



**UNIVERSITÀ
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1240**

COMPETITIVE EXAMS
OFFICE

ABSTRACT

COMPETITIVE EXAM PROCEDURE BASED ON QUALIFICATIONS, PUBLIC DISCUSSION FOR THE RECRUITMENT OF FOUR (4) — RESEARCHER PURSUANT TO ART. 22, OF LAW 240/2010

Art. 1 – SUBJECT OF THE NOTICE

1. The procedure of comparative evaluation through qualifications, public discussion and oral test, for the recruitment of four (4) RESEARCHER PURSUANT to art. 22, of the law n. 240 of 30.12.2010, as indicated below:

n. 1 Researcher DEPARTMENT OF INFORMATION ENGINEERING AND MATHEMATICS	
GSD	09/IMIS-01 MEASUREMENTS
SSD	IMIS-01/B Electric and Electronic Measurements
Profile of the researcher to be hired	Researcher with solid experience in the IMIS-01B sector, particularly in the development of measurement systems and data acquisition, including systems based on innovative sensors and IoT networks. More specifically, the candidate must have experience in the design of instrumentation, including embedded systems, and in sensor integration, experimental characterization, and the management of sensor networks for distributed applications. The researcher must possess proven expertise in the design and implementation of acquisition systems for both individual sensors and complex networks, in the development and validation of hardware/software solutions for IoT and embedded systems, as well as in the metrological characterization and experimental testing of sensors and innovative prototypes.
Productivity objectives	The project focuses on the development of advanced systems for the real-time monitoring of transportation networks, based on the integration of innovative sensors and distributed IoT architectures. The main objective is to create modular and scalable platforms for the collection, transmission, and management of metrologically reliable data. These systems are designed not only for transportation applications but also to be transferable to other domains, such as environmental monitoring, Industry 4.0, and smart city infrastructures. The approach begins with the accurate modeling of measurement systems and the design of customized hardware/software architectures for data acquisition, with particular attention to the integration of advanced sensors and the optimization of IoT networks to ensure efficiency, security, and scalability. The project also includes prototyping and implementation of embedded solutions capable of operating in realworld scenarios, reliably handling data from both individual sensors and complex distributed networks. A key aspect of the project is the metrological characterization performed both upstream and downstream, which is essential to guarantee the quality, integrity, and traceability of the collected



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	measurement data. Calibration and experimental validation of the developed sensors and systems will ensure high performance and compliance with standards, making the proposed solutions reliable and replicable in various application contexts. In particular, the project envisages the use of both commercial and innovative gas sensors, whose integration into measurement systems will require thorough metrological characterization. This phase is critical to ensure the reliability and accuracy of the measurements, which are fundamental for applications in safety, air quality monitoring, and environmental sensing in transportation systems and other distributed contexts.
Maximum of scientific publications	12
Foreign requested language	English - Excellent
Project proposal	Candidates must also attach a project proposal concerning the activity to be carried out over the biennium, in adherence to the Research Project

n. 1 Researcher DEPARTMENT OF MEDICAL BIOTECHNOLOGIES	
GSD	06/MEDS-03 MICROBIOLOGY AND CLINICAL MICROBIOLOGY
SSD	MEDS-03/A Microbiology and Clinical Microbiology
Profile of the researcher to be hired	The researcher should have solid knowledge and proven experience in the field of microbiology, immunology and vaccinology. Expertise in multiparametric flow cytometry and cell sorting is required, including computational analysis of multiparametric flow cytometry data. The candidate should also have competence in pre-clinical models of infection. The researcher will have to work independently, in a spirit of collaboration within interdisciplinary and international teams. A PhD in the field of Medical Biotechnology and an excellent knowledge of the English language, are required.
Productivity objectives	The projects "Innovations to accelerate vaccine development and manufacture" (Inno4Vac) and European Vaccines Hub for Pandemic Readiness (EVH), in which the researcher will be engaged, aim to develop and validate preclinical models of infection in order to evaluate the immune response induced by some vaccine candidates. The final scope of the projects is accelerating the development and optimization of new vaccines. These objectives will be achieved through standardized immunoassays and with multiparametric flow cytometry and transcriptomic approaches
Maximum of scientific publications	15
Foreign requested language	English - Excellent
Project proposal	Candidates must also attach a project proposal concerning the activity to be carried out over the biennium, in adherence to the Research Project



