

**Rector's Decree**

Additional call for public selection for admission to PhD courses - XL cycle - AY 2024/2025

The Rector

HAVING REGARD TO the Statute of Autonomy;

HAVING REGARD TO the University General Regulations;

HAVING REGARD TO the University Teaching Regulations;

HAVING REGARD TO the Administration and Accounting Regulations;

HAVING REGARD TO the University Regulations regarding Research Doctorates;

HAVING REGARD TO the University Code of Ethics and Code of Conduct;

HAVING REGARD TO the Law no° 476 of 13 August 1984;

HAVING REGARD TO the Law no° 240 of 30 December 2010, in particular art. 19;

HAVING REGARD TO the Ministerial Decree no° 226 of 14 December 2021;

HAVING REGARD TO the Law no° 104 of 5 February 1992, as integrated and modified by Law no° 17 of 28 January 1999;

HAVING REGARD TO the Decree of the President of the Republic no° 445 of 28 December 2000;

HAVING REGARD TO the Prime Ministerial Decree of 9 April 2001 "Uniform treatment of the right to university studies, pursuant to art. 4 of Law no° 390 of 2 December 1991";

HAVING REGARD TO the Law no° 148 of 11 July 2002;

HAVING REGARD TO the Legislative Decree no° 196 of 30 June 2003;

HAVING REGARD TO the Ministerial Decree no° 270 of 22 October 2004;

HAVING REGARD TO the General Data Protection Regulation (GDPR) - Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data, as well as on the free movement of such data;

HAVING REGARD TO the Ministerial Decree no° 247 of 23 February 2022 which provided for the increase in the gross annual amount of the PhD fellowship;

HAVING REGARD TO the Rectoral Decree no° 374 of 1 March 2022 with which the "Fees, contributions and exemptions Regulation" was issued, updated for the academic year 2024/2025, with its own decree no° 179 of 4 March 2024 and any subsequent amendments;

HAVING REGARD TO Ministerial Decree no° 440 of 13 February 2024 containing the list of particularly poor countries for the academic year 2023/2024;

HAVING REGARD TO the provisions of Ministry of University and Research (MUR) regarding Procedures for the entry, residence and enrollment of international students and the related recognition of qualifications, for higher education courses in Italy valid for the academic year 2024-2025, available on the page: <https://www.university.it/studenti-stranieri>;



HAVING REGARD TO the Law no° 33 of 12 April 2022 containing "Provisions regarding simultaneous enrollment in two higher education courses";

HAVING REGARD TO the note from the MUR prot. no° 8614 of 2 May 2024 relating to the "Operating instructions for the accreditation procedure of doctoral courses for the XL cycle";

HAVING REGARD TO the "Guidelines for the accreditation of research doctorates pursuant to article 4, paragraph 3, of the regulation referred to in Ministerial Decree 14 December 2021, no° 226" issued with Ministerial Decree no° 301 of 22 March 2022;

HAVING REGARD TO the resolutions of the relevant Departments of the University's PhD courses, relating to the approval of the renewal of the courses for the AY 2024/2025 - XL cycle;

HAVING REGARD TO the resolutions of the Academic Senate and the Board of Directors, sitting on 21 and 28 May 2024 respectively, relating to the PhD courses for the XL cycle;

HAVING REGARD TO its own rectoral decree no° 620 of 18 June 2024 with which the selection notice was issued for admission to the XL PhD cycle of doctoral courses with administrative headquarters at the University of Calabria;

HAVING REGARD TO its own rectoral decree no° 956 of 19 September 2024, with which the acts of the above-mentioned selection notice were approved and the merit lists for admission to doctoral courses with administrative headquarters at the University of Calabria for the XL cycle;

CONSIDERED that no° 1 position with PhD scholarship to the research project "CEreals REsiliency REvolution for agile supply chain management in the Mediterranean - CERERE" (CUP H23C24000170006) within the European program 2023 Section 1 AGROFOOD RIA - FIRST for the Civil and Industrial Engineering PhD course was not awarded at the end of the selection procedures;

CONSIDERED that the Department of Mechanical, Energy and Management Engineering and the Coordinator of the PhD course in Civil and Industrial Engineering have indicated their intention to reactivate the selection procedure for the vacant position;

HAVING REGARD TO the National Recovery and Resilience Plan (PNRR) document;

