

**Disclaimer:** This document is a non-official version of the PhD programme selection notice meant to provide information in English – only the Italian version approved with Rectoral Decree n. 1111/2021, Prot. N. 101167 of 15/06/2021 shall be legally binding.

**Call for application for admission to PhD programmes, 37<sup>th</sup> cycle, academic year 2021/2022**  
**PhD course in *Information Engineering and Science***

**THE RECTOR**

*Applicable Laws and Regulations* (available only in the Italian official version of the notice)

**DECREES**

1. Following the positive opinion expressed by ANVUR on 4 June 2021 and the consequent accreditation by the Italian Ministry for University and Research for the 37<sup>th</sup> cycle, a public selection for admission to the doctoral courses, which will be activated at the University of Siena for the academic year 2021/22, is herewith announced.
2. With regard to the aforementioned selection, the publication of the following notice is authorized:

**Selection notice for doctoral research courses – deadline for applications 19 July 2021**

**Art. 1 - Subject**

1. The University of Siena announces a selection procedure for admission to the doctoral courses for academic year 2021/22, 37<sup>th</sup> cycle. The open positions and the selection procedures for the doctoral course are indicated in the annex which is an integral part of this notice.
2. The number of scholarships may be increased as a result of additional funding that must actually be acquired by the University of Siena in time to be assigned by 31 December 2021. These scholarships will be assigned only after completion of the acts necessary for the acquisition of the resources required for the scholarship and ascertained by the competent offices. If the number of scholarships increases, the number of positions without scholarships may be increased provided that at least 75% of the total available positions are financially covered.
3. Any increase of scholarships and the consequent integration to the present notice will be published on the website of the doctoral course, 37<sup>th</sup> cycle.
4. The duration of the doctoral course is 3 years, beginning from 1 November 2021.

**Art. 2 – Admission requirements**

1. Applicants holding at least one of the following academic qualifications, obtained by 31 October 2021, may apply for admission, without age or citizenship restrictions:
  - *Diploma di Laurea* conferred by an Italian university before D.M. 509/1999 or
  - *Laurea Specialistica* conferred by an Italian university according to D.M. 509/199 or
  - *Laurea Magistrale* conferred by an Italian university according to D.M. 270/2004 or

- academic degree conferred by a foreign University, comparable for level, nature, duration, content and academic rights (access to doctoral courses) to the Italian master's degree. In this case a "statement of comparability" (*dichiarazione di equipollenza*) by competent academic authorities, including the context of inter-university cooperation and mobility agreements, is required and in the application for admission the candidate must indicate the date of issue of the statement of comparability as date of the achievement of the title and the Italian university that has issued it. If no statement of comparability has been issued yet, the eligibility of the qualification is ascertained by the selection board, also on the basis of the indications of the competent office of the University in compliance with the law in force in Italy and in the country where the title was awarded and international treaties or agreements in the field of recognition and qualifications for the continuation of studies.
2. The academic qualification awarded abroad, lasting at least 4 years, must be qualified second level according to the university system of the country in which it was obtained and allow access to doctoral courses. Candidates with foreign academic qualifications must attach the following documentation to the online application: certificate of title with list of exams and grades (transcript) in Italian, English or French, or translated into Italian, English or French and a copy of any other document deemed useful for the assessment of eligibility of the qualification (*e.g.* Diploma supplement, curriculum, Declaration of value - *Dichiarazione di valore in loco*). The candidate may be asked at any time to integrate the submitted documentation in order to verify eligibility. Candidates with a foreign academic qualification are admitted to the selection under condition. If admitted for matriculation, they must deliver the documentation indicated in article 5, paragraph 9. If, after verification, the qualification does not comply with the requirements of this notice, the candidates will be excluded from the doctoral programme.
  3. The University administration may, at any time, with a motivated decision, exclude candidates for a lack of the requirements indicated in this notice.

