass the interview.

### **4) Selection procedure for a position with scholarship with topic “The Eurac corpus of Academic Cover Letters (Italian, German, English): Linguistic success in cover letter writing in academia and beyond”:** based on academic and research record

The Selection committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- exams taken, degree mark, degree thesis / abstract of the degree thesis (maximum 9 points)
- curriculum vitae and experience considered relevant (maximum 9 points),
- other qualifications, e.g. masters, courses, degrees (maximum 4 points),
- language skills (maximum 4 points),
- publications (maximum 4 points),
- research project (maximum 30 points); Evaluation criteria of the research project:
  - i) relevance of the proposal (maximum 9 points)
  - ii) feasibility in the space of the doctoral course (maximum 3 points)
  - iii) knowledge of the scientific framework (maximum 9 points)
  - iv) innovativeness of the proposal (maximum 9 points)

Candidates obtaining a minimum of 40 points will be allowed to interview.

Only on the University website (<https://www.unimore.it/didattica/doctorates.html>) in the section relating to the PhD Programme in Reggio Childhood Studies, it will be published

the list of candidates admitted to the interview and any variations in the methods and terms of the selection procedure, in a date between August 24<sup>th</sup> and 25<sup>th</sup>, 2023.

The Selection committee has the capacity to assign scores up to 60 points in the interview. Candidates may opt to have their interview in Italian or English. Knowledge of the English language will be assessed during the interview; candidates will discuss the research project and they will be given the opportunity to deepen or further develop it orally (please, note that no attachments or additional written documentation will be accepted).

Evaluation criteria:

- a) basic knowledge (maximum 25 points)
- b) argumentation skills (maximum 30 points)
- c) knowledge of languages (maximum 5 points)

Candidates with a score of at least 40 points will pass the interview.

**Areas of the PhD Programme:** Space and environment as elements that contribute to structuring learning processes; play and learning in the digital age; cognitive and emotional group processes, co-construction of a learning community cultural; the theory and practice of uniqueness and differences that in social, cultural, anthropological and religious contexts; the aesthetic dimensions as a constituting element of learning processes.

The official language of the PhD program is English. However, every student is encouraged to learn the Italian language skills during their study cycle, considering that some activities will also be carried out in Italian.

Further information is available from PhD Programme website at: <http://www.phdreggiochildhoodstudies.unimore.it/> .

## **EXAMS SCHEDULE**

**In-person interview:** August 30<sup>th</sup>, 2023, 9:30 am. Interviews could continue on August 31<sup>st</sup>, 2023 9:30 am, should there be a high number of candidates,

The examination will take place in the CDA Room of Centro internazionale Loris Malaguzzi, Viale B. Ramazzini, 72/a, Reggio Emilia.

**Interview via Microsoft Teams (allowed for each candidate, regardless of residence):**

August 30<sup>th</sup> 2023, 9:30 a.m. Interviews could continue on August 31<sup>st</sup> 2023, 9:30 a.m., should there be a high number of candidates.

The operational indications on how to conduct the interview via Microsoft Teams will be communicated at the time of publication of candidates admitted to the interview.

## **14) PhD Programme in “HUMAN SCIENCES: STUDIES ON LANGUAGE AND LITERATURE, HISTORY AND PHILOSOPHY, COMMUNICATION AND DIGITAL HUMANITIES”**

**Places with scholarship: 5** without specific topic

**Reserved places:**

- **1** without scholarship for candidates with a degree awarded by a foreign University.
- **2** for candidates with scholarship of foreign Countries
- **1** covered by a three-year high apprenticeship contract, funded by **TICE Cooperativa Sociale** (registered offices in Alta Val Tidone (PC), Località Seguzzone 3) for carrying out work, training and research activities on the subject of parenting and neurodivergence, with the following characteristics: the research should investigate how to involve parents of neurodivergent children and explore methodologies for promoting parental awareness. The candidate should have knowledge and skills in ABA methodologies and work/training experience in neurodivergence organizations. The apprentice will be hired at the

Company's premises located in Correggio (RE), Strada Ronchi San Prospero 26, with a functional qualification equal to Child Care Assistant with educational functions, on a part-time basis 25 hours a week and with application of the regulations and economics required by the current National Collective Labor Agreement relating to the Social Cooperatives sector, in which the Company operates.

**Places without scholarship: 1**

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection procedure (for all selection procedures):** The Course provides for three selection procedures depending on the type of positions available. Candidates interested in more than one selection procedure must apply for each procedure in which they wish to participate and pay a € 25.00 fee.

The selections are intended to verify the candidate's preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of art. 3 of this application procedure, candidates may submit the following additional documents:

- 1) self-certification to prove that the degree has been obtained (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved;
- 2) curriculum vitae written in Italian or English in which the candidate describes his/her research and teaching activities and indicates his/her university degree qualifications obtained;
- 3) a copy of the degree dissertation in electronic form, degree obtained prior to D.M. 509/99 or second level degree ("laurea specialistica/magistrale") or equivalent degree (if obtained abroad), or an abstract of the degree dissertation;
- 4) a short essay written in English – no longer than two pages – which illustrates the reasons why the candidate wishes to attend the PhD Programme and describes his/her specific research interests (Statement of Research Interest);
- 5) any certification attesting the candidate's knowledge of the English language (TOEFL, CAE/Proficiency or other) or of other languages, indicating the level achieved;
- 6) a research project, in Italian or English, in one of the subject areas of the PhD Programme. The project will be a description – between four and ten pages in length – with: aim of the research, literature review, materials and methods, expected results, references. The project will not be binding for the Teaching Committee in terms of the possible attribution of a thesis title, regarding the scholarships without specific topic.