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n. 1 Researcher DEPARTMENT OF MEDICAL BIOTECHNOLOGIES	
GSD	06/MEDS-03 MICROBIOLOGY AND CLINICAL MICROBIOLOGY
SSD	MEDS-03/A Microbiology and Clinical Microbiology
Profile of the researcher to be hired	The researcher will be responsible for laboratory activities focused on developing systems for the genotypic and phenotypic assessment of potential biomarkers of viral infection progression and candidate antiviral compounds. The role offers integration within a highly international environment and exposure to multidisciplinary projects involving chemistry, bioinformatics, and infectious diseases. The ideal candidate will have: documented experience in the cultivation and genotypic/phenotypic characterization of human viruses, ideally including work in biosafety level 3 (BSL3) laboratories; strong proficiency in nucleic acid manipulation techniques; ability to work effectively within a team, with a strong aptitude for multidisciplinary projects; willingness to collaborate and interact with partners and collaborators outside the primary workplace
Productivity objectives	The project is part of the host laboratory's ongoing activities in the characterization of viral infections using advanced systems aimed at identifying potential markers of infection progression and characterizing candidate antiviral compounds in vitro. From a technical perspective, the work will involve the development of model systems followed by the evaluation of biomarkers in selected clinical cohorts, made possible through collaborations with clinical departments. Similarly, the assessment of candidate antiviral activity and related resistance mechanisms will include both the development of in vitro systems and their application in testing compound libraries generated through ongoing collaborations with groups in biochemistry and medicinal chemistry.
Maximum of scientific publications	10
Foreign requested language	English - Excellent
Project proposal	Candidates must also attach a project proposal concerning the activity to be carried out over the biennium, in adherence to the Research Project

n. 1 Researcher DEPARTMENT OF MEDICINE, SURGERY AND NEUROSCIENCE	
GSD	06/MEDS-26 METHODS IN LABORATORY MEDICINE, TECHNICAL DIAGNOSTIC, ASSISTANCE, PREVENTION AND REHABILITATION HEALTH PROFESSION SCIENCES, ADVANCED MEDICAL AND SURGICAL TECHNOLOGY AND METHODOLOGY
SSD	MEDS-26/A Biotechnology and Methods in Laboratory Medicine
Profile of the researcher to be hired	Researcher with a solid background in molecular biology and specific expertise in next-generation sequencing, with a focus on circulating small RNAs, digital PCR, real-time PCR, confocal microscopy, and high-content imaging. Prior experience in molecular and cellular research on diabetes mellitus is preferred



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Productivity objectives	The selected candidate will be involved in experimental activities within translational research projects, with a particular focus on the study of circulating RNAs in plasma and serum samples of type 1 diabetic and at risk individuals, as well as on the transcriptome in human cellular models, with the goal of identifying novel biomarkers and tracing their origin. Tasks will include the extraction of total RNA from various biological matrices (plasma, cells, tissues), using optimized and standardized protocols to ensure high yield and quality of the material. The researcher will be responsible for the preparation of small RNA sequencing libraries, following specific protocols for the analysis of microRNAs and isomiRs, and will be actively involved in sequencing using Illumina platforms and Oxford Nanopore technology, with particular attention to library preparation steps, sequencer calibration, and troubleshooting of potential technical issues. The project involves a tight integration between wet-lab and bioinformatics activities; therefore, active participation in data processing and interpretation will also be encouraged, in close collaboration with the laboratory's multidisciplinary team.
Maximum of scientific publications	10
Foreign requested language	English - Good
Project proposal	Candidates must also attach a project proposal concerning the activity to be carried out over the biennium, in adherence to the Research Project

Art. 2 - ADMISSION REQUIREMENTS

1. Candidates who, on the date of submission of the application, are in possession of the **PhD or equivalent** title, even if citizens of countries not belonging to the European Community, obtained in Italy or abroad, or of the diploma of Medical Specialization School for the sectors concerned, are admitted to participate in the aforementioned comparative evaluation procedure.
2. The requirements referred to in this Article shall be met on the date of expiry of the period laid down in the call for the submission of the application for admission. The lack of the requirements, ascertained during the selection or subsequently, entails the exclusion from the selection itself and constitutes a cause for termination of the employment relationship, if already established.
3. Candidates are admitted to the competition with reserve. The Rector may, at any time, with motivated measure, order the exclusion of candidates from the procedure due to lack of requirements.

Art. 3 -APPLICATIONS AND DEADLINES FOR SUBMISSION

1. The application for admission to the procedure must be submitted exclusively electronically through the PICA platform (<https://pica.cineca.it/unisi>), within the peremptory term of **twenty (20) days** starting from the day following that of publication of the notice in the University's online register. If the submission deadline falls on a public holiday, it shall be extended to the first successive working day.



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The application, under penalty of exclusion, must be completed fully in each and every section.

