

**Subject: NOTICE OF SELECTION PROCEDURE FOR ADMISSION TO PhD PROGRAMMES
(CYCLE 39, Academic Year 2023/2024)**

**The Rector
Having regard to**

- Presidential Decree No. 382 of 11 July 1980, "Reorganisation of university teaching, related academic category, as well as organisational and teaching experimentation";
- Law No. 210 of 03 July 1998, "Rules for the recruitment of researchers and tenured university professors", in particular Art. 4 "PhD Programmes";
- Ministerial Decree No. 22 of 30 April 1999, "Regulations on the matter of PhD programmes";
- Law No. 240 of 30 December 2010 "Rules on the organisation of universities, academic staff, and their recruitment, as well as delegation to the Government to incentivise the quality and efficiency of the university system", in particular the Art. 19 "Provisions on PhD Programmes";
- Decree of the Minister of Education, University, and Research No. 45 of 08 February 2013 "Regulations laying down procedures for the accreditation of PhD programmes and locations, and criteria for the implementation of PhD programmes by accredited bodies";
- Decree of the Minister of University and Research No. 226 of 14 December 2021 "Regulations laying down procedures for the accreditation of PhD programmes and locations, and criteria for the implementation of PhD programmes by accredited bodies";
- Decree of the Minister of University and Research No. 247 of 23 February 2022 "Increase in PhD scholarships";
- Decree of the Minister of University, and Research No. 301 of 22 March 2022 laying down New guidelines for the accreditation of PhD programmes;
- Decree of the Minister of University and Research No. 118/2023 concerning the allotment of three-year PhD scholarships for the attendance of PhD programmes, in specifically dedicated and declined programs (PNRR [National Plan for Recovery and Resilience] funding);
- Rectoral Decree No. 151/2023 concerning the results of the evaluation procedure of project proposals submitted by UNICAM Researchers, in order to allocate funding under the Ministerial Decree N. 118/2023;
- Decree of the Minister of University and Research No. 117/2023 concerning the allotment of innovative PhD scholarships that respond to the innovation needs of companies and promote the hiring of researchers by companies (PNRR funding);
- Ministerial Guidelines made available by the Minister of University and Research in relation to the financial reporting of doctoral scholarships funded under Decrees No. 117/2023 and No. 118/2023;

Law No. 33 of 12 April 2022 “Provisions on simultaneous enrolment in two higher education programmes”;

The University Statute, issued with Rector’s Decree No. 194 of 30 July 2012, and published in the Official Gazette of the Italian Republic - General Series - Part One, No. 200 of 28 August 2012, which entered into force on 27 September 2012; amended by Rector’s Decree No. 179 of 18 September 2015, published in the Official Gazette of the Italian Republic No. 236 of 10 October 2015, and entered into force on 09 November 2015;

the adoption of the European Charter for Researchers and the Code of Conduct for their recruitment and the adoption of the human resources strategy;

the Regulations of the School of Advanced Studies, issued with Rector’s Decree No. 168/2022;

the Regulations on PhD Programmes, issued with Rector’s Decree No. 169/2022;

the University Guidelines and the UNICAM OTM-R (Open, Transparent and Merit-based Recruitment of Researchers) Policy, approved by the Academic Senate in their meeting No. 28 of 31 May 2016;

the Agreements (and possible addenda) signed by UNICAM and further Institutions/Bodies that are partners or co-funders, in the framework of specific research topics or specific Phd Programs;

AND, FOR THE SPECIFIC PURPOSES OF SCHOLARSHIP(S) MANAGED IN COLLABORATION WITH THE UNIVERSITY OF FLORENCE

Having regard to the ministerial note n. 15659 of 28/12/2022 with which the MUR published the results of the evaluation communicating the list of 180 Departments that were awarded the funding in the framework of "Departments of Excellence 2023-2027" ;

having acknowledged that the Department of Statistics, Informatics, Applications - DiSIA - “G. Parenti” was the recipient of the funding in the framework of “Departments of Excellence 2023-2027” and that the project includes in the budget the item: *Other highly qualified educational activities*;

having acknowledged that the DiSIA “G. Parenti” has established to co-fund n. 1 scholarship co-funded under the Ministerial Decree No. 118/2023 for € 10.000,00 on the Project of Excellence - DiSIA 2023-2027 CUP B13C22004500001 ;

DECREES

Art. 1 – PhD PROGRAMME

The “first stage” call of the selection procedure, unique for EU and non-EU citizens, for admission to the 39th cycle of PhD program “Blockchain and Distributed Ledger Technology” activated by the School of Advanced Studies - International Doctoral School of the University of Camerino (henceforth referred to as SAS) is hereby launched.

The “second stage” call will be launched following the timeline set in the “first stage” call.

Camerino, July 11, 2023

The Rector
Prof. Claudio Pettinari

**UNICAM (University of Camerino) PhD Program "BLOCKCHAIN E DISTRIBUTED LEDGER TECHNOLOGY"
Call for applications 2023
XXXIX cycle - academic year 2023-24**

The UNICAM PhD Program "BLOCKCHAIN E DISTRIBUTED LEDGER TECHNOLOGY" is now accepting applications!