Referring to selection procedure n. 1 mentioned below, candidates who wish to apply primarily for the reserved position, must fill in the facsimile "*Annex D1*" of this call and attach it to the online application form.

The Selection Committee will examine the above documents for those who have expressed their interest in competing primarily for the reserved positions.

Referring to selection procedure n. 2 mentioned below, candidates must upload the documentation proving possession of the scholarship or the beginning of the application procedure to obtain it, before completing the online admission application.

**1) Main selection procedure (for positions with scholarship without specific topic, position without scholarship and place reserved for the three-year high apprenticeship contract): based on academic and research record and interview**

The Selection Committee assigns scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 10 points,
- Master thesis/abstract and other qualifications: from 0 to 10 points,
- Publications: from 0 to 10 points,
- Research project: from 0 to 30 points.

Candidates will be admitted to the interview when the evaluation of qualifications presented has a score of at least 40 points out of the 60 available. A list of the candidates admitted to the interview, and any variation in the selection procedure, will be published between August 30<sup>th</sup> and 31<sup>st</sup>, 2023 on the University website at page <http://www.unimore.it/didattica/doctorates.html>, in the section relating to the PhD Programme in Human Sciences.

For the interview, the Examiners may award a score of up to 60 points. Candidates may opt to have their interview in English. The interview will focus on the scientific methodologies used for the research project proposed by candidates and on the objectives the project aims to achieve, as well as on the research experience and the professional profile of the candidates. It will also assess the candidate's knowledge of the English language and of other languages the candidate may have indicated in the application. A pass is achieved where candidates are awarded a minimum score of 40/60.

The judgement of suitability for the reserved place for the three-year high apprenticeship contract does not affect the marks awarded to the candidates, but is useful only for the purposes of the assignment of the reserved place. The sub-mentioned place will be allocated, among the candidates who have expressed priority interest and have been deemed suitable, to the one with the highest score in the ranking list.

**2) Selection procedure for position reserved to candidates with scholarship of foreign Countries: based on academic and research record**

The Selection Committee assigns scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 10 points,
- Master thesis/abstract and other qualifications: from 0 to 10 points,
- Publications: from 0 to 10 points,
- Research project: from 0 to 30 points.

The Selection committee will verify the presentation of the documentation proving the possession of the scholarship or the beginning of the request procedure to obtain it.

Candidates will be accepted for admission if the evaluation of qualifications presented has a score of at least 40 points out of the 60 available.

**3) Selection procedure for positions without scholarship reserved for candidates with a degree awarded by a foreign University: based on academic and research record**

The Selection Committee assigns scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 10 points,

- Master thesis/abstract and other qualifications: from 0 to 10 points,
- Publications: from 0 to 10 points,
- Research project: from 0 to 30 points.

Candidates will be accepted for admission if the evaluation of qualifications presented has a score of at least 40 points out of the 60 available.

### **Course themes:**

The areas of the PhD Programme are: a) *Studies on Language and Literature* (English, French, German, Italian and Spanish studies): discourse analysis and specialized discourse, translation studies; b) *History and Philosophy*: theoretical philosophy, philosophy of language, moral philosophy and history of ideas; modern and contemporary History; sovereignty and nationalism, church and modernity c) *Education Theory and Methods*: sociology of communication, educational practices and processes; d) *Digital Humanities and Digital communication*: promotion of cultural heritage, planning and implementation of digital databases, aspects and problems of digital communication, digital resources and tools for human studies, digital publishing, digital culture enterprises and creative culture enterprises.

The language required is English. All the students are encouraged to learn Italian during the years of the PhD and to write their dissertation in the language that is most relevant to their object of study (e.g. Italian for Italian studies, German for German Studies, French for French studies and Spanish for Spanish studies).

Further information is available on the PhD Programme website at: <http://www.dottoratoscienzeumane.unimore.it/>

### **EXAM SCHEDULE**

#### **(Selection 1 – Main)**

**In-person interviews:** September 4<sup>th</sup>, 2023, 9:30 a.m. Interviews may continue on September 5<sup>th</sup>, 2023 9:00 a.m., should there be a high number of candidates,

The examination will take place in Room B.1.3 at the Department of Studies on Language and Culture, Largo Sant'Eufemia, 19, Modena.

**Interviews via Microsoft Teams (allowed for each candidate, regardless of residence):** September 4<sup>th</sup>, 2023, 9:30 a.m. Interviews may continue on September 5<sup>th</sup>, 2023 9:00 a.m., should there be a high number of candidates.

Instructions on how to conduct the interview via Microsoft Teams will be communicated with the list of candidates admitted to the interview.

## **15) PhD Programme in “FOOD AND AGRICULTURAL SCIENCE, TECHNOLOGY AND BIOTECHNOLOGY” (Main venue: Reggio Emilia)**

### **Places with scholarship:**

- 4 on research topics of the PhD Course;

- 1 on topic “**Development of novel approaches to re-educate the gut microbiome**” funded by the European Union – NextGenerationEU, PNRR - HUB “HEAL ITALIA” Foundation (CF 97370050821) – Mission 4, Component 2, Investment 1.3 (MUR Directorial Decree of 15 March 2022, n. 341) - Research and Innovation Program entitled “Health Extended ALliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine - HEAL ITALIA” – Spoke 5 - identification code PE00000019 – CUP E93C22001860006.



