PHD PROGRAMME TABLE
Announcements of competition for admission to PhD Courses
42nd cycle, Academic Year 2026/2027

PhD Course: INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)
Available positions: 28
Evaluation Methods: academic and research records and interview

Available positions:

Place n.	Description	Financial support	Specific research topic
1	Scholarship	University scholarship	-
2	Scholarship	University scholarship	-
3	Scholarship	University scholarship – funded by Fondazione di Modena	-
4	Scholarship	University scholarship – funded by Fondazione di Modena	-
5	Scholarship	Scholarship funded by the Artificial Intelligence Research and Innovation Center (AIRI)	Large-Scale and Trustworthy Multimodal Foundation Models
6	Scholarship	Scholarship funded by "Enzo Ferrari" Department of Engineering and co-funded by the Artificial Intelligence Research and Innovation Center (AIRI)	Large-Scale and Trustworthy Multimodal Foundation Models
7	Scholarship	Scholarship funded by "Enzo Ferrari" Department of Engineering and co-funded by the Artificial Intelligence Research and Innovation Center (AIRI)	Large-Scale and Trustworthy Multimodal Foundation Models
8	Scholarship	Scholarship funded by Axyon AI Srl	AI modularity for foundational models
9	Scholarship	Scholarship funded by Nuovo Pignone s.r.l.	Multimodal Reasoning and Understanding for Technical Diagrams and Complex Documents
10	Scholarship	Scholarship funded by SPAL Automotive s.r.l.	Modularity and task arithmetic in Multimodal vision AI systems
11	Scholarship	Scholarship funded by SPAL Automotive s.r.l.	Analysis of multidimensional and heterogeneous data, integrated with local language models for advanced operational support systems in industrial contexts
12	Scholarship	Scholarship funded by Ducati Motor Holding S.p.A.	Modular AI and world models for simulation and control

13	Scholarship	Scholarship funded by Villanova.ai S.p.A.	Modular and Adaptive Multimodal Foundation Models
14	Scholarship	Scholarship funded by National Research Council (CNR)	Federated Learning in the Pervasive Computing Continuum
15	Scholarship	Scholarship funded by ASK Industries S.p.A.	Advanced Multi-Interface 5G Standalone Networks for V2X Communications and Experimental Vehicular Applications
16	Scholarship	Scholarship funded by Ferrari S.p.A.	Experimental Characterization of Advanced Soft and Hard Magnetic Materials for Traction Electrical Machines
17	Scholarship	Scholarship funded by Leithà S.r.l.	Modular and task arithmetic for foundation models on multi sensory and multi source data
18	Scholarship	Scholarship funded by "Enzo Ferrari" Department of Engineering	Design and control of high-performance electric machines for cryogenic applications
19	Scholarship	Scholarship funded by AMD Silo AI Oy	Multimodal World Models for Embodied AI
20	Scholarship	Scholarship funded by AMD Silo AI Oy	Multimodal World Models for Embodied AI
21	Position without scholarship	-	-
22	Reserved position	Industrial PhD position reserved for employees of SPAL Automotive s.r.l.	Advanced Methods for Thermal Data Acquisition, Processing and Interpretation in Industrial Contexts
23	Reserved position	Industrial PhD position reserved for employees of SPAL Automotive s.r.l.	Multidimensional Time-Series Analysis Integrated with Local Language Models for Advanced Operational Support Systems
24	Reserved position	Industrial PhD position reserved for employees of BLUE MATTER srls	Design of high-power density electrical machines for transport applications
	Reserved position*	Three-year high apprenticeship contract funded by Deep Radars S.r.l.	UAV-based X-band synthetic aperture radar (SAR) systems: algorithms, and their validation on simulated and experimental data
	Reserved position*	Three-year high apprenticeship contract funded by Deep Radars S.r.l.	UAV-based X-band synthetic aperture radar (SAR) systems: algorithms, and their implementation on embedded platforms

	Reserved position*	Three-year high apprenticeship contract funded by Spin Applicazioni Magnetiche S.r.l.	Design and control of electric machines for hydraulic applications of the Electric Power Take Off type
	Reserved position*	Three-year high apprenticeship contract funded by Vektoria srl	Non-linear Magnetic Modeling and Advanced Control Strategies for High-Efficiency Hybrid Excitation Synchronous Machines