You have to participate in a 2-stage selection procedure.

Apply to the first step of the Selection Procedure by August the 28th, 2023, at 1.00 pm Italian time

TIMELINE

The selection procedure comprises the following main steps (dates are provisional):

- 1- **[Call opening – 28 August]** Call opening - **First stage** of the selection procedure: candidates must submit the Application form through <https://vele.unicam.it/CallforApplication/?st=7> within 28 August, 2023, at 1.00 pm Italian time. Application consists in the submission of a CV, a short hypothetical research project, choose the Thematic Areas of interest and indicate up to 3 research topic of potential interest.
- 2- **[28 August to 4 September]** **Eligibility checks and CVs evaluation** – UNICAM appoints an Evaluation Committee for the purpose. A shortlist of the candidates who are *admitted / admitted "subject to confirmation"* to the second stage of the selection procedure is published.
- 3- **[6 September – 12 September]** **Second stage** of the selection procedure is launched: candidates who are *admitted / admitted "subject to confirmation"* to the second stage of the selection procedure submit their application through the dedicated weblink within 12 September, 2023, at 1:00 p.m. Italian time. In particular, they have to choose up to 3 research topics among the ones proposed by UNICAM at second stage. In the meanwhile, further eligibility checks will be carried out, where needed.
- 4- **[12 September – 18 September]** Calendar of interviews is established within **12th September, 2023. Between 12 and 18 September**: distance interviews and evaluation of the candidates by Scientific Panels appointed by UNICAM Doctoral Board ("Consiglio SAS") take place. The linguistic and transversal skills, the know-how owned by the Candidates are assessed.
- 5- **[18 September – 20 September]** For each Research Topic, a final merit-based ranking list is determined. The procedure of acceptance of the position/grant is activated.
- 6- **[1 December - 31 December 2023]** **Provisional Starting date of the Phd Programs: 1st December, 2023 (in any case, no later than 31st December, 2023).**

PHD PROGRAMS AND THEMATIC AREAS

Regular duration of the Phd Programs: 3 years

The National PhD Programme in “Blockchain e Distributed Ledger Technology” usually lasts three years, and aims to help educate and train a new generation of researchers, professionals, and innovators capable of providing adequate answers to the scientific and innovative challenges emerging from the private sector and public administration bodies, fully capable of guiding the current and future evolution of these technologies and infrastructures, and giving methodologically adequate responses to digital and green strategies and strategic plans, and agendas of our country and Europe. To this end, a PhD programme is offered on Blockchain and Distributed Ledger Technology that is inherently interdisciplinary and multidisciplinary. PhD students will be immersed in scientifically stimulating environments where, in addition to curricular teaching and research, they will have the opportunity to deepen aspects relating to the European Framework for Research Careers and to transversal training and the acquisition of “soft skills” much desired by the European Training and Research Area.

The Programme is divided into the following **8 curricula**:

1. METHODOLOGY, TECHNOLOGY, AND TOOLS

Methodology plays an increasingly important role in the management and definition of Blockchain and Distributed Ledger Technology. A key point is the definition of new and fault-tolerant distributed consensus mechanisms, cryptographic primitives, and distributed protocols. In particular, the consensus mechanisms guarantee the integrity of the information stored in the blockchains, and improve the efficiency of the system and the defence against attacks. Other aspects of the research cover, but are not limited to, Blockchain-oriented software architectures and engineering. Notations for the modelling and analysis of smart contracts can support progress in Blockchain-oriented software, and break down the technological barriers for non-expert users. Optimisation aspects will also be taken into consideration to ensure the efficiency of smart contract execution. Formal specifications and advanced automated verification techniques, and new approaches for testing smart contracts and auditing blockchain transactions, need to be defined. Blockchain technologies are based on the adoption of different infrastructures, such as Ethereum, IOTA, Hyperledger ecosystem, etc. In this regard, the recent challenges for supporting security, scalability, reliability, interoperability, and performance issues in Blockchain and smart contracts across multiple Blockchain platforms will be addressed. Certainly of interest are also the tools, including open-source software, which allow new scenarios such as the sale of tokens. Blockchain-related issues in the metaverse will also be addressed.