- 1 on topic “**Microbial biodiversity of microbial communities in natural whey starters for the Parmigiano Reggiano cheese production and constitution of a natural whey starter biobank (Natural Whey Starter Biobank)**” (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3 for research activities at Consorzio del Formaggio Parmigiano Reggiano);
- 1 on topic “**Sustainable management of insecticide-resistant aphid populations through integrated biological control strategies**” (with PNRR DM117/2023 funds, Mission 4, Component 2, Investment 3.3 for research activities at Koppert Italia);
- 1 on topic “**How microbial biodiversity impacts sustainable bioindustry: the role of selective sources to exploit bacterial diversity**” (with PNRR DM118/2023 funds, Mission 4, Component 1, Investment 4.1, “PNRR”)

**Admission requirements:** Italian second level degree (laurea specialistica, under D.M. 509/99 or laurea magistrale, under D.M. 207/04) or Italian degree obtained prior to D.M. 509/99 or equivalent qualification obtained abroad, in accordance with the provisions in art. 2 of this application procedure.

**Selection procedures (for all selection procedures):** The Course provides for five selection procedures depending on the type of places available. Candidates interested in more than one selection procedure must apply and pay the relevant fee of € 25.00 for each procedure in which they wish to participate.

The selections are intended to verify the candidate’s preparation and aptitude to carry out research activities related to the topics of the PhD Course.

In addition to the provisions of the art. 3 of this application procedure, candidates are required to submit the following additional documents:

- 1) self-certification to prove that the degree has been conferred (if awarded by an Italian university), or Degree certificate (if awarded by a foreign university), with a list of exams taken and grades achieved.
- 2) curriculum vitae of research and teaching activities, indicating clearly and concisely what candidate has studied, skills acquired (languages, knowledge of computers, use of complex instrumentation, etc.) including any official certifications he/she may have. It must be written in English language using the template reported in *annex B2* and must include the exact name and nature of degrees possessed, publications, if applicable, and contributions to conferences/congresses;
- 3) a summary of MsC thesis in Italian or English, or equivalent – with length between 3000 and 5000 characters (including spaces) – organised under the following headings: statement of purpose, research methodology used, obtained results;
- 4) a Statement of Research Interest, written in English language using the template reported in *annex C2* and referring to the instructions contained therein, which illustrates the reasons why the candidate wishes to attend the PhD Programme, and describes her/his specific research interests, in relation to the Research Topics of the XXXIX cycle of the PhD Programme (available from the PhD Programme website at: <http://www.steba.unimore.it/> under “Research topics”).
- 5) any letters of presentation/reference drawn up by experts in the fields of research of the Course, indicating the public or private structure at which such experts work, which must be produced directly by the referees and exclusively according to the procedure indicated in art. 3 of the Call.



**1) Main selection procedure (for positions with scholarship on research topics of the PhD Course): based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 30 points,
- Master thesis: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Other qualifications: from 0 to 10 points.

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

Candidates obtaining a minimum score of 40/60 will be considered eligible.

**2) Selection procedure for a position with scholarship with topic “Development of novel approaches to re-educate the gut microbiome”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 30 points,
- Master thesis: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Other qualifications: from 0 to 10 points.

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

Candidates obtaining a minimum score of 40/60 will be considered eligible.

**3) Selection procedure for a position with scholarship with topic “Microbial biodiversity of microbial communities in natural whey starters for the Parmigiano Reggiano cheese production and constitution of a natural whey starter biobank (Natural Whey Starter Biobank)”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 30 points,
- Master thesis: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Other qualifications: from 0 to 10 points.

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

Candidates obtaining a minimum score of 40/60 will be considered eligible.

**4) Selection procedure for a position with scholarship with topic “Sustainable management of insecticide-resistant aphid populations through integrated biological control strategies”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 30 points,
- Master thesis: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Other qualifications: from 0 to 10 points.

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

Candidates obtaining a minimum score of 40/60 will be considered eligible.

**5) Selection procedure for a position with scholarship with topic “How microbial biodiversity impacts sustainable bioindustry: the role of selective sources to exploit bacterial diversity”: based on academic and research record**

The Selection Committee has the capacity to assign scores up to a total of 60 points in the evaluation of candidate qualifications, as follows:

- Curriculum: from 0 to 30 points,
- Master thesis: from 0 to 15 points,
- Publications: from 0 to 5 points,
- Other qualifications: from 0 to 10 points.

Once the qualifications have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded.

Candidates obtaining a minimum score of 40/60 will be considered eligible.

**Areas of the PhD Programme:** The PhD program deals with the production, processing, quality and safety of raw materials and of food.

Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course of study.

Further information is available on the website of the PhD course at: <http://www.steba.unimore.it>

Modena, 27/06/2023

THE RECTOR  
(Prof. Carlo Adolfo Porro)

**Annex A1 (for candidates holding degrees awarded in Italy only)**

Self-certification as substitute for attested declarations under articles 46 and 47, Presidential decree 445/2000

**WARNING**

The following self-certification complies with the dispositions of Presidential decree 445 of the 28th December 2000: "LEGISLATIVE DISPOSITIONS AND RULES FOR ADMINISTRATIVE FORMS". In particular:

- Details provided by candidates have to be considered as substitute for attested declaration under articles 46-47; following article 76 candidates who provide mendacious information can incur in administrative and criminal penalties.
- Following article 39 the self-certification does not require official stamps.
- Under articles 71 and 72 the relevant University office will verify the information provided.
- The information requested in this self-certification follow article 16 is strictly necessary for the selection procedures and will be kept confidential following the Legislative decree 196 of the 30th June 2003 on personal data protection.