2. By the deadline for submitting the application, the system allows saving it in draft mode so as to let candidates make changes before submitting it. Once the deadline for submission has expired, the system will no longer allow access to and submission of the electronic form.
3. Candidates will be able to access the PICA platform using one of the following modes:
 - a) access via digital identity (SPID level 2), selecting the University of Siena among the available federations. Information on the Public Digital Identity System can be found at www.spid.gov.it and <https://www.agid.gov.it/it/piattaforme/spid>.
 - b) access via the credentials issued by the same PICA platform
 - c) access via your LOGINMIUR account.
4. The application and attachments must be in pdf format, the allowed maximum size for each document being 30 MB. For any technical problem related to the compilation of the application, you can contact CINECA support through the link at the bottom of the page <https://pica.cineca.it/unisi>, by clicking on "supporto".
5. Together with the application the following must be attached:
 - a **dated and signed CV**;
 - the **project proposal**;
 - the **publications** that the candidate intends to submit to the evaluation of the board, in the maximum number established in art. 1 of this notice;
 - copy of a valid **identity document**.
6. For works printed abroad, the date and place of publication must be shown. For works printed in Italy, it is necessary to certify the legal deposit in the forms provided for by law 106/2004 and the related regulations issued by decree of the President of the Republic 252/2006.
7. Publications must be presented in the language of origin which, if different from Italian, English, French, German, and Spanish, requires translation into one of the mentioned languages. The translated texts may be submitted, together with the copies in the original language, in a typewritten copy made compliant with the original in accordance with current legislation.
8. The documents and documentation attached to the application and drawn up in a foreign language, other than Italian, English, French, German, and Spanish, must be accompanied by a translation into Italian, certified in accordance with the foreign text, drawn up by the competent diplomatic or consular representation, or by an official translator.
9. In the case of selections concerning language fields, the submission of publications written in the language or in one of the languages object of the selection, even if different from those indicated in the preceding paragraph, shall be allowed.
10. Candidates in a situation of disability, pursuant to Law 104 of 5.2.1992, must file an explicit request in relation to their disability, regarding the necessary assistance.
11. The Administration assumes no responsibility for the unavailability of the recipient or for the dispersion of communications due to incorrect indications given by the candidate, for failure or late communication



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of the change of address indicated in the application, or for any mistake the Administration is not responsible for.

12. The Administration reserves the right to conduct appropriate checks on the veracity of the content of the declarations in lieu of certifications and notoriety deeds. If the control indicated above reveals the untruthfulness of the content of the declarations, the declarant loses any benefits resulting from the measure issued on the basis of the untruthful declaration (without prejudice to the provisions of Article 76 of Presidential Decree no. 445/2000, regarding the sanctions provided for by the Criminal Code and the special laws on the matter).

Art. 4 - EXAMINATION BOARD

1. The Examination Board (hereinafter referred to as "Board") is composed in accordance with the provisions of the Regulation, where possible, and in compliance with gender equality and namely, by three by three effective members and a substitute, chosen from among the professors and researchers, or of an equivalent role in the case of members from foreign universities, with research experience on the topics covered by the call; of which at least one in the same scientific-disciplinary sector subject of the competitive procedure.
2. Candidates, in order to challenge the members of the Board, can send a PEC (rettore@pec.unisipec.it) addressed to the Rector within seven days from the date of publication of the appointment measure in the Online Register of the University. The Rector decides on the objection. The decision shall be communicated to the person concerned without delay.
3. If the Board does not complete the selection within three (3) months of the day following the publication of the order of appointment, the Rector shall initiate the procedure for the appointment of a new Board.
4. Pursuant to art. 35/bis of Legislative Decree 165/2001, those who "... have been convicted, even with a sentence that has not become final, for the crimes provided for in chapter I of title II of book two of the Criminal Code..." cannot be part of the board.
5. After the appointment of the Board, all candidates, pursuant to art. 7 of the Code of Ethics of the University Community, are requested to declare under their own responsibility that they do not have relationships of kinship or affinity up to and including the fourth degree with the members of the Board or if among the members of the board there is the spouse or the cohabitant and persons with whom the candidates have business relations. The declaration must be sent together with a copy of a valid identity document, to the Ufficio Concorsi (Competitive Exams Office) (concorsi@unisi.it).
6. The model of the declaration can be found at: <https://www.unisi.it/ateneo/concorsi-gare-e-appalti/contratti-di-ricerca/modulistica-guide-e-facsimili>
7. As per art. 7 of the Code of Conduct of the university community, members of competitive examinations boards, also when external to the University, as soon as it is known to them that among the candidates are their spouse, or cohabitant, relatives or next of kin until the fourth degree, or people with whom they have business relations, shall resign from the Board for incompatibility reasons.
8. At the end of each day's meeting, the Board shall draw up a special report on all the examination operations and the decisions taken, which shall be signed by all the members.



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9. The work of the Board shall be conducted collectively, even if by electronic means or other means of distance communication.