KEYWORDS:

- Foundational aspects of Blockchain and Distributed Ledger Technology
- Distributed ledgers
- Distributed Computing
- Metamodeling and Management
- Distributed consensus mechanisms, cryptographic primitives, and distributed protocols

- Smart Contracts
- Modelling, analysis, and verification
- Model-driven software development
- Dynamic Networks
- Metaverse

2. SOCIAL SYSTEMS AND SMART SOCIETIES

The Blockchain is increasingly becoming a tool to increase the transparency and traceability of data in smart societies and social systems. As a decentralised infrastructure, it can manage emerging networks to offer transparent services to the citizen, sharing of public data, and support for decentralised identities. Web3 claims a vision of the Internet that can interrupt the intermediation of Big tech by completely decentralising the Web. This new web model largely revolves around Blockchain technology, which allows for the integration of cryptocurrencies and tokens into many social media platforms. This gives the possibility both to reward users for their social actions and to define Non-Fungible Tokens, digital resources that represent real-world objects such as art, music, games, videos thus creating a new form of decentralised finance, Social Finance. Blockchain technology defines a new, more user-centric, secure, uncensored, and compensatory model for users, able to offer them quality and reliable content. The curriculum will develop theoretical and applicative skills:

a) Theory: When new models of social interaction are considered, new and stimulating theoretical questions emerge, and, in order to understand the interaction between social and economic strata at different scales, the support not only of technicians, but also of sociologists, lawyers, economists is required. Furthermore, the enormous amount of transactions that a social system can generate requires new solutions to improve the scalability of the Blockchain (off-chain channels, sidechain, etc.).

b) Applications: New scenarios for the application of Blockchains are emerging in the context of social and smart communities. Among these, of greatest interest are the integration of rewards and tokens in social platforms, the integration of the Blockchain with metaverses, the development of Blockchain-based platforms for intelligent communities, and for the support of user-centric digital identity.

KEYWORDS:

- Smart Cities e Smart Communities
- Transparency and traceability
- Services to Citizens, Companies and Public Administrations.
- Tokenization
- Cybersecurity
- Inter-ledger technologies
- Self-Sovereign Identity
- Blockchain oracles

- Non Fungible Tokens (NFT) and Web3
- Social Interactions

3. HEALTH AND WELLBEING

The curriculum aims to progress in the study of Blockchain technologies in the creation of innovative solutions to improve trust between patients and healthcare facilities, as well as in the management of data sharing between the latter. Since these are sensitive data, the sharing of health-related data requires compliance with numerous rules and policies that can be defined at European, national, or even organisational levels. In this context, Blockchain and Distributed Ledger can be useful references in providing reliable environments to monitor compliance with these rules and policies, without requiring the construction of a complex and often centralised authority in charge of verifying compliance. In this curriculum, the adoption of these technologies will be studied considering the different types and formats of data involved in clinical processes and related to research trials. In fact, the domain includes “stream data”, “data-at-rest”, images, genomic data, unstructured data, and the approaches to decide between “on-chain / off-chain” data management to balance between the need for trust, and the performance of the system cannot be defined in general but depends on the type of data considered. Furthermore, the potential adoption of Blockchain and Distributed Ledger Technology will consider the connection with consolidated protocols (e.g., HL7 in its FHIR and DICOM version for diagnostic images) and common systems (e.g., PACS for image management and CRF for setting up experiments). In particular, the role of Blockchains in improving the management of genomic data that entail the need to manage important artefacts with significant dimensions will be studied. Finally, in conjunction with the fundamental role of the ethics committee that must decide on the possibility of managing personal data, smart contracts can be studied to implement policies in a more agile way.

KEYWORDS:

- Healthcare services
- Hospital data and automated management
- Healthcare data sharing
- Healthcare data protection
- Trust-based health environments
- Distributed Ledger Technology
- Electronic Health Records
- Privacy preserving data processing
- Ethics and Ethics Committee

4. ECONOMICS AND FINANCE

This curriculum explores blockchain and distributed ledger technology in economics and finance with a multidisciplinary approach. As a noteworthy application, this path will consider socio-economic, legal, organisational, and technological aspects of cryptocurrencies, central bank digital

currencies (CBDCs), and non-fungible tokens (NFTs). These include: User trust and reputation mechanisms underlying the move from institutional and centralised currencies to decentralised digital currencies; the emergence of central bank digital currencies; analysis of transactions for the detection of anomalies, fraud, suspicious behaviour (cyber-crime) and communities; business models of token-based economies; anonymisation and de-anonymisation techniques; the interaction between cryptocurrency/NFT and social media/virtual worlds; exploring the real consequences of virtual money from the metaverse; the performance and reliability of blockchain algorithms and implementations; the environmental footprint of digital ledgers; combining game theory, economics and cryptography to understand the incentive models underlying distributed blockchain protocols. The path will also cover platform economies, smart contracts, and their communication/interaction protocols. Candidates will have the opportunity to explore the following: Languages for the specification of smart contracts; techniques for the analysis and verification of the correctness and compliance of smart contracts; legal and regulatory aspects; game theory applied to human-algorithm interaction; psychology of money. Candidates on this path can also study blockchain in supply chain management for digitalisation and certification of commercial documents and NFTs for intellectual property rights.

KEY WORDS:

- Central Bank Digital Currency
- Credit market and financial services
- Illegal markets detection
- Internet of Money
- Valuation services and financial advising
- Business models for DLTs-based financial players
- The economics of DLTs-based financial markets
- Banking & Finance
- Digital asset/Crypto-assets
- Entrepreneurial finance

5. LAW AND GOVERNANCE

The curriculum investigates three main directions:

- Theoretical aspects. The Blockchain implies a new form of social organisation, a decision-making method that changes the relationships between institutions, authorities, and citizens. This raises relevant questions regarding the legitimacy of the activities carried out in the Blockchain, and the validity of the smart contracts applied above all in some sectors (e.g., legislation, justice, administration). The autonomy of the decision maker is fundamental to preserve the normativity and the self-execution of smart contracts underlines some theoretical aspects and pillars of our democracy. Human control at every stage is an important research investigation topic.