**DEGREE DESCRIPTION**

**Italian second level degree "laurea magistrale" (under D.M. 270/04)  
or Italian second level degree "laurea specialistica" (under D.M. 509/1999)  
or Italian degree (prior to D.M. 509/1999)**

Aware of the provisions on criminal consequences for false declarations, under art. 76 of Presidential decree 445/2000 the undersigned

Family name \_\_\_\_\_

Given name \_\_\_\_\_

Place of birth \_\_\_\_\_

Date of birth (dd/mm/yyyy) \_\_\_\_\_

Citizenship \_\_\_\_\_

E-mail for correspondence \_\_\_\_\_

**DECLARES TO HOLD THE FOLLOWING DEGREE CERTIFICATE**

(Tick only one of the three options)

- Italian second level degree "Laurea magistrale" (under D.M. 270/04) in

\_\_\_\_\_  
Degree class of \_\_\_\_\_

- Italian second level degree "Laurea specialistica" (under D.M. 509/1999) in

\_\_\_\_\_  
Degree class of \_\_\_\_\_

- Italian degree (prior to D.M. 509/1999) in

\_\_\_\_\_

Degree awarded by the University of \_\_\_\_\_

on the (dd/mm/yyyy) \_\_\_\_\_

Final mark \_\_\_\_\_

**AND DECLARES**

that, in accordance with articles 46 and 47 of Presidential decree 445/2000, the information included in all the copies attached to the admission form is correct.

\_\_\_\_\_  
Date and place

\_\_\_\_\_  
Signature (legible and in full)

## **Annex A2 (for candidates holding foreign degrees only)**

Self-certification as substitute for attested declarations under articles 46 and 47, Presidential decree 445/2000

### **WARNING**

The following self-certification complies with the dispositions of Presidential decree 445 of the 28th December 2000: "LEGISLATIVE DISPOSITIONS AND RULES FOR ADMINISTRATIVE FORMS". In particular:

- Details provided by candidates have to be considered as substitute for attested declaration under articles 46-47; following article 76 candidates who provide mendacious information can incur in administrative and criminal penalties.
- Following article 39 the self-certification does not require official stamps.
- Under articles 71 and 72 the relevant University office will verify the information provided.
- The information requested in this self-certification follow article 16 is strictly necessary for the selection procedures and will be kept confidential following the Legislative decree 196 of the 30th June 2003 on personal data protection.

## **DESCRIPTION OF THE QUALIFICATION (Degree, Master of Science or equivalent)**

### **INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION**

Family name \_\_\_\_\_

Given name \_\_\_\_\_

Place of birth \_\_\_\_\_

Date of birth (dd/mm/yyyy) \_\_\_\_\_

Citizenship \_\_\_\_\_

E-mail for correspondence \_\_\_\_\_

### **INFORMATION IDENTIFYING THE QUALIFICATION**

Level of Qualification (Degree, Master of Science or other) \_\_\_\_\_

Qualification in \_\_\_\_\_

Qualification awarded at the University of \_\_\_\_\_

Qualification awarded on (dd/mm/yyyy) \_\_\_\_\_

Final degree mark /grade \_\_\_\_\_

Main Field(s) of Study for the Qualification \_\_\_\_\_

Language(s) of Instruction/Examination \_\_\_\_\_

Official Length of Programme (years) \_\_\_\_\_

Access Requirement(s) to Programme \_\_\_\_\_

**INFORMATION ON THE EXAMINATIONS AND RESULTS GAINED FOR THE QUALIFICATION  
(Examination and individual grades/marks/credits obtained)**

DATE	EXAMINATION	GRADE	MARK	CREDITS OBTAINED

Useful additional information about examinations and results \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**INFORMATION ON THE FUNCTION OF THE QUALIFICATION IN THE COUNTRY WHERE THE  
QUALIFICATION WAS AWARDED**

Does the title described above, in the country where it has been awarded, enable application to  
University PhD programmes? (Tick only one of the two options)

- Yes             No

**ADDITIONAL DECLARATION**

In accordance with articles 46 and 47 of Presidential decree 445/2000, the information included in  
all the copies attached to the admission form is correct.

\_\_\_\_\_  
Date and place

\_\_\_\_\_  
Signature (legible and in full)

**Annex B1 (Facsimile to be used only for applications to the PhD Programme in Labour, development and innovation).**

**CURRICULUM VITAE**

**for the purposes of the application for enrolment on the Doctoral Research Programme (XXXIX cycle)**

**PERSONAL DATA**

Name and surname

Date of birth

Nationality

Address

Telephone number and e-mail

**EDUCATION**

Period

Institution

Country where the qualification was awarded

Qualification awarded

Final mark

**WORK EXPERIENCE**

Period

Type of employment

Sector

Employment grade and duties

**PARTICIPATION IN RESEARCH PROJECTS**

Period

Title of the project

Disciplinary area

Tasks performed as part of the project



**LANGUAGE SKILLS** (Specify for each language the level of knowledge on the basis of the following scale, as laid down in the Common European Framework of the Council of Europe. Reference should also be made to any certification awarded to the candidate, such as TOEFL, etc.)