### Art. 3 – Application

1. Applications must be submitted, from 16 June 2021 on, and **by the peremptory deadline of 10:00 hrs (Central European Summer Time - CEST) of 19 July 2021** through the online platform at <https://segreteriaonline.unisi.it>. Instructions for the online application procedure are available in the section "How to apply to PhD positions" on webpage "*Informazioni per dottorandi e dottori di ricerca*" on the website of the University of Siena (at the time of the notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/informazioni-dottorandi-e-dottori-di-ricerca>).
2. The documents required for evaluation indicated in annex must be uploaded to the telematic system in PDF format, with the exception of the reference letter/s. If reference letters are required, the email of the lecturer/s who will submit the letter directly on-line must be indicated.
3. The "Selection application reminder" (*Promemoria domanda di partecipazione selezione*) will be automatically issued to confirm that the application has been registered successfully. When closing the procedure on the online platform <https://segreteriaonline.unisi.it> the application is automatically forwarded to the University of Siena. Applicants are therefore not required to send or deliver any documentation to the University offices.
4. Candidates may apply for more than one position, following the on-line procedures as of paragraph 1. If in a useful placement in more than one ranking list, candidates must opt for only one position.

### Art. 4 – Selection examinations and admission

1. The dates of the examination and the composition of the selection committee, responsible for the evaluation of the candidates, will be published on the reference pages of the related doctoral course on the website of the University of Siena (at the time of publication of this notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/dottorati-di-ricerca-xxxvii-ciclo>) usually at least 15 days before the date of the exam. This publication is to be considered an official convocation. **Candidates will not receive any personal convocation nor communication related to the examinations.**
2. The examinations, aimed at assessing the candidate's aptitude for scientific research, will take place as

indicated in the attached annex. To take part in the examinations, candidates must present the valid identification document (ID card, passport, driver's license) uploaded during the application process. Considering the current health emergency, interviews may be conducted on an online platform. Details on the modality will be communicated on the reference pages of the doctoral course on the website of the University of Siena (at the time of publication of this notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/dottorati-di-ricerca-xxxvii-ciclo>). In this case, the candidate must ensure the use of a webcam to allow his/her identification to the selection board, be available at the registered personal address during the registration on the day indicated for the oral exam. The selection board may agree with the candidates on a precise timetable for the start of the interview. For the purpose of identification each candidate shall be required, before the interview begins, to identify himself/herself, showing the same identity document submitted during the application procedure. Failure to communicate the personal address, failure to connect, the unavailability of the candidate on the date or time set or the failure to present a valid identification document, as indicated beforehand, constitute grounds for exclusion from the selection procedure. The University declines any responsibility for technical difficulties that may hinder a regular conduction of the interview. The oral examinations, including those conducted on online platforms, are public.

3. The selection committee, appointed by the Rector after consulting the PhD board, shall be composed of at least three tenured professors and may comprise up to two experts, also from foreign countries, selected from public or private research institutions and centres. The evaluation criteria of the examinations are established in advance by the selection board in plenary session.

#### Art. 5 – Ranking lists and enrolment

1. The Rector approves the selection acts and rankings and issues a decree regarding the admission of candidates. The ranking of eligible applicants and winners (with or without a scholarship) will be published on the reference pages of the doctoral course on the website of the University of Siena (at the time of publication of this notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/dottorati-di-ricerca-xxxvii-ciclo>) **by 23 September 2021**. The ranking is based on the candidate's total score in the evaluation of the CV, titles, project and any tests.
2. In the event of equality of merit, the youngest candidate shall prevail.
3. The positions will be assigned on the basis of the ranking of merit. The publication of ranking lists has the value of official notification. **Winners will not receive any personal communication regarding their final ranking.** In case of useful placement in more than one ranking list of different doctoral research programmes, the candidate must opt for only one position.
4. Winners must enrol, under penalty of forfeiture, **by 10:00 hrs (CEST) of 30 September 2021**. Only if there are still positions available, due to non-enrolment or explicit waiver by entitled persons, the ranking list will be scrolled. The terms for scrolling are indicated in the following table:

	<i>Date of publication</i>	<i>Peremptory deadline for enrolment</i>
<b>Ranking list(s)</b>	<b>By 23 September 2021</b>	<b>By 10:00 hrs (CEST) of 30 September 2021</b>
<b>1<sup>st</sup> scrolling</b>	<b>1 October 2021</b>	<b>by 10:00 hrs (CEST) of 6 October 2021</b>
<b>2<sup>nd</sup> scrolling</b>	<b>7 October 2021</b>	<b>by 10:00 hrs (CEST) of 12 October 2021</b>
<b>3<sup>rd</sup> scrolling</b>	<b>13 October 2021</b>	<b>by 10:00 hrs (CEST) of 18 October 2021</b>

The list of replacement candidates is notified through the same procedure adopted for the final ranking. Should the candidate renounce to his/her position or fail to enrol, the next candidate in the ranking list shall be assigned a position in accordance with the dates indicated above. After these deadlines, and in any case no later than 31 December 2021, replacements are possible only after approval by the academic board of the doctoral course.

5. Scholarship holders of specific international mobility programmes (such as, for example, AICS - Italian Agency for Development Cooperation, Marie Curie Sklodowska Actions, etc.) must apply for admission through the appropriate procedure on the on-line secretariat (<https://segreteriaonline.unisi.it>), following the instructions available in the section "How to apply to PhD positions" on webpage "*Informazioni per dottorandi e dottori di ricerca*" on the website of the University of Siena (at the time of

the notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/informazioni-dottorandi-e-dottori-di-ricerca>).

6. Simultaneous enrolment in Degree programmes, Master's Degree programmes, Specialization schools, doctoral courses, and university Masters are prohibited. For other incompatibilities not mentioned herein, please refer to the current regulations.
7. Joint attendance is permitted only in the case of a medical specialization course and a doctoral research course. In case of joint attendance, the duration of the doctoral course is reduced to a minimum of two years (art. 19, Law n. 240/2010) in compliance with the following general criteria:
  - a) The postgraduate student must have been awarded a place in the doctoral course at the same university in which he/she is attending postgraduate school.
  - b) Joint attendance may be arranged during the last year of the Specialization school and must be compatible with the activities and duties of the school, subject to approval by the school's council.
  - c) The academic board of the doctoral course may approve any request for reduction after assessing research activities already carried out during the medical specialization course, as attested by the school's council.
  - d) During the year of joint attendance, the specializing postgraduate student cannot receive a doctoral scholarship.
8. Winners must submit their request for enrolment, no later than the deadline indicated under paragraph 4, using the dedicated online enrolment procedure available at <https://segreteriaonline.unisi.it>, following the instructions in section "How to enrol in the first year" on internet page "Informazioni per Dottorandi e Dottori di ricerca" of the University of Siena (at the time of the notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/informazioni-dottorandi-e-dottori-di-ricerca>).
9. Candidates who hold a foreign academic qualification, of at least four-year duration, which has not yet been declared equivalent (*equipollente*) by an Italian university, must also attach to the online application copy of the original degree awarded or certificate of the qualification issued by the awarding university in digital format. In the case of a qualification awarded outside the EU, candidates must also submit a copy of the Declaration of value issued by the appropriate Italian diplomatic offices abroad. The Declaration of value must clearly indicate that the academic qualification allows access to doctoral programmes in the country where it was awarded. Candidates who do not submit the documentation necessary for foreign qualification at the moment of enrolment will be admitted to the doctoral course "under condition" and will be excluded if they do not present the required documentation within six months from the official start of the PhD course. They shall also be excluded if, on assessment of the documentation, the qualification does not meet the requirements for admission to the programme.
10. Non-EU applicants who are eligible for enrolment will be admitted to the courses provided that they comply with the current provisions concerning entry and stay in Italy and are legally residing in Italy (art. 39, par. 5 of Legislative Decree no. 286 dated 25.07.1998, as modified by art. 26 of Law no. 189 dated 30 July 2002). They must submit a copy of their valid passport and residence permit issued by the competent authorities. If resident abroad, instead, they must provide a copy of the passport, of the entry visa and a copy of the residence permit for study purposes issued by the competent police authority (*Questura*).
11. Enrolment is confirmed upon payment of the fees through the PagoPA system (art. 5 of Code for Digital Administration and Legislative Decree 179/2012). An enrolment receipt may be printed out at the end of the online procedure.
12. Those admitted who do not comply with the above prescribed within the aforementioned peremptory deadlines shall be considered *ipso iure* renouncers.
13. The completion of enrolment is subject to verification of the possession of requirements for access to the course. Until such time enrolment is to be considered under condition.