- Regulation. It is necessary to define stable regulation in its legal foundations (e.g., theory of law) and in specific areas (e.g. civil law, labour law, etc.) in support of the emerging market and the

introduction into society of Blockchain, smart contracts, ICO, NFT. A view of international law (e.g., UNCITRAL, UNIDROIT, HCCH) is needed to avoid fragmentation. The European Blockchain Service Infrastructure is an opportunity to regulate certain principles including digital identity at a supranational level.

- Application aspects. The course aims to research how to apply the constellation of Blockchain and Distributed Ledger Technology to the legal domain (e.g., Anti-money laundering, Anticorruption, etc.), and to other domains with the aim of ensuring compliance with the legal framework. Some solutions include legal reasoning and arguments for verifying compliance before self-execution. Several principles are fundamental: law-by- design, transparency, accountability, human rights, privacy, accountability, human-centred design, explicability. All these themes require innovative specific interdisciplinary research.

KEY WORDS:

- Smart Legal Contract
- Intelligible Contract
- Self-Sovereign Identity
- Legal reasoning
- Regulation
- Blockchain forensic
- Anti-money laundering, anti-corruption
- Private standards
- Compliance
- Business models

6. INDUSTRY 4.0

Industry 4.0 includes a new business vision that stimulates innovation and adds value to the business through the integration of new pervasive ICT technologies (IoT, Cloud and Edge Computing, AI and Machine / Deep learning) in services, products, and production plants, in order to provide the industrial production system with greater automation and responsiveness, efficiency, automatic optimisation of process improvements, etc. The curriculum focuses on Blockchain and Distributed Ledger Technology research for Industry 4.0 applications, and covers both application and theoretical aspects. Research issues concern, for example, the identity and accountability of digital users between business units and consortia, scalability, interoperability, and trust in Blockchain systems for Industrial IoT, transparency, information sharing, and privacy control in the next generation of Blockchain technology for smart applications. The fields of application are innumerable and relevant. They can relate to the “supply chain” management process and therefore relate to the countless links along the supply chain for the creation and distribution of goods, the multitude of payments and invoices, the entire flow of materials and information. With the same complexity, quality control processes, waste reduction, trade finance can benefit from Blockchain and Distributed Ledger Technology. Knowledge and skills are needed

to guide the Blockchain integration process in the innovative scenarios of Industry 4.0. To this end, the direct involvement of organisations that play a leading role in this issue is envisaged.

KEY WORDS:

- Technology integration in Industry
- Internet of Things
- Machine learning
- Consensus protocol
- Distributed ledger security
- Blockchain security
- Accountability
- Services, products, and supply chain
- Business organisation

7. CLIMATE, ENERGY, AND MOBILITY

The curriculum focuses on Blockchain and Distributed Ledger Technology to promote an open, strategic, and distributed approach in energy value chains. Many climate programs have been established over the years. However, the intrinsic multilateral and international approach entails many difficulties in linking political commitment to technical involvement, and to contributing, for example, to reducing greenhouse gas emissions. First, the curriculum will study Blockchain's contribution to transparency, traceability, and trust in environment-related programs. Creating more resilient, inclusive, and democratic European energy systems will prepare to respond to threats and disasters adequately. Distributed energy resources (DER) require the collection and distributed management of data (smart meters, production plans, prosumers).

This curriculum will study distributed methodologies to strengthen the digital-enabled, climate-neutral, and sustainable circular economy through the technical management of virtual power plants, transmission and distribution networks, and energy communities. The attestation and validation of energy production methodologies will distinguish the cases of green and environmentally friendly production from the traditional ones, in particular for blue, green, and grey hydrogen. The use of the Blockchain will be applied to revolutionary business models and programs in the energy and energy mobility sector (Demand - Response, Vehicle to Grid, energy communities, self-consumption certification, etc.). In addition, the monitoring and traceability of batteries for electric mobility, including the management of the logic for monitoring their health status, allow them to be used in second-life applications. The challenges described above will be addressed with innovative theoretical approaches to ensure privacy and security.