**LANGUAGE.....**

A1 (BEGINNER)

A2 (ELEMENTARY)

B1 (PRE INTERMEDIATE)

B2 (POST INTERMEDIATE)

C1 (ADVANCED)

C2 (PROFICIENCY)

**ANALYTICAL SKILLS** (Please specify, where applicable, analytical skills in relation to the research activity: statistical software, informatic instruments or database)

**LIST OF PUBLICATIONS (WHERE APPLICABLE)**

Date and place

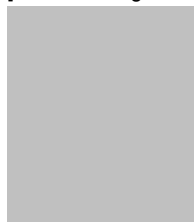
Signature

## ANNEX B2 (to be used only for applications to the PhD Programme in Food and agricultural science, technology and biotechnology)

### CURRICULUM VITAE

#### PERSONAL INFORMATION

[All CV headings are optional. Remove any empty headings.]



#### Replace with First name(s) Surname(s)

Replace with house number, street name, city, postcode, country

Replace with telephone number Replace with mobile number

State e-mail address

State personal website(s)

Date of birth: dd/mm/yyyy | Nationality: Enter nationality/-ies

#### EDUCATION AND TRAINING

Replace with dates  
(from dd/mm/yy– to dd/mm/yy)

[Add separate entries for each course. Start from the most recent.]

#### RESEARCH EXPERIENCE

Replace with dates  
(from dd/mm/yy– to dd/mm/yy)

[Remove any headings left empty.]

[Add separate entries for each experience. Start from the most recent]

Replace with occupation or position held (e.g., research grant, research scholarship.....)

Replace with University or Research Centre name and locality (if relevant, full address and website):

- Replace with main activities (max 200 characters)

#### TEACHING EXPERIENCE

Replace with dates  
(from dd/mm/yy– to dd/mm/yy)

[Remove any headings left empty.]

[Add separate entries for each experience. Start from the most recent]

e.g mentorship, teaching, seminars (specifying place, institution)

#### WORK EXPERIENCE

Replace with dates  
(from dd/mm/yy– to dd/mm/yy)

[Remove any headings left empty.]

[FILL WITH OTHER WORK EXPERIENCE (IF ANY)]

[Add separate entries for each experience. Start from the most recent]

Replace with occupation or position held

Replace with employer's name and locality (if relevant, full address and website)

- Replace with main activities and responsibilities (max 200 characters)

#### PERSONAL SKILLS

Mother tongue(s)

Replace with mother tongue(s)

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
Enter level	Enter level	Enter level	Enter level	Enter level
Replace with name of language certificate (if any). Enter level if known.				

Replace with language

Replace with language

Enter level | Enter level | Enter level | Enter level | Enter level  
Replace with name of language certificate (if any). Enter level if known.

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

Common European Framework of Reference for Languages

Communication skills

Replace with your communication skills. Specify in what context they were acquired.  
Example:

- good communication skills gained through my experience as sales manager

Organisational / managerial skills

Replace with your organisational / managerial skills. Specify in what context they were acquired. Example:

- leadership (currently responsible for a team of 10 people)

Digital skills

SELF-ASSESSMENT

Word processors	Spreadsheet	Presentation software	Statistical software (specify)	Image editing	Programming languages (specify)
Enter level	Enter level	Enter level	Enter level	Enter level	Enter level

Levels: Basic user - Independent user - Proficient user

Digital competences - Self-assessment grid

Indicate below ICT-certificates (if any)

Replace with your other computer skills. Specify in what context they were acquired.

## ADDITIONAL INFORMATION

[List relevant publications, presentations, conferences/seminars, honours and awards, memberships, other certifications (if any). Remove headings not relevant in the left column. Please, indicate for each publications the DOI code or any relevant information to find them on web. In absence of this information, the candidate can add the relevant files as annexes.]

Publications

Oral presentations

Poster presentations

Participation to

Conferences/seminars

Honours and awards

Memberships

Other certifications

**Annex C1 (Facsimile to be used only for applications to the PhD Programme in Labour, development and innovation).**

**RESEARCH PROJECT**

Submitted for admission to the PhD Course (XXXIX cycle) by

**Name and surname**

**Title of the project**

**Curriculum (not binding choice; please mark the preferred option)**

- Labour, development and innovation
- Industry 4.0

**Research areas (non-binding option - select one of the preferred research areas from the following link: <https://www.phdlavorosviluppoinnovazione.unimore.it/en/research-areas/>)**

**Abstract**

*(Summarise in no more than 10 lines the content and objectives of the project):*

**Background and goals (please explain the theoretical framework, the investigated problems and the goals of the project)**

*(Maximum 10.000 characters):*

**Methodology and intermediate stages of the research**

**Please, specify (where applicable) analytical skills used in relation to the research activity  
(for example: statistical software, informatic instruments o database)**

*(Maximum 5.000 characters):*

**Essential bibliography**  
(*Minimum 10 publications*):

Date and place

Signature



**ANNEX C2 (to be used only for applications to the PhD Programme in Food and agricultural science, technology and biotechnology)**