HAVING REGARD TO the "Reporting Guidelines for Implementers of Mission 4 System Initiatives Component 2" and the "Guidelines for Information and Communication Actions by Implementers";

HAVING REGARD TO the requests of the Departments of Mathematics and Informatics, of Biology, Ecology and Earth Sciences, and of Environmental Engineering for additional places respectively for the PhD courses in Mathematics and Informatics, in Life Science and Technology and in Geology, Engineering and Science of Sustainable Earth and Energy Transition - XL cycle;

HAVING REGARD TO the financial availability for financing additional positions from funds coming from external funding or research projects;

HAVING REGARD TO the willingness of the doctoral course coordinators concerned to activate the selection for these additional positions;

HAVING REGARD TO its own rectoral decree no° 1353 of 18 December 2024 on additional doctoral scholarships for the XL cycle, which will be submitted to the Board of Directors for ratification;

ASSURED the financial availability within the relevant economic budgets of the Departments involved for the financing of the sum, equal to at least 10% of the cost of the doctoral fellowship, intended to finance the research activities for their doctoral students;



CONSIDERED that the Head of the Research, Innovation and Social Impact Area has issued an opinion on technical administrative regularity by approving this decree;

CONSIDERED necessary to provide to the issuing of the additional selection notice for admission to the PhD courses - XL cycle - AY 2024/2025 with administrative headquarters at the University of Calabria;

DECREES

Art. 1 Call for selections

1. The public selection notice for admission is announced at the University of Calabria to the PhD courses for the academic year 2024/2025 - XL cycle and the attribution of no° 4 PhD fellowships.

The fellowships valid for this selection notice are financed by Department of University from funds financed by external bodies and PNRR projects, as specified in Annex A "Analytical Sheets for XL cycle Research Doctorate Courses - AY 2024/2025" which constitutes an integral and substantial part of this announcement.

2. This announcement will be published on the website of the Ministry of University and Research, on the European Euraxess website and on the University of Calabria portal at the link: https://unical.portaleamministrazionetrasparente.it/pagina874_tc-7_dottorati-di-ricerca.html and has the value of notification in all respects.

3. For each doctoral course, information relating to the Coordinator, the duration, the proposing Department (any other Departments involved), the CUN Areas and the relevant Scientific Disciplinary Sectors, the research topics or curricula of the course, the participation requirements, the admission methods, the qualifications to be attached to the application for participation, the assessment criteria for the tests, the number of places and fellowships with the specification of the financing entities and the research objectives/topics, also in relation to individuals curricula, if applicable, the test diary (agenda), any contact information and the PhD course website, are shown in Attachment A.

4. Any changes, updates or additions to the content of the announcement will be made known, exclusively, upon publication on the University of Calabria portal at the link https://unical.portaleamministrazionetrasparente.it/pagina874_tc-7_dottorati-di-ricerca.html.

Any personal communications to candidates relating to this announcement will take place via ordinary email. For this purpose, the e-mail address indicated by the candidate in the online application is used. The University assumes no responsibility for the dispersion of communications resulting from inaccurate indications of personal contact details by the candidate or from failure or late communication of their change, nor from electronic errors also linked to the candidate's personal email inbox.

5. The submission of the application for participation through the procedure referred to in art. 4 presupposes the candidate's knowledge of the rules contained in this announcement, in the University Regulations regarding research doctorates and of the regulations relating to the sources of funding for the fellowships.

6. The start of the XL cycle doctoral courses is scheduled for March 1st, 2025.

Art. 2 Admission requirements

1. They can submit an application to participate in the selections for admission to the Research Doctorate Courses referred to in the previous art. 1, without age and citizenship limits, those who hold one of the following qualifications:

- a. Old system degree diploma (ex ante DM 509/1999);
- b. Specialist/Master's Degree (DM 509/1999 and DM 270/2004);



- c. Second level academic qualification issued by institutions belonging to the AFAM sector;
- d. Qualification obtained from legally recognized foreign universities, provided that it is comparable in duration, level and disciplinary field to the Italian qualification that allows access to the course.

To access the selection of some of the doctoral courses, the possession of specific master's/specialist degrees (or equivalent) is required, as indicated in Annex A of this announcement.