KEYWORDS:

- Energy value chains
- Environment
- Disaster monitoring and management

- Resilient and inclusive energy systems
- Environmental data management
- Circular Economy
- Energy communities
- Sustainable mobility
- Battery traceability
- Smart Contracts

8. AGRICULTURE AND AGRI-FOOD SECTOR

The curriculum is focused on studying how the current and next generation Blockchain can support greater traceability and transparency in food supply chains and support the implementation of green and sustainable schemes. The topic of the study will cover both the applicative and the theoretical aspects. On the application side, the study will contribute to the ambition to develop sustainable, productive, and climate-neutral, biodiversity-friendly, and resilient agricultural systems, providing consumers with affordable, safe, healthy, and sustainable food, while minimising the pressure on ecosystems, improving public health and generating fair economic returns for farmers through the exploration and development potential of the use of Blockchain in the agri-food sector. From the theoretical point of view, all aspects of traceability, integrity, authentication, identification (which also cover the issues of Self-Sovereign Identity) will be taken into consideration using the Blockchain. Its characteristics will be exploited by applying them in the agri-food sector, with particular attention to the issues of greenery and sustainability.

KEYWORDS:

- Food supply
- Smart agriculture
- Sustainable cultivation Traceability
- Transparency
- Sustainable agricultural systems Information asymmetry Biodiversity and resilience
- Conscious consumption

Universities and affiliated research institutions

- 1- University of Camerino
- 2- IMT School for Advanced Studies
- 3- Gran Sasso Science Institute
- 4- "Aldo Moro" University of Bari
- 5- University of Bologna
- 6- University of Calabria
- 7- University of Cagliari
- 8- "G. D'Annunzio" University, Chieti Pescara
- 9- "Sacro Cuore" Catholic University
- 10- University of Florence

- 11- University of Aquila
- 12- University of Milan – Bicocca
- 13- University of Macerata
- 14- University of Palermo
- 15- University of Milan
- 16- University of Pisa
- 17- Polytechnic University of Marche
- 18- “Tor Vergata” University of Rome
- 19- University of Turin
- 20- “Carlo Bo” University of Urbino
- 21- “Ca’ Foscari” University of Venice

PHD POSITIONS

Total number of scholarships currently available: at least n. **30**.

Some of the above-mentioned scholarships are funded under the NGEU Programme (“Piano Nazionale di Ripresa e Resilienza - Missione 4 - Componenti 1 e 2,”), in the framework of Ministerial Decrees n.117/2023 and n. 118/2023:

- n. 24 under Ministerial Decree n. 118/2023;
- at least n. 5 under Ministerial Decree n. 117/2023.

Further details will be made available in the second stage of the call.

On the basis of the number of scholarships awarded, at least n. 5 positions will be made available **without the use of a scholarship**.

Drawing from the ranking list of suitable candidates, the University reserves the right to assign other positions. The assignments will be subject to the availability of further funding for the XXXIX PhD cycle.

Positions and scholarships are theme-bound, and topic-specific. The research activity is to be primarily conducted at the host university offering the scholarship. A complete list of topics is made available at the second stage of the selection procedure.

During the first-stage call, applicants should select up to three topics of their potential interest. The candidates are not bound to the topic choice while they will be in the second stage.

TIME COMMITMENT of PHD STUDENTS

According to National Law and UNICAM regulation in force, Phd positions require a full-time commitment, in terms of training and research activities, as well as possible didactics, tutoring and students’ services. Training and research periods abroad are mandatory.

Further activities/conditions may be foreseen for specific research topics/scholarships, if included in the specific agreements/funding rules governing scholarships and/or positions. More details will be provided in the second stage of the selection procedure.

Please, read UNICAM Regulation in force for an in-depth view.

Without prejudice to the full-time commitment, work activities, including paid ones, concerning practical professional training or limited external work activity that allows the acquisition of skills relating to the formative field of the PhD Programme, are also compatible with the PhD Programme, subject to the authorisation of the Board of the SAS, following the approval of the Academic Boards. Please, read UNICAM Regulation in force for an in-depth view.

CAREER, RIGHTS AND DUTIES OF PHD STUDENTS

The rights and responsibilities of PhD students and the requirements for obtaining the degree are outlined in the UNICAM PhD Program Regulations and the acts issued with Rector's Decree No. 169/2022, which is available at the web link <https://isas.unicam.it/school/unicam-regulations>.

The laws and regulations governing simultaneous enrollment in two higher education courses are governed by Law No. 33/2022 and the related decrees.

UNICAM and its partners (in case of PhD Programs carried out in partnership with further Institutions) may support non-EU students in finding accommodation, limited to rooms/apartments that are available in the University college at the time the PhD students arrive in Italy.

PhD students must enroll/be enrolled in the Italian National Health System before starting their activity.

PhD Students benefit from accident and civil liability insurance coverage for the entire duration of the Program, and only for the activities relating to the PhD program.

In the case of an invention made by a PhD student as part of university research, the University Regulations on patents shall apply.

SCHOLARSHIP AND RESEARCH BUDGET

* Total amount of the scholarship (gross of withholding tax paid by the recipient): approximately **€1.353,00** per month, approximately **€16.243,00** per year (based on a duration of 3 years). The amounts may slightly vary in case of further updates by the National Authorities.

* The monthly rate of the scholarship is increased by an amount of 50% per month in case of mobility abroad.

* **Research Budget:** all PhD Students (with or without scholarship) can use a **research budget** of at least **€ 9745,80** during the 3-year course and according to the rules set by Italian law, UNICAM Regulations and guidelines.