**STATEMENT OF RESEARCH INTEREST**

**Candidate: *name/surname***

*In case of multiple research topics, please duplicate the table below*

<b>Title of the Research Topic</b>	<i>Please, report here the exact title of the topic for the XXXIX cycle, available from the PhD Programme website at: <a href="http://www.steba.unimore.it/site/home/research-topics.html">http://www.steba.unimore.it/site/home/research-topics.html</a></i>
<b>Description of the specific research interest</b>	<b>(max 3000 characters including spaces)</b> <i>Please illustrate the reasons why you wish to attend the PhD Programme and describe your specific research interests related to the Research Topic. Previous studies and experiences on the specific topic may be indicated.</i>

## Annex D1 (Apprenticeship contract)

### DECLARATION OF PRIORITARY INTEREST FOR THE FOLLOWING RESERVED PLACE

(the contract may be concluded only by candidates who have not yet reached their thirtieth year of age at the time of signing the contract)

I, \_\_\_\_\_ (full name), born in \_\_\_\_\_ (place) on \_\_\_\_\_ (date)

wish to express my interest in applying primarily for the following reserved place (please tick one of the following options):

- PhD Programme in “**Civil, environmental and material engineering**”:

- n. 1 place with apprenticeship contract for advanced training financed by Società Kosme Srl for carrying out work, training and research activities on the subject of the use of additive manufacturing processes in the field of the food industry.

- PhD Programme in “**Industrial Innovation Engineering**”:

- n. 1 place with apprenticeship contract for advanced training financed by Coopservice S.Coop p.A. for work, training and research activities on the subject of Development of models and optimisation methods for real applications in distributed logistics contexts

- PhD Programme in “**Human Sciences: studies on language and literature, history and philosophy, communication and digital humanities**”:

- n. 1 place with apprenticeship contract for advanced training financed by TICE Cooperativa Sociale for work, training and research activities on the subject of parenting and neurodivergence.

The option hereby chosen has priority over regular places, with or without scholarship.

Date and place,

Signature

## Annex D2 (Industrial PhD)

### DECLARATION OF PRIORITARY INTEREST FOR THE FOLLOWING RESERVED PLACE

I, \_\_\_\_\_ (*full name*),  
born in \_\_\_\_\_ (*place*) on \_\_\_\_\_ (*date*)  
employee of the Company \_\_\_\_\_  
with contract \_\_\_\_\_  
wish to express my interest in applying primarily for the following reserved place (please tick one of the following options)

- PhD Programme “Enzo Ferrari” in “**Mechanical and Vehicle Engineering**”:

- n. 4 places reserved for employees of Ferrari S.p.A.

- PhD Programme in “**Reggio Childhood Studies**”:

- n. 1 place reserved for employees of Fondazione Reggio Children – Centro Loris Malaguzzi

The option hereby chosen has priority over regular places, with or without scholarship.

Date and place,

Signature

**Annex D3 (candidates with scholarship provided by foreign States)**

**DECLARATION OF PRIORITARY INTEREST FOR THE FOLLOWING RESERVED PLACE**

I, \_\_\_\_\_ (*full name*),  
born in \_\_\_\_\_ (*place*) on \_\_\_\_\_ (*date*)  
holder of the following scholarship provided by foreign Country

\_\_\_\_\_,  
wish to express my interest in applying primarily for the following reserved place (please tick one of the following options):

- PhD Programme in “**Civil, environmental and materials engineering**”:

- n. 1 place reserved for candidates with scholarship provided by foreign States

- PhD Programme in “**Mechanical and vehicle engineering**”:

- n. 1 place reserved for candidates with scholarship provided by foreign States

The option hereby chosen has priority over regular places, with or without scholarship.

Date and place,

Signature

**ANNEX E**

**FORM “Declaration of interest in a possible apprenticeship contract for advanced training”**

**DECLARATION OF INTEREST IN A POSSIBLE APPRENTICESHIP CONTRACT FOR  
ADVANCED TRAINING**

(the contract may be concluded only by candidates who have not yet reached their thirtieth year of age at the time of signing the contract)

**The document must be attached to the application for enrolment in the PhD course or programme- a. a. 2023/2024 only if the candidate is interested in any contract of apprenticeship for advanced training that may become available later**

I, \_\_\_\_\_ (*full name*), born in \_\_\_\_\_ (*place*) on \_\_\_\_\_ (*date*), wish to express my interest in any possible “apprenticeship contract for advanced training and research” that may become available, to be drawn up in accordance with under Legislative Decree no. 81/2015 and Interministerial Decree 12/10/2015 and allocated to enrolled students selected by the University, in conjunction with any interested firms, for such a contract and on the basis of candidates’ specific qualifications.

Date and place,

Signature (legible and in full)

## ANNEX F

### Form “Self-certification of subscription to Gestione Separata Inps”

To

Payroll Office – Finance Directorate

Università degli Studi di Modena e Reggio Emilia

Via Università, 4 - 41121 Modena

E-mail: [ufficiostipendi@unimore.it](mailto:ufficiostipendi@unimore.it)

**Autocertificazione di iscrizione alla Gestione Separata Inps  
di cui all’art. 2, comma 26, L. 335/1995  
(resa ai sensi del D.P.R. 28 dicembre 2000, n.445 e s.m.i.)**

Il sottoscritto \_\_\_\_\_

nato/a \_\_\_\_\_ il \_\_\_\_\_

Codice Fiscale \_\_\_\_\_

Titolare di (barrare la relativa opzione):