*: Reserved position funded by **Deep Radars S.r.l.** for a three-year High Apprenticeship Contract aimed to carry out work, training, and research activities on the topic of development, calibration, and validation of techniques for X-band synthetic aperture radar (SAR) systems on UAV platforms, with the following characteristics: definition of radar system and navigation sensor requirements and architecture; development of raw radar signal models and simulators; design of calibration and trajectory reconstruction procedures; development of image formation, autofocus, and motion compensation algorithms; analysis of the functional distribution between onboard and offboard processing, and integration on a prototype; validation on simulated data and experimental data acquired using a commercial UAV platform.
The apprentice will be hired at the Company's premises located in Modena, Via P. Vivarello, 10, with a functional qualification of technical area employee, initially classified at level 6, on a full-time basis and with the application of the regulatory and economic treatment provided for by the current Italian National Contract (CCNL) for employees of small and medium-sized enterprises in communication, IT, innovative services, and micro-enterprises – IT and innovative services sector (CONFAPI Unimatica), in which the Company operates;

: Reserved position funded by **Deep Radars S.r.l. for a three-year High Apprenticeship Contract aimed to carry out work, training, and research activities on the topic of development and validation of robust processing methodologies and real-time implementation for X-band synthetic aperture radar (SAR) systems on UAV platforms in complex operational scenarios, with the following characteristics: generation of simulated datasets for clutter and target characterization; development of multichannel processing algorithms, clutter suppression, target detection, and robust motion estimation even under degraded GNSS conditions; definition of computational requirements and optimization of the processing chain for embedded/GPU/FPGA platforms; integration and validation on simulated data and experimental data acquired using a commercial UAV platform.
The apprentice will be hired at the Company's premises located in Modena, Via P. Vivarello, 10, with a functional qualification of technical area employee, initially classified at level 6, on a full-time basis and with the application of the regulatory and economic treatment provided for by the current Italian National Contract (CCNL) for employees of small and medium-sized enterprises in communication, IT, innovative services, and micro-enterprises – IT and innovative services sector (CONFAPI Unimatica), in which the Company operates;

***: Reserved position funded by **Spin Applicazioni Magnetiche S.r.l.** for a three-year High Apprenticeship Contract aimed to carry out work, training, and research activities on the topic of transport electrification, with the following characteristics: design and control of electric machines for hydraulic applications of the “Electric Power Take Off” (ePTO) type.
The apprentice will be hired at the Company's premises located in Cortemaggiore (PC), viale Gabriele Rossetti, 1, with a functional qualification of “Research and Development Engineer”, on a full-time basis and with the application of the regulatory and economic treatment provided for by the current Italian National Contract (CCNL) for the Commerce sector, in which the Company operates;

****: Reserved position funded by **Vektoria srl** for a three-year High Apprenticeship Contract aimed to carry out work, training, and research activities on the topic of drives and electric machines, with the following characteristics: training and research activities on the design and control of high-performance electric machines with and without permanent magnets, and the study of control algorithms and machine simulation.
The apprentice will be hired at the Company's premises located in Castelnovo di Sotto (RE), via Limido 1/e,, with a functional qualification of employee, on a full-time basis and with the application of the regulatory and economic treatment provided for by the current Italian National Contract (CCNL) for the commerce and tertiary sector, in which the Company operates.

Areas of the PhD Programme: The PhD Programme offers three curricula:
1) Computer engineering and Science;
2) Electronics and Telecommunications;
3) Industrial Applications of ICT.
The topics of the ICT PhD Programme 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 programmes and the National Research Programme.
Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course.
Further information is available from the PhD Programme website at: http://www.ict.unimore.it/ (entry " Research Topics ").
The Programme is part of the PhD School in “E4E (Engineering for Economics – Economics for Engineering)”.

Admission requirements: Italian second cycle master's degree (“Laurea Magistrale”, under D.M. 270/04 or “Laurea Specialistica”, under D.M. 509/99) or Italian degree obtained prior to D.M. 509/99 (the previous Italian regulations) or Second cycle non-Italian Master's degree, equivalent to the Italian degrees mentioned above, in accordance with Article 2 of this Call.