The scholarship is paid to the PhD Student in monthly installments (each rate is paid the month after) and after the registration procedure is fully completed (for foreign students, it occurs only after the arrival in Italy); the payment of the scholarship requires that the PhD student has an Italian Fiscal Code and is header of a proper Italian/online bank account.

The counting of the scholarships runs from the starting date of the PhD Programs, being 1st December 2023 (in any case, no later than 31st December 2023).

In case the PhD student arrives later (within 31st March 2024), no rates will be paid before his/her arrival in Italy, nor before the registration procedure is closed and proper bank account is available.

PhD students can be scholarship recipients if the maximum amount of annual emoluments does not exceed the annual amount of the scholarship calculated net of charges (for the academic year 2023/2024, the scheduled amount is around € 14.346,00).

For the benefit of the scholarship, PhD students avail themselves of the faculty of self-certification to be referred to the tax period coinciding with the calendar year in which the scholarship is actually paid.

This communication must be sent to the SAS offices (postlaurea@unicam.it) no later than 31st July of each year. The university administration may carry out checks on the veracity of the aforementioned self-certifications.

In the event that the annual emoluments of the PhD student with scholarship, during the course of the PhD programme (with the exception of the year of issue of the Call) exceed the annual amount of the scholarship net of charges, the PhD student shall forfeit the receipt of the scholarship, with the obligation to repay the amount already received in the reference calendar year.

Anyone who, for at least one year, has benefited from a scholarship for a PhD programme, cannot ask to benefit from it a second time.

Scholarships cannot be combined with other scholarships conferred for any reason, except with those granted by national or foreign institutions aimed at supporting stays abroad for the purposes of training or research activity of PhD students.

FEES FOR ACCESS AND ATTENDANCE TO PhD PROGRAMS

The annual amount of fees for access to PhD Programmes and for relative attendance will be available in the Manifesto of Studies under “University Fees”, which will be approved by the Academic Bodies and published on the University’s institutional website.

Candidates admitted to the PhD Programmes are required to pay the regional tax for the right to university study of € 140, and the stamp duty of € 16, paid electronically. PhD students without a scholarship who are included in the ERDIS (Regional Body for the Right to University Education) right-to-study ranking lists are also exempted from paying the regional tax for the right to university study, which will subsequently be reimbursed, once the compliance with the requirements has been verified.

HOW TO APPLY – first step of the selection procedure

The application for participation in the selection procedure must be filled out exclusively (under penalty of exclusion from the selection procedure / admission) on the format accessible from the

website <https://vele.unicam.it/CallforApplication/?st=7> by **28 August, 2023 at, 1.00 pm Italian time**. Only applications that are completed in due time will be considered.

Candidates are invited to submit their application for participation in the selection procedure online, well in advance of the deadline indicated in this Notice. It is the candidates' responsibility to verify that the IT procedure has been completed correctly.

No complaints will be accepted for any computer system malfunctions due to overloads encountered by candidates near the deadline.

The university administration declines all responsibility for failure to receive documentation resulting from third-party liability or technical causes.

IT guidelines will be made available at <https://isas.unicam.it/>.

Applicants first need to register via the following link. After registering, applicants will receive their login details for the portal and can submit their application via <https://vele.unicam.it/CallforApplication/?st=7>.

Mandatory language to fill out Application in English.

What information and documents are necessary during the first step of the selection procedure:

- Personal data
- CV (online template): data related education and training; work experiences; ...
- Identity document
- Choice of the PhD Program/Thematic Area of interest
- Selection of 3 research topics of potential interest
- 3 names of presenters, meaning professors / researchers, who will receive a request by e-mail to provide a cover letter, drawn up according to a predetermined template indicated in that same e-mail. The letter of presentation must be received within 30 August, 2023 at 11.59 pm (Italian Time). It is the candidate's responsibility to ensure that at least 1 teacher / researcher has carried out the procedure for uploading the cover letter. The failure to provide this letter shall be a cause of exclusion from the selection procedure / admission.
- Short hypothetical Research program
- Final declarations.

RESEARCH TOPICS

The PhD Program and curricula are associated with specific thematic areas. Research topics for the three-year research projects undertaken by PhD students will be defined and provided for each program. The descriptions of these topics can be found in the same section of the website where the call for applications is published.

During the initial stage of the selection procedure, applicants are allowed to indicate their preference for up to three research topics. However, this choice is not binding at this stage.

During the second stage of the selection procedure, a more detailed description of each research topic will be made available. Applicants are then required to choose a third research topic, if not done before. The evaluation committee, after the initial screening, may suggest additional topics that can be considered.

Detailed information on the research topics covered by the PhD studies is published on the SAS website, and at <https://isas.unicam.it/dni/phd-blockchain-dlt/how-apply>

HOW TO APPLY – the second step of the selection procedure

Information will be made available at the second stage of the selection procedure.