2. Those who obtain the qualification required in paragraph 1 by the date of enrollment in the doctoral course can also submit an application to participate in the call for admission. If the candidate is successful, he/she will be admitted "conditionally" and must submit, by the date of enrollment in the doctoral course, via e-mail to dottorati@unical.it, the self-certification relating to the achievement of the qualification with an attached copy of a valid identity document. Failure to obtain the qualification within the indicated deadline will result in exclusion from the merit rankings.

3. Those who:

- have benefited from a PhD fellowship or part thereof in the past;
- have already obtained a research doctorate.

Art. 3 Qualification obtained abroad

1. The suitability of the qualification obtained from foreign universities is ascertained, solely for the purposes of admission to the selection, by the judging commissions in compliance with the legislation in force in Italy and in the country where the qualification was issued, as well as international treaties or agreements regarding the recognition of qualifications for the continuation of studies.

2. In this case, candidates must present, in the manner indicated in article 4 below, the degree certificate, indicating the exams passed and the study plan followed, both first and second level. The candidate can also attach the diploma supplement or the declaration of on-site value or comparability certificate issued by CIMEA or other ENIC-NARIC centers and any other documentation useful for evaluating the admissibility of the qualification held for the chosen course. The aforementioned documents, if they are not drawn up in Italian or English, must, under penalty of exclusion from the selection, be accompanied by a sworn translation into Italian or English. The judging commissions will proceed to evaluate the suitability of the foreign qualification based on the documentation presented and therefore may exclude the candidate even if there are not sufficient elements for the evaluation.

3. Candidates in possession of a foreign qualification are admitted to the selection with reservation, which can be dissolved only when, if successful, they produce the diploma supplement or declaration of value on site or certificate of comparability from CIMEA or other ENIC-NARIC centres, such as provided for by the art. 8.

Art. 4 Application for admission

1. The application for admission to the selection must be sent exclusively using the specific online procedure available on the page: <https://unical.esse3.cineca.it/>.

2. The IT procedure for submitting the online admission application will mandatorily close **at 12:00 p. m. (midday Italian time) on January 20, 2025.**

3. The online procedure provides for preliminary registration for those who do not have a student number from the University of Calabria, in order to obtain the credentials that allow access to the subsequent phase of completing the application for admission to the selection.



4. Candidates who are already registered must access the Reserved Area using the credentials they already have. Candidates are invited to update the data already present in the registry, in particular the place of residence, telephone number and e-mail address, to which any communications relating to the competition will be delivered.
5. The application for admission to the selection is considered correctly submitted only with the completion of the electronic procedure and can no longer be modified online.
6. The date of submission of the application for admission to the selection is certified by the computer system which, upon expiry of the deadline useful for submission, it will no longer allow access and sending the application.
7. In order to participate in the selection call, it is mandatory, under penalty of exclusion, to pay an admission fee of € 10.00 (for each application presented) through the PagoPA integrated system in the esse3 online procedure. Only each "closed and transmitted" application with the relevant payment made will be considered valid for the purposes of participation in the selection call. Complaints due to any malfunctions of the IT system near the deadline will not be accepted nor will the admission fee be refundable under any circumstances; Candidates are therefore invited to complete the application to participate in the selection notice sufficiently in advance of the deadline to ensure the necessary assistance.
8. The online admission procedure involves uploading the following documents in pdf format:
 - self-certification of access qualification pursuant to art. 47 of Presidential Decree 445/2000 (annex B) exclusively for academic qualifications obtained in EU countries;
 - documentation required for the evaluation of candidates in possession of an academic qualification obtained abroad;
 - self-certification of exams taken during the academic career, for candidates not yet in possession of the qualification;
 - research project, with a maximum length of 16,000 characters (including spaces), unless otherwise requested in the PhD course information sheet for which you intend to participate, in compliance with the specifications indicated in Attachment A;
 - candidate's curriculum vitae and studiorum;
 - copy, front and back, of a valid identity document;
 - copy of the tax code, exclusively for Italian candidates;
 - any further qualifications subject to assessment, specified in "Annex A" of this announcement.
9. All the titles, documents and publications deemed useful for the purposes of the competition procedure must be attached in PDF format with a maximum size of 20 MB; in a completely exceptional case, any documentation that the candidate is unable to attach may be sent via certified email (PEC) to the address amministrazione@pec.unical.it or delivered by hand to the Protocol Office of the Central Administration, Via Pietro Bucci cubi 7-11 b, Arcavacata di Rende (CS), on weekdays from 10:00 to 12:00, always respecting the expiry date of this document announcement. Furthermore, using the same methods, candidates who wish to integrate or modify the application or attachments can send them, together with the signed admission application and a photocopy of a valid identity document, within the peremptory deadline of the call. In the event that the attachments are not received within the deadline and in the manner indicated, only the documents inserted using the IT procedure will be evaluated. The University assumes no responsibility for any electronic problems.
10. Candidates who intend to participate in more than one selection for admission to the doctoral courses referred to in this call must submit a different application for each selection, each accompanied by the required qualifications and the relevant payment of the admission fee.