#### **Art 6 – Scholarship allocation**

1. The academic board of the doctoral course allocates the scholarships in compliance with the ranking order.

2. In case of waiver or failure to enrol by the winner of a scholarship, the scholarship will be allocated by scrolling the ranking list.
3. Scholarships which are dedicated to a specific research activity, bind the recipients to carry out such activity and to the respect of what is required.
4. In the case of a scholarship financed by an external body, the commitment provided for in the agreements apply for the doctoral student.
5. Those who have already received, even partially, a scholarship for the attendance of doctoral courses or equivalent courses at the University of Siena or other Italian universities, cannot benefit from another doctoral scholarship.
6. Should a scholarship winner with a foreign academic qualification not submit the necessary documentation (as of art. 5, paragraph 8) or the submitted documentation not attest the validity of the qualification for an academic course similar to a PhD (*Dottorato di ricerca*) in the country of achievement, the candidate loses his/her position and must return any doctoral scholarship disbursements.
7. The annual amount of the scholarship is Euro 15.343,00, eligible for the INPS separately managed social security contribution. The duration of the scholarship is equal to the entire duration of the course and will be paid in deferred monthly instalments. If the doctoral student renounces to the scholarship or the continuation of the course, the University will interrupt payment of the scholarship.
8. The doctoral scholarship may not be combined with any other scholarship, except those awarded by national or foreign institutions to supplement training or research activity of the scholarship holder.
9. In the case of a scholarship financed by public or private external bodies, the scholarship will only be allocated if the financier has actually paid the corresponding amount to cover the scholarship.

#### **Art. 7 – Fees and contributions**

1. Doctoral students benefitting from a scholarship must pay the annual DSU (Right to University Study) Tuscan regional tax of € 140 and the virtual stamp duty of € 16 at the moment of enrolment and the annual university fee of € 340,00 by 31 December 2021.
2. Doctoral students without scholarship must pay the annual DSU Tuscan regional tax of € 140 and the virtual stamp duty of € 16 at the moment of enrolment.
3. Students with certified disability greater than or equal to 66% are exempt from payment of university fees and the DSU Tuscan regional tax.

#### **Art. 8 – Duties of doctoral students**

The admission to the doctoral course entails exclusive, full-time commitment. Students are required to carry out the activities related to the approved research project and to submit a report on the activities and research performed to the Academic board, at the end of each year, and a dissertation with original contributions at the end of the course. Following the evaluation of activities performed by the student, the Academic board of the doctoral course shall decide on the admission of the doctoral student to the subsequent year. Given a valid reason, the Academic board also has the authority to exclude candidates from progressing to the following academic year.

#### **Art. 9 – Awarding of the degree**

1. The title of *Dottore di ricerca* (PhD) is awarded in compliance with the University Regulations governing doctoral courses (in Italian; see link in art. 10).
2. Doctoral dissertations must be up-loaded by the doctoral students in electronic format with a digital signature (compliant with Italian legislative decree n. 82 of 7 March 2005 and successive modifications) in the University repository USiena-Air (<http://usiena-air.unisi.it/>), to be filed in the national libraries.