ELIGIBILITY

Italian and foreign citizens in possession of a Specialisation/Master's degree, or an equivalent university qualification recognised as suitable by the academic authorities on the basis of laws and regulations in force, can apply for participation in the selection procedure for admission to the PhD Research Programs, without discrimination based on gender, age, religion, nationality, sexual orientation, political opinions, socioeconomic conditions, or disabilities.

Applicants due to be awarded their master's (or equivalent qualification) by the date of enrolment in the PhD programme may also apply. In such a case, admission shall be allowed "under reserve" and the candidate shall confirm he/she has obtained the qualification when accepting the position/scholarship and after the publication of the final ranking list, within the deadline set in the acceptance form.

Candidates who have obtained the academic qualification abroad, must submit, for enrolment purposes, the Declaration of Value, issued by the Italian Embassy of the country in which the qualification was issued, or the Statement of Comparability and Verification of the qualification issued by CIMEA (Academic Equivalence Mobility Information Centre).

In the Declaration of Value, it must be specified that the qualification that allows access to doctoral courses was obtained after 17 years of schooling, and that it meets the academic requirements for access to third-cycle courses in the country of issue.

An official translation in Italian of the diploma and of the Transcript of Records is also required, showing the exams taken and the grades obtained, if not already produced in English.

This documentation must be sent **within 30 November 2023 by email to postlaurea@unicam.it**, and presented in original copy to formalise the registration once the candidate has arrived in Italy; UNICAM cannot ensure that the registration of the PhD students is carried out if the required documents are missing or provided with delay.

If the qualification has not already been recognised, the Selection Board will decide on and declare its equivalence, for the sole purpose of admission to the PhD Programme, after having carried out the appropriate controls and on the basis of laws and regulations in force.

EVALUATION OF CANDIDATES

The Selection Board and Scientific Panels are appointed according to the Laws in force, as well as UNICAM Regulation in force; UNICAM Regulation is available at <https://isas.unicam.it/school/unicam-regulations>.

The names of the experts and their CVs will be made public on the SAS website, at <http://isas.unicam.it> for transparency and accountability purposes.

The first stage of the evaluation will consist in submitting the hypothesis of a research programme, to an analysis for the detection of any infringements attributable to plagiarism; if the analysis reveals this type of infringement, the candidate responsible shall be excluded from the selection procedure. On the basis of the documentation produced by the candidates, in particular the hypothesis of a research programme, the Selection Board shall carry out its own evaluation, in accordance with the provisions of the *European Framework for Research Careers* (<https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-descriptors>) for the R1 profile (*First stage researchers*), i.e.:

- ability to conduct original research under the guidance of supervisors;
- ambition to develop knowledge of research-related methodologies and disciplines;
- good knowledge of the research area in which they intend to develop their thesis;
- ability to produce data under the guidance of supervisors;
- critical ability, analysis, evaluation, and synthesis of new and complex ideas;
- ability to illustrate research results and their meaning.

When preparing the shortlist of suitable candidates, the Selection Board shall also take into account the CV of the candidate, with particular reference to the graduation grade, other qualifications, scientific publications and presentations at congresses, prizes and awards. The presentation letters from the presenters will also be evaluated.

At the end of the first stage of the evaluation process, the Selection Board shall prepare the ranking list of suitable candidates for the PhD Programme on the basis of the score achieved by each candidate.

The list of suitable candidates will be published on the Unicam institutional website and on the page <https://isas.unicam.it/>; they will be allowed to apply to the second stage of the selection procedure. Only upon request, the excluded candidates will be sent a synthetic judgment on their performance drawn up by the Selection Board.

Suitable candidates listed in the shortlist will be invited to interviews, to then produce the final ranking list for each Topic. The interviews will preferably be conducted remotely, in English language, by scientific panels designated by the Academic Board of each PhD programme.

Calendar of interviews is established within 12th September, 2023.

For the evaluation, reference will be made to the provisions of the European Framework for Research Careers, for the R1 profile (First stage researchers).

FINAL SCORE and AWARD OF POSITIONS AND SCHOLARSHIPS

Final ranking lists will be drafted on the basis of final scores obtained by each candidate.

There will be as many ranking lists as many research topics.

Candidates may have chosen up to 3 research topics; in case a candidate chooses more than one topic, he/she may be named in more than one list.

The final ranking lists:

- Will be in decreasing order of scores; in case of equal scores, minor age will be considered. In case of further equal scores, gender will be considered;
- Will report as many ranking lists as many research topics, based on the assessment of the Selection Board.

Final ranking lists will be published on the website <https://isas.unicam.it>.

Only upon request, the excluded candidates will be sent a synthetic judgment on their performance drawn up by the Selection Board.

Participants in the selection procedure will have 30 days to submit any complaints to postlaurea@unicam.it.

These will be sent to the Head of Corruption Prevention and Transparency of the University, who, in collaboration with the students' Ombudsman, will examine and respond to the issues submitted to him/her within 30 days following the submission of the complaint.

Scholarships and positions will be awarded according to the selection procedures set out in this Call, until positions and scholarships made available in the call are allocated.