Art. 5 - ASSESSMENT OF QUALIFICATIONS, PUBLIC DISCUSSION AND ORAL EXAM

1. The selection process is based on a comparative evaluation of the candidates, which assesses the project proposals' relevance to the research program covered by the call for applications, as well as the candidates' possession of a suitable CV.
2. Candidates must attach all documents necessary for the evaluation.
3. Candidates are evaluated based on the following criteria:
 - a. The quality, originality, and innovativeness of the project proposal, with specific reference to the research programme;
 - b. The pertinence and significance of previously conducted research activities and any professional experiences, in relation to the research programme outlined in the call for applications;
 - c. The relevance of the appended publications to the research programme specified in the call for applications;
 - d. An interview aimed at ascertaining the candidate's suitability for undertaking the research activity and executing the presented project proposal, as well as evaluating the required language proficiency.
4. The Board, following a comprehensive assessment and based on the established criteria, shall proceed collectively to express a reasoned judgment and to attribute the corresponding score for each individual evaluation criterion.
5. The scores assigned to the criteria referred to in paragraph 3, letters a), b), and c) shall be communicated to the candidates prior to the interview. The Board may stipulate a minimum score below which suitability cannot be conferred.
6. Upon completion of the evaluation, the Board shall collectively express a reasoned overall judgment and corresponding score for each candidate. Any postponements due to organisational requirements shall be published on the University's online notice board, serving as notification for all intents and purposes.
7. Candidates and candidates must present themselves for the discussion/oral exam with a suitable valid identification document. Those candidates coming from countries outside the European Union will only have to present their passport. Those who are not present on the established day, will be considered as having renounced to the selection, therefore excluded from the selection, whatever the cause of the absence, even if not dependent on the will of the individual candidates.
8. In the event that the discussion/oral test is planned telematically the candidates are responsible for the quality and continuity of the signal coming from their position. The Board may at any time decide to exclude the candidate for reasons which make it impossible to conduct the test and to monitor the environment in which the test is taken.
9. Following the discussion, a score is assigned to the qualifications and to each of the publications submitted by the admitted candidates, according to criteria predetermined by the board.



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Art. 6 - RANKING OF SELECTED CANDIDATES AND CALL PROPOSAL

1. At the conclusion of the selection process, the Board shall draw up a merit ranking, taking into account the overall score obtained by the candidates, and shall identify the successful applicant for the selection. The validity of the merit ranking shall be a maximum of two years from the date of the approval of the proceedings.
2. In the event of a tie in scores, preference shall be given to the candidate of the younger age.
3. Having ascertained the formal regularity of the procedure, the proceedings shall be approved by a Decree of the Rector. The Decree approving the proceedings shall be published on the University's online notice board, in compliance with the principles of transparency and personal data protection.

Art. 7 - PROCESSING OF PERSONAL DATA

1. The processing of personal data, present in the request to participate in this call or possibly communicated with additional documents of the request, will take place in compliance with EU Regulation 2016/679 on data protection, Legislative Decree no. 196/2003 and subsequent amendments. "General Data Protection Regulation" according to the principles of lawfulness, correctness, transparency, adequacy, relevance, accuracy, minimization of processing, limitation of storage, etc. referred to in art. 5, paragraph 1 of the GDPR.
2. The Data Controller is the University of Siena, legally represented by the Rector; pursuant to the University Regulation on the processing of personal data, the Data Designated person is the manager of the Personnel Area. The personal data provided by the candidates will be processed for the management of the procedure, for the possible conferral of the assignment or hiring, for the management of the rankings (where provided for in the notice) exclusively for the purpose of fulfilling the legal requirements, including the publication obligations provided for by current legislation.
3. The provision of personal data is to be considered mandatory. Any refusal will make it impossible to conduct the operations necessary for participation in the procedure and, possibly, for the establishment and management of the employment relationship.
4. The information relating to the processing of data, in the management of competitive examinations proceedings, drawn up in accordance with the provisions of art. 13 of EU Regulation 2016/679, is published on the University portal at <https://www.unisi.it/ateneo/adempimenti/privacy>

Art. 8 – ADVERTISING, FINAL RULES AND HEAD OF THE PROCEDURE

1. This announcement, the extract in English and the acts for which publication of this announcement is expected, are published in the University's online Register and on the University's portal at: <https://www.unisi.it/concorsi>
2. The abstract of this call, in Italian and English, is also published on the website of the Ministry of University and Research at <https://bandi.miur.it/> and on the portal of the European Union at: <http://ec.europa.eu/euraxess/>



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3. For the purposes provided for by Law no. 241/1990 and subsequent amendments, the Head of the procedure inherent to the selection referred to in this notice is the Head of the Competitive Exams Office (Ufficio concorsi: concorsi@unisi.it).
4. For what is not provided for in this notice, reference is made to the relevant laws and regulations in force.

Siena, date of the digital signature by

The Rector
Roberto Di Pietra

Seen by
The Director General
Beatrice Sassi

Seen by
Head of the procedure
Natale Ciconia