#### **Art. 10 – Relevant legislation**

For any matter not explicitly covered by this selection notice, the University shall refer to the following

Italian legislation:

- Art. 4 of Law no. 210 dated 3 July 1998;
- Ministerial Decree no. 45 dated 8 February 2013;
- University regulation governing doctoral courses (at the time of publication of this notice [https://www.unisi.it/sites/default/files/allegatiparagrafo/REGOLAMENTO\\_DOTTORATO\\_2020%2004%2017.pdf](https://www.unisi.it/sites/default/files/allegatiparagrafo/REGOLAMENTO_DOTTORATO_2020%2004%2017.pdf)).

#### **Art. 11 – Processing of personal data**

1. The processing of personal data of candidates is carried out by the University of Siena exclusively for institutional purposes and for managing this notice. The information on the processing of the student's personal data can be obtained in the Privacy section of the University Portal <https://www.unisi.it/ateneo/adempimenti/privacy>.
2. The University undertakes to respect the confidential nature of the data and information provided by the candidate, which will be treated in accordance with EU Regulation 2016/679 on the protection of personal data and Legislative Decree 196/2013 of the Privacy Code, for provisions not incompatible with the Regulation itself. The data controller is the University of Siena, legally represented by the pro-tempore Rector, Prof. Francesco Frati. The candidate can assert his/her rights (articles 15 and following of the EU Regulation) by contacting the Data Controller by writing to pec email [rettore@pec.unisipec.it](mailto:rettore@pec.unisipec.it), or e-mail [segreteria.rettore@unisi.it](mailto:segreteria.rettore@unisi.it).
3. The provision of data is mandatory for the management of the relationship between the student and the University (eg. selection, admission, enrolment, university career management, etc.). Any refusal to process data implies the exclusion from the selection.

#### **Art. 12 – Notice advertising**

1. This selection notice shall be published on the reference pages of the doctoral course on the website of the University of Siena (at the time of publication of this notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/dottorati-di-ricerca-xxxvii-ciclo>) and advertised online on the University of Siena, Euraxess, and Ministry of University and Research webpages.
2. Furthermore, this notice and the rankings of candidates will be published on the official University website at <http://albo.unisi.it>.

#### **Art. 13 – Final provisions**

1. The person in charge of the administrative procedure is Jacqueline Irene Muller, Head of the Office for doctoral courses (*Ufficio per il Dottorato di Ricerca*) at the University of Siena.
2. Any changes or additions to the contents of this notice will be published on the reference pages of the doctoral course on the website of the University of Siena (at the time of publication of this notice <https://www.unisi.it/ricerca/dottorati-di-ricerca/dottorati-di-ricerca-xxxvii-ciclo>).

## Annex – Positions and selection modalities

<b>PhD programme</b>	<b>INFORMATION ENGINEERING AND SCIENCE</b>
Coordinator	Antonio Vicino <a href="mailto:vicino@ing.unisi.it">vicino@ing.unisi.it</a>
Department	Ingegneria dell'Informazione e Scienze Matematiche DIISM
Open positions	<b>17</b>
of which:	

	n.	Funding institution(s)	Research topic
<b>Positions with scholarship</b>			
A.	4	University of Siena	No research topic restriction
B.	1	DIISM	Specific research topic: 5G Metasurfaces
C.	1	DIISM	Specific research topic: Non-homogeneous lens antennas
D.	1	DIISM	Specific research topic: Conformal Metasurfaces
E.	1	DIISM	Specific research topic: Accelerators and Programmability in Modern Heterogeneous Architectures
F.	1	DIISM	Specific research topic: Software/firmware and hardware innovative architectures for the design of intelligent power electronic systems, for body power automotive applications
G.	1	Baker Hugues - Nuovo Pignone	Specific research topic: Explanability of AI and ML models for industrial applications
H.	2	Leonardo Spa	Specific research topics: a) Soft Robotic End-effectors for Grasping and Manipulation (tematica di Robotica) b) Explanability in machine learning for trustworthy AI (tematica di Intelligenza Artificiale)
<b>Positions without scholarship</b>			
I.	4	//	No research topic restriction
<b>Positions reserved for scholarship holders of international mobility programmes</b>			
J.	1	//	No research topic restriction