- |   |   |
|---|---|
| <input type="checkbox"/> Assegno di ricerca               | <input type="checkbox"/> Collaborazione coordinata e continuativa               |
| <input type="checkbox"/> Dottorato di ricerca             | <input type="checkbox"/> Docenza a contratto                                    |
| <input type="checkbox"/> Borsa di Specializzazione Medica | <input type="checkbox"/> Prestazione d’opera occasionale (redditi > € 5.000,00) |

DICHIARA:

di essere iscritto alla data odierna ed in seguito a conferma INPS, o che provvederà nei termini all’iscrizione, alla Gestione Separata Inps\*:

- “ALTRA CASSA - aliquota MINIMA”<sup>1</sup> in quanto iscritto presso la seguente cassa pensionistica: (*specificare quale*) .....
- “CASSA UNICA - aliquota MASSIMA”<sup>2</sup> in quanto non iscritto presso alcuna cassa pensionistica obbligatoria

\*L’iscrizione alla Gestione Separata INPS, da effettuarsi in via telematica entro la fine del primo mese di attività, è un adempimento a totale carico del percettore. UniMoRe declina ogni responsabilità connessa alla mancata iscrizione.

FIRMA

.....

Il sottoscritto dichiara, inoltre, di essere consapevole delle sanzioni penali, nel caso di dichiarazioni mendaci, richiamate dall’art. 76 del D.P.R. 445/2000 e dall’art. 495 del C.P. e **si impegna a comunicare, prima della liquidazione del compenso, qualsiasi modifica di quanto dichiarato.**

Modena,.....

FIRMA

.....

**Si allega alla presente fotocopia del documento di identità del sottoscrittore e, possibilmente, tessera sanitaria o tessera codice fiscale**

<sup>1</sup> Dall’anno 2016: 24,00%. Iscrizione che presuppone il versamento di contributi previdenziali ad altra cassa pensionistica obbligatoria, quali, ad esempio: Inps gestione dipendenti, artigiani, commercianti, Casse e Ordini professionali.

<sup>2</sup> Dall’anno 2022: 35,03%.

## ANNEX G (Part 1) - Form “Accompanying declaration for scholarship holders”

### DECLARATION TO BE ATTACHED FOR PhD STUDENTS HOLDING SCHOLARSHIPS IN THE PROCEDURE FOR APPLICATION FOR ENROLMENT ON A PhD PROGRAMME A. Y. 2023/2024, XXXIX cycle

To be completed only by holders of scholarships

I, the undersigned Surname \_\_\_\_\_ First name \_\_\_\_\_

DECLARE TO BE FULLY AWARE THAT:

- a) the grant to which this declaration relates cannot be accumulated with any other study grants, regardless of their title, with the exception of grants awarded by national or foreign institutions which are available to support, with periods of study abroad, the grant holder’s training or research activities (art. 6, para 1, of Law 30.11.1989, n. 398);
- b) students who have previously held a grant cannot hold a second grant with the same title (art. 6, para 2, of Law 30.11.1989, n. 398);
- c) art. 1, sub-para a), of Law 315/98 states that, from the date 01.01.99, the MIUR (Ministry for Education, Further Education and Research) is required to guarantee the application of study grants to pursue research doctorates as per the regulations laid down by art 2, para 26, first part of Law No.335/95, and also art. 59, para 16, of Law No.449/97, as amended (compulsory general insurance with INPS – Italian Social Security Institute);
- d) state employees who hold grants to which this declaration relates may request special leave without pay for study purposes, as provided by art. 2 of Law No.476/1984 (art. 6, para 7, Law 398/89).

I, the undersigned, in accordance with articles 46 and 47 of D.P.R. No.445 of 28.12.2000, aware of the liability incurred in the event of a false declaration,

DECLARE

- a) **not to hold**, for the entire duration of the doctorate, other study grants of any title whatsoever, with the exception of grants awarded by national or foreign institutions which are available to support, with periods of study abroad, the grant holder’s training or research activities (art. 6, para 1, of Law No.398 of 30.11.1989);
- b) **not to have held**, even if only for one year, another study grant to pursue postgraduate courses (art. 6, para 2, Law 398/89);
- c) **not to hold** a grant for collaboration in a research activity under art. 51, para 6, Law 449/97 and D.M. II.02.1998
- d) to be aware of the rights and obligations of graduates, as specified in the notices of competitions for admission to PhD Programmes, XXXIX cycle – A.Y. 2023/2024, published on the internet site of the University of Modena and Reggio Emilia;
- e) to have read and fully understood the regulatory provisions governing research doctorates, as published on the internet site of the University of Modena and Reggio Emilia.
- f) to hereby provide consent to their personal data being held, including sensitive information, in accordance with EU Regulation 2016/679 and Legislative Decree No.196/2003, modified by Legislative Decree No. 101/2018, and to be aware that the databank is the property of the University of Modena and Reggio Emilia.

Italian and foreign citizens holding an academic degree awarded abroad are reminded they have to submit their academic transcript of records, together with its legalized Italian translation and the “declaration of equal value” issued by the Italian consular office of the country where the degree was awarded, if it is not already enclosed with the online application form, or certificate of comparability and verification issued by CIMEA as ENIC\_NARIC centre, or Diploma supplement for academic degrees awarded in European Union.

Please note that citizens of States which do not belong to the European Union must provide documentation certifying insurance cover for medical treatment and hospitalization, together with a valid residence permit.