Documenti da allegare alla domanda:

1) In order to express interest in also competing for the scholarships linked to a specific research topic, candidates must complete and attach the file “Declaration of priority interest to compete for scholarships linked to a specific research topic”;
2) degree certificate (or self-certification for Italian degrees) and Transcript of Records including the full list of examinations with corresponding marks. Applicants with a non-Italian degree must attach their certificate (including the full list of examinations with corresponding marks) and a legalized translation or Diploma Supplement and, if available, the Declaration of Value (“Dichiarazione di Valore in loco”) issued by the competent Italian diplomatic-consular Representation, or the certificates issued by the CIMEA - ENIC-NARIC centre. If the degree certificate is not yet available or if the degree has not yet been obtained, the candidate must attach a description of the degree with a list of the examinations taken using Annex A;

3) a curriculum vitae including their scientific and teaching activities in Italian or English using the form in Annex B; the CV must include the university-level qualifications held;
4) a summary of the Master's thesis, written in Italian or English, consisting of a minimum of three and a maximum of six pages, and structured as follows: thesis motivations, research methods, and results obtained. In the case of graduating students, a written presentation of the thesis to be discussed must be provided;
5) a short text in English (Statement of Research Interest) using the form in Annex C, in which the candidate illustrates her/his motivation for attending the Course and the description of her/his specific research interests. The candidate must indicate a preference for one of the research topics available on the programme's website http://www.ict.unimore.it/ under the section "Research Topics", and may also express, in order of priority, any preferences among the thematically-bound scholarships;
6) optional certificates of English competence (TOEFL, Proficiency or others);
7) optional certificate of completion of the GRE (Graduate Record Examination) test, if owned;
8) letters of introduction/recommendation/reference (maximum three); in the online application, applicants must enter all the personal details of the professor/researcher/expert who will be sending the letter of recommendation. Once the application has been submitted, the computer system will send an automatic e-mail to the contact person requesting the letter of recommendation. The deadline for uploading letters is June 30th 2026, 11.59 pm (CET); applicants can check on the application summary page whether the contact person has sent the cover letter/recommendation. Within the aforementioned deadline, applicants may send a reminder to the contact person who has not yet done so by selecting the 'reminder' item from the application summary page;
9) any other document considered useful for the candidate's assessment and/or scientific publications; candidates must provide a full list of all the documents and publications attached;
10) a copy of a valid identity document.

Candidates who meet the requirements (being an employee of the company) and wish to compete for the reserved position with priority must express their interest by attaching Annex G to the on-line application form.
The Commission will verify whether or not those who have expressed their interest in competing for the reserved position meet the requirements.

Candidates who intend to apply primarily for the position reserved for the three-year higher education apprenticeship contract must express their interest by compiling and attaching Annex E of this call to their online application.

Evaluation criteria:

In the evaluation of candidates' qualifications, the Selection Committee assigns scores up to a total of 60 points, 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.

Candidates will be admitted to the interview if the evaluation of their presented qualifications has reached a score of at least 40 points out of the 60 available.

The list of the candidates admitted to the interview, and any variation in the selection procedure, will be published by July 15th, 2026 at the following University website address: https://www.unimore.it/en/bando-phd-42.

For the interview, the Examiners may award a score of up to 40 points.

The interview, which will be conducted in English, will focus on the research project submitted by the candidates and on their knowledge of the topics listed under the "Research Topics" section of the application.

Candidates who achieve a total score of 70 out of 100 will be considered eligible.

Assessment of candidates' suitability for the position covered with a three-year high apprenticeship contract will not affect the marks awarded to the candidates, but is necessary to attribute the contract to suitable candidates. The contractual position will be allocated, to the candidate with the highest score in the ranking list among those who have expressed priority interest for the contract and have been deemed suitable for the position.

INTERVIEW SCHEDULE

In-person interview: July 20th, 2026 from 10.00 am. In the event of a high number of candidates, the interview will continue on July 22nd, 2026 from 10.00 am.

The interview will be held at the "Enzo Ferrari" Department of Engineering; the room in which the interview will be held will be communicated with the results of the selection based on academic and research qualifications.

Interview via Microsoft Teams (allowed for each candidate, regardless of residence): July 20th, 2026, 10:00 am. In the event of a large number of candidates, the interview will continue on July 22nd, 2026, 9:00 am.

The operational indications on how to carry out the interview via Microsoft Teams will be communicated with the publication of the list of the candidates admitted to the interview.