Type of ranking(s)	<ul style="list-style-type: none"> <li>• One ranking list for positions with no research topic restriction (positions A &amp; I)</li> <li>• One ranking list for positions with specific research topics indicated in positions B, C, and D</li> <li>• Single ranking list for each position with specific research topic indicated in positions E, F, G, and H</li> <li>• For positions reserved for scholarship holders of international mobility programmes (position J) see art. 5, paragraph 5 of the selection notice</li> </ul>
Documents required for evaluation (to be attached during online application)	<ul style="list-style-type: none"> <li>• <b>Curriculum vitae et studiorum</b> (duly signed at the bottom with the following declaration “<i>Hereby I declare that what reported above corresponds to the truth, according to the Decree of the President of the Italian Republic 445/2000</i>”), indicating qualification obtained (or to be obtained by 31 October 2021) with the issuing institution and a list of publications</li> <li>• <b>Research project</b> (in English, max 4 pages);</li> <li>• <b>Reference letters</b>, if any (not more than 2) of Italian or international university professors and/or research professionals (no letters must be uploaded, but the email address(es) of the persons be indicated during the application procedure)</li> <li>• <b>Thesis abstract</b> of <i>Laurea Magistrale/Specialistica/Vecchio ordinamento</i> or equivalent foreign degree translated into Italian, English or French (max 1 page)</li> <li>• <b>English language certification</b> (min. level B2), if any</li> <li>• Any other document useful for the evaluation of the eligibility of the title.</li> </ul> <p>Eligibility of foreign degrees (to be translated into Italian, English or French) is ascertained by the selection committee in accordance with relevant regulations and</p>

	<p>international agreements on the recognition of qualifications for further studies. The knowledge of the English language level B1, if not certified, will be verified by the selection committee.</p> <p><u>Candidates who achieved (or will achieve by 31 October 2021) the <b>diploma di laurea at an Italian university</b></u> have to specify, in their curriculum, all the data on the university path and the title of admission, in particular:</p> <ul style="list-style-type: none"> <li>• University issuing the title</li> <li>• type of <i>laurea – vecchio ordinamento/specialistica/magistrale</i>;</li> <li>• degree course name</li> <li>• list of examinations with votes</li> <li>• date of obtaining the title and final vote or expected date of obtaining the title (by 31 October 2021).</li> </ul> <p><u>Candidates who achieved (or will achieve by 31 October 2021) their <b>degree at a foreign university</b></u> (with a duration of at least four years) have to specify in their curriculum:</p> <ul style="list-style-type: none"> <li>• University issuing the title</li> <li>• type of degree (min. duration four years) – <i>Bachelor’s degree/ Master’s degree</i></li> <li>• date of obtaining the title and final vote or expected date of obtaining the title (by 31 October 2021).</li> </ul> <p>Candidates with a foreign degree have to attach to the online presentation also the following documentation:</p> <ul style="list-style-type: none"> <li>• <b>transcript</b> – certification of the title with the list of exams and votes – with a translation in Italian or English</li> <li>• <b>Diploma supplement</b> (if available).</li> </ul>
Web site for further information	<a href="http://phdies.ing.unisi.it/">http://phdies.ing.unisi.it/</a>
Selection modalities	<b>Evaluation of titles and curriculum</b> <b>Evaluation of research project (in English)</b>
Admission requirements	<b>All master’s degrees</b>
Exam procedures	<p>The overall score is given by the sum of scores achieved in the single evaluations or exam(s). The minimum score for eligibility is 60/100.</p> <p>No written or oral tests will be done for candidates.</p> <p><b>Evaluation of titles and curriculum</b> – Score: up to a maximum of 70</p> <p><b>Evaluation of research project</b> - Score: up to a maximum of 30</p>
Dates of evaluation and exam(s)	//
Selection committee	The composition of the selection committee will be published after the deadline for application.