Date \_\_\_\_\_

\_\_\_\_\_  
Signature



## ANNEX G (Part 2) - Form “Accompanying declaration for scholarship holders”

### DECLARATION ACCOMPANYING APPLICATION FOR ENROLMENT ON A PhD PROGRAMME A.Y. 2023/2024, XXXIX

To be completed only by holders of scholarships

With full knowledge of the liability incurred in the event of a false declaration, in accordance with articles 46 and 47 of D.P.R. No. 445 of 28.12.2000, I the undersigned

Surname \_\_\_\_\_ First name \_\_\_\_\_

Tax code \_\_\_\_\_ Acquired surname \_\_\_\_\_

Born in \_\_\_\_\_ province of \_\_\_\_\_ on the \_\_\_\_\_

Resident at (street) \_\_\_\_\_ No. \_\_\_\_\_ Town/city \_\_\_\_\_

Post code \_\_\_\_\_ Province/State/County \_\_\_\_\_ Tel. \_\_\_\_\_

MOBILE PHONE \_\_\_\_\_ E-mail \_\_\_\_\_

Domiciled (if different from above) at \_\_\_\_\_ No. \_\_\_\_\_

Town/City \_\_\_\_\_ Post code \_\_\_\_\_ Province/State/County \_\_\_\_\_

#### REQUEST that the sum relating to the study grant

is paid into the current account of \_\_\_\_\_ (payment can only be made to an account in the name of the grant holder; the account may be in the name of more than one person inclusive of the grant holder – in this case specify all co-holders) with IBAN \_\_\_\_\_ . The International Bank Account Number consists of 27 characters: IT, 2 international code numbers, 1 national code letter (CIN), 5 numbers for the ABI code, 5 numbers for the CAB code, 12 alphanumeric characters for the current account number.

Important note: to avoid errors in the payment of sums due, the above-indicated fields must be completed fully and correctly. If in any doubt, please contact your own bank.

Please note that any bank charges arising from the bank transfer are the responsibility of the recipient of the monies.

, the undersigned undertake to register promptly with the “INPS gestione separata” (by internet through the website at [www.inps.it](http://www.inps.it) –searching “Iscrizione dei lavoratori parasubordinati alla Gestione Separata”– “Utilizza il Servizio”, or through the INPS Contact Centre at [www.inps.it](http://www.inps.it)) and send via e-mail a [ufficiostipendi@unimore.it](mailto:ufficiostipendi@unimore.it) the affidavit to prove the registration (using the form “Autocertificazione di iscrizione alla Gestione Separata Inps”) to the Ufficio Contabilità e Stipendi of the Università di Modena e Reggio Emilia, Via Università n. 4, Modena, by October 31, 2023 (if the graduate is already subscribed to the “INPS gestione separata” as a result of previous collaborations with other clients, it is only necessary to provide the affidavit confirming the registration with the INPS).

The payment of the grant is made in monthly instalments with fixed currency on 25th of the following month. The related coupons (“cedolini”) will be exclusively available on-line, at the following link: <https://unimore.u-web.cineca.it/>

In the event that facts are ascertained during the course of the year which vary from those declared, the undersigned undertakes to immediately communicate the relevant facts in writing, exonerating the University of Modena and Reggio Emilia from any responsibility whatsoever concerning the same.

#### Information in accordance with Legislative Decree of 30th June 2003, No.196

The personal data contained on this form is gathered by the University for the sole pur pose of fulfilling all of its administrative, accounting, financial and social security obligations under the law. The personal data gathered will, in observance of the aforementioned legislative obligations, be communicated to the Ministero delle Finanze (Ministry of Finance), the INPS office (Italian Social Security Institute), and to any other public bodies, to permit the same to carry out the respective institutional functions, within the boundaries established by the law and regulations.

Date \_\_\_\_\_ (Signature) \_\_\_\_\_

**ANNEX H - Form “Declaration to be completed only by applicants without scholarships”**

**DECLARATION ACCOMPANYING APPLICATION FOR ENROLMENT ON A PhD PROGRAMME  
A.Y. 2023/2024, XXXIX cycle**

I, the undersigned \_\_\_\_\_

**DECLARE**

- a) that I am aware of the rights and obligations of graduates, specified in the notice of competition for admission to PhD Programmes, XXXIX cycle – A.Y. 2023/2024, on the internet site of the University of Modena and Reggio Emilia: *www.unimore.it*;
- b) to have read and fully understood the rules and regulations governing research doctorates, as published on the internet site of the University of Modena and Reggio Emilia: *www.unimore.it*.
- c) to hereby provide consent to their personal data being held, including sensitive information, in accordance with EU Regulation 2016/679 and Legislative Decree No.196/2003 as modified by Legislative Decree No. 101/2018, and to be aware that the databank is the property of the University of Modena and Reggio Emilia.

Italian and foreign citizens holding an academic degree awarded abroad are reminded they have to submit their academic transcript of records, together with its legalized Italian translation and the “declaration of equal value” issued by the Italian consular office of the country where the degree was awarded, if it is not already enclosed with the online application form, or certificate of comparability and verification issued by CIMEA as ENIC\_NARIC centre, or Diploma supplement for academic degrees awarded in European Union.

Please note that citizens of States that do not belong to the European Union must provide documentation certifying insurance cover for medical treatment and hospitalization, together with a valid residence permit.

Date \_\_\_\_\_

\_\_\_\_\_  
Signature