11. Applications for admission to the selection submitted using a method other than that set out above will not be taken into consideration, as will payments relating to the admission fee made using methods other than those provided by the esse3 system.
12. It is the candidate's responsibility to ensure the correct conclusion of the IT procedure; in this regard, this University declines any responsibility for any malfunctions of the IT system close to the deadline.
13. Candidates with proven disabilities, pursuant to law no. 104/1992 as integrated by law 17/99, can request, in relation to their disability, the necessary aids and any additional time to complete the test. For candidates suffering from specific learning disabilities in accordance with law no. 170/2010 in relation to the type of test, an additional time equal to 30 percent more than that defined is granted. Disabled candidates, if they intend to make use of the aids provided for by Law no. 104/1992 as integrated by law 17/99, they must also report it when completing the online application, indicating the type of aid requested.
14. All candidates are admitted to the selection subject to verification of the requirements set out in the announcement, which will be carried out pursuant to art. 43 of Presidential Decree 445/2000. The University may, therefore, decide at any time to exclude candidates from the selection procedure. The University will also, ex officio, ascertain the truthfulness of the declarations in lieu of certification submitted by the candidates: anyone who issues false declarations is punished in accordance with the penal code and special laws on the matter.
15. The University reserves the right to adopt, even after the completion of the selection, measures to exclude candidates who do not possess the required requirements or who have not complied with the provisions of the announcement.

Art. 5 Judging commissions

1. The selection commissions for admission to doctoral courses are appointed by the Rector in compliance with the "University Regulations regarding research doctorates" of the University of Calabria.
2. Each judging commission is responsible for the entire procedure of evaluating the applications, drafting the minutes, formulating the merit rankings and assigning the doctoral fellowships.
3. The composition of the individual Commissions will be published on the University of Calabria portal at the link https://unical.portale.amministrazionetrasparente.it/pagina874_tc-7_dottorati-di-ricerca.html.

Art. 6 Admission tests

1. Admission takes place according to the methods explained for each course in Annex A, an integral part of this decree.
2. The admission test diary, reported for each course in the aforementioned Attachment A, constitutes notification to all intents and purposes to interested parties. Any changes or additions to the exam calendar will be published exclusively on the portal of the University of Calabria at the web addresses indicated in Attachment A for each course, by the Department proposing the doctoral course.
3. Failure to show up for the admission tests will be considered as a waiver of the selection.
4. To take the competitive tests, candidates must show one of the following valid identification documents: identity card, passport, car license with photograph, gun licence, identification cards - with photograph and stamp or other marking equivalent - issued by a State Administration.
5. The selection procedure, aimed at ascertaining the candidate's aptitude for scientific research, consists of an evaluation of the candidates' qualifications, integrated, in accordance with the provisions of each



course in Annex A, by an Oral test.