UNICAM reserves the right to allocate further scholarships/positions made available, also in case of resignation or withdrawal of a candidate, by scrolling down the ranking lists on the basis of the order set.

Scholarships shall then be confirmed yearly by the Board of the SAS, after verification of the activities carried out by the PhD student in the previous year by the Academic Board.

On the basis of the ranking lists, at least 5 places will be made available without the use of a scholarship; candidates in this position must indicate whether they can obtain financial support from public and / or private entities other than the University of Camerino.

Of these positions, at least 1 will be reserved for research and study on Science Education, which secondary school teachers can also access. If such positions are not assigned, they can be used in other areas.

Also activities of PhD students not receiving scholarships shall be subject to verification by the Academic Board.

AFTER THE FINAL RANKING LISTS

If candidates are successful and are offered a position in the UNICAM PhD programs, they have to accept the scholarship/position by submitting the relevant form by the 29th of September, 2023.

The form will be made available by email to the candidates awarded, through the email address postlaurea@unicam.it.

Once the selection procedure exams have been completed, and after acceptance by the PhD student, the Rector shall approve the ranking list formulated by the Selection Board, assigning the places and scholarships available for the selection procedure.

Candidates who require a visa to enter Italy, once they have been officially admitted to the PhD program, must submit an application for pre-enrolment through the University portal, at <https://www.universitaly.it/index.php/dashboard>, within 30th November, 2023.

All candidates should also:

- submit an application for enrolment, addressed to the Rector of the University of Camerino, within the 30th of November 2023, exclusively online through the appropriate section on the University website where all the necessary information is published. Enrolment is considered regularly closed, and therefore accepted, when the entire online procedure has been completed, and all the required fees have been paid, and the required attachments have been uploaded;
- Start their PhD Program on the 1st of December 2023 (in any case, no later than 31st December, 2023)¹
- Make an Italian/online bank account available for payments which are related to their position/scholarship (it must be headed to the candidate)
- Attend a Security/safety training and participate in medical check required, before starting the Research Activity
- (Foreign students) Register with the Italian National Health Service, and renew their registration every year, by immediately notifying postlaurea@unicam.it. Such a registration is a precondition to carrying out the PhD programme;
- Register at Mur portal <https://loginmiur.cineca.it/front.php/login.html>
- Register autonomously at "gestione separata INPS" (for social security purposes).

PROCESSING OF PERSONAL DATA

The University, implementing the “Code regarding the protection of personal data” (Legislative Decree No. 196 of 30 June 2003, and subsequent amendments), “Consolidated Law on privacy and the use of information systems” (Legislative Decree No. 271/2009, and subsequent amendments), and the General Data Protection Regulation (EU Regulation 2016/679), as data controller, undertakes to process the personal data and contacts provided by the candidate for the completion of the selection procedures, and for the pursuit of its institutional purposes.

¹ Note for foreign / non-EU students: you should arrive in Italy within the starting date of the Phd Program; otherwise, you should arrive in Italy no later than 31st of March, 2024, and start your activity remotely on the starting date of the Program. Enrollment must be closed as soon as you arrive in Italy, within a week from your arrival. In order to complete registration, you have to provide promptly: Declaration of Value/Statement by CIMEA; an official translation in Italian of the diploma and of Transcript of Records is also required, showing the exams taken and the grades obtained, if not already produced in English; Italian fiscal code; residence permit.

The University of Camerino, in the context of managing the Phd Programme and carrying out the relevant reporting activities, collects and processes the personal data of candidates, as well as data related to the courses and scholarships/fellowships; furthermore, University of Camerino collects and processes data concerning: the research and training activity carried out in Italy and abroad, payments (research budget; scholarship) and relevant supporting documents, training outcomes and outputs, graduation, mobilities.

Certain data of the scholarship holders, non-scholarship holders and reserve list candidates are shared with possible partners of Projects/Agreements the scholarships/positions are funded and managed in the framework of, as well as with Agencies and Institutions responsible for the Funding Programmes (where relevant).

Participation in the selection procedure implies the expression of tacit consent, so that:

- the names of the candidates and the results of the selection procedure tests are published on the UNICAM website, and the SAS website, at <http://isas.unicam.it>;
- data will be treated for management and reporting activities mentioned above.

RULES FOR REFERENCE

For matters not covered by this Call, reference is made to the regulations in force on the subject of PhD programmes, in particular to:

- Ministerial Decree No. 226/2021
- Regulations on PhD Programmes of the University of Camerino issued with Rector's Decree No. 169/2022
- Regulations of the School of Advanced Studies of the University of Camerino, issued with Rector's Decree No. 168/2022.

FINAL INFORMATION

SAS Director: Prof. Michele Loreti

Coordinator of the Phd Programme: Prof. Flavio Corradini

Manager of the administrative procedure: Mrs. Natascia Alessandrini.

Contacts: for information, interested parties can timely send an email to phd.blockchain.dlt@unicam.it.

This Call shall be published on the European Euraxess website, on the website of the Ministry of Education, University, and Research, on the institutional website of the University, and on the SAS website.