6. The points available for each individual test, the attribution criteria and the minimum score thresholds for admission to subsequent tests are indicated in the form for each doctorate.
7. Each Commission, prior to the assessment qualification operations, must designate the president and the recording secretary and establish the evaluation and scoring criteria relating to each individual item (research project, curriculum vitae et studiorum, any certifications, any publications, etc.). In the case of candidates who do not yet have the qualification to access the PhD, for the purposes of an appropriate evaluation of their educational path, the Commission must take into account their self-certified academic career at the time of submitting the application.
8. The oral test is public and includes testing of knowledge of one or more foreign languages.
9. Candidates resident or domiciled abroad will be permitted and all candidates who demonstrate, by providing adequate justification to the Selection Committee, the impossibility of going in physical presence to the place and date scheduled for the oral test, to request that it be carried out electronically. In such cases the candidate must request it by sending a PEC (amministrazione@pec.unical.it) to the Department proposing the doctoral course reported in the doctoral form, as well as to the address dottorati@unical.it, immediately after the publication of the results of the assessment qualifications, as indicated in the individual doctorate forms. The request must be accompanied by a copy of a valid identification document. Candidates must guarantee the use of a webcam to allow their identification to the Judging Commission and must be available on the day and time established in the test diary in Annex A. Each Commission has the right to decide to agree with the candidates a specific time for the start of the interview. For identification purposes and under penalty of exclusion from the selection procedure, each candidate is required, before the interview begins, to identify himself, showing the same identity document already sent as an attachment to the e-mail and the online participation application. Failure to connect, the unavailability of the candidate on the established day or time or failure to show the identification document transmitted constitute causes of exclusion from the selection procedure. The University declines any responsibility for the eventuality that technical reasons prevent the oral interview from taking place properly.
10. At the end of the evaluation, the Commission, At the end of the evaluation, the Commission prepares the merit rankings on the basis of the scores given by each candidate and award the grants taking into account the position in the merit list and the number of scholarships to be awarded.
11. Pursuant to current national legislation, each candidate cannot benefit from multiple doctoral fellowships at the same time.
12. For the assignment of the positions referred to in this announcement, in the event of a tie in the general merit ranking, the evaluation of the economic situation (ISEE of the candidate) prevails.
13. The documents relating to the competition procedure are sent to the Rector by the Judging Commission.
14. Candidates are guaranteed access to the documentation of the competition proceedings, in accordance with current legislation.

Art. 7 Admission to doctoral courses

1. The Rector approves the selection documents and decrees the merit rankings for the admission of candidates.



2. The decrees approving the selection documents will be made known through publication on the University of Calabria portal at the link https://unical.portaleAmministrazionetrasparente.it/pagina874_tc-7_dottorati-di-ricerca.html.
3. Candidates will therefore not receive any personal communication.
4. Candidates are admitted to courses according to the rankings drawn up by each judging commission until all positions available for each doctorate are filled. In case of any cancellations by those entitled before the start of the course, the same number of candidates will take over according to the order of the ranking drawn up by the Commission, always respecting the qualifications assigned. In case of useful placement in multiple rankings, the candidate must exercise the option for only one doctorate course or administrative category.
5. This selection involves the assignment only of positions covered by fellowships and equivalent funding. Renunciation of the fellowship, therefore, entails renunciation of the doctoral course.

Art. 8 Registration methods

1. The winners will have to pre-register via the procedure available at <https://unical.esse3.cineca.it/>, within the terms indicated together with the publication of the Rectoral Decree approving the selection documents. Failure to complete the pre-enrolment will result in the forfeiture of the right to admission to the doctoral course.
2. The amount relating to the fees for attending doctoral courses, to be paid by all doctoral students, includes the regional tax for the right to study, the stamp duty and the insurance premium pursuant to the Regulation on taxes, contributions and exemptions mentioned in the introduction and to which reference is made.
3. Non-EU winners, once they have enrolled, must deliver to the Research Doctorates Sector of the Research, Innovation and Social Impact Area, within a suitable deadline agreed with the Sector itself, a copy of the entry visa for study/university or of the permit of stay.
4. Non-EU citizens requesting visas must register on the University Portal <https://www.universitaly.it/index.php/dashboard>, under "International students", to request an entry visa. Enrollment is completed only upon issuance of the entry visa for study in Italy, the exclusive responsibility of the Italian Diplomatic Representations abroad, regardless of the eligibility acquired.
5. Candidates with a foreign qualification admitted to the course, if they have not submitted it during the admission phase, will have to submit to the Research Doctorate Sector of the Research, Innovation and Social Impact Area, within a suitable time agreed with the Sector itself, under penalty block of career and subsequent forfeiture, the declaration of local value of the qualification, issued by the Italian Diplomatic Representation of the country to which the qualification refers. As an alternative to the declaration of value on site, it is possible to present the diploma supplement in English, issued by the same institution that issued the qualification, drawn up according to the model developed by the European Commission, the Council of Europe and UNESCO/ CEPES, or the comparability certificate from CIMEA or the ENIC-NARIC centres. If the "Declaration of value" presented by the candidate certifies that the qualification is not valid in the country of achievement for enrollment in a course similar to the Doctorate, the interested party will forfeit the Doctoral Course.
6. In the event of withdrawal by those entitled, the remaining vacant positions are assigned to those who hold a useful position in the merit rankings, with communication sent only by ordinary email. For this purpose, the e-mail address indicated by the candidate in the online application is used. The University assumes no responsibility for the dispersion of communications resulting from inaccurate indications of



personal contact details by the candidate or from failure or late communication of their change, nor from electronic errors also linked to the candidate's personal email inbox.

7. The University reserves the right to proceed with appropriate checks on the truthfulness of the content of the winner's declarations. If the content of the declarations is found to be untrue, the winner will lose the benefits resulting from the provision issued on the basis of the untruthful declaration.

Art. 9 Fellowships

1. The amount of the doctoral fellowship is a minimum of €16,243.00 per year gross of social security contributions to be paid by the fellowship holder, with the exception of some administrative categories as reported in Attachment A of the doctoral courses involved. The doctoral fellowship is exempt from the payment of local income tax and personal income tax (IRPEF) and is subject to the payment of separately managed INPS social security contributions, of which two thirds are paid by the University and one third paid by the fellowship holder. Doctoral students enjoy related protections and rights. Fellowship recipients must register for INPS separate management.

2. The total gross annual personal income limit to be able to benefit from the doctoral fellowship is €15,000.00. Income from assets as well as emoluments of any other nature, including those of an occasional nature, contribute to the determination of this income. The income refers to the tax period relating to the calendar year of greatest use of the fellowship (for the academic year 2024/2025 the year 2025). Exceeding the income limit in one of the academic years of enjoyment of the fellowship determines the loss of the right to the fellowship for the year in which the income event incompatible with the fellowship occurred. In this case there will be an obligation to return any monthly payments already received during the academic year.

3. The doctoral fellowship is paid in installments on a deferred monthly basis, has an annual duration and is renewed annually for the duration of the course, provided that the doctoral student has completed the activities foreseen in the previous year and has been admitted by the Teaching Board to the 'next year.

4. Doctoral fellowships cannot be cumulated with research grants or other fellowships awarded for any reason, except with those granted by national or foreign institutions useful for integrating training or research activities with stays abroad.

5. The amount of the fellowship is increased by 50 percent for periods of stay abroad at universities or research institutes previously authorized by the teaching body and proven by a certificate from the host institution, not less than 30 consecutive days and overall not exceeding 12 months, extendable up to 18 months for doctorates in co-supervision with foreign universities and for those activated in associated form pursuant to article 3, paragraph 2 of Ministerial Decree no. 226/2021. The doctoral student is required to certify the actual stay abroad under penalty of reimbursement of the amount received. The increase cannot be received for stays spent in the country of origin or in the country of residence of the doctoral students.

Art. 10 Rights and duties of doctoral students

1. Without prejudice to the rights and obligations provided for by the current University Regulations regarding Research Doctorates and by Ministerial Decree no. 226/21, acceptance of grants implies compliance with the obligations established by the relevant funding sources.

2. Admission to the doctorate involves an exclusive, full-time commitment. Doctoral students have the obligation to assiduously attend doctoral courses, to carry out all study and research activities in the structures intended for this purpose and according to the methods established by the Teaching Board, to present to the Teaching Board, at the end of each year of the course, an oral or written report on the activity and research carried out and to comply with anything else established by the College itself.



3. Each PhD student is guaranteed a budget for research activity in Italy and abroad amounting to no less than 10% of the cost of the Ministerial grant.
4. All PhD students winning this selection will have to carry out a mandatory period of study and research in public or private entities abroad of at least ninety (90) days in the three-year period, previously authorized by the Teaching Body, unless otherwise provided by the financing body.
5. Doctoral students are required to read itof the University Regulations regarding Research Doctorates of the University of Calabria and to consultperiodically the web portal, in particular the page <https://www.unical.it/didattica/editore-formativa/dottorati/>.

Art. 11 Final exam and awarding of the title

The title of Doctor of Research (“Dott. Ric. or Ph.D.”) is issued by the Rector of the University of Calabria at the conclusion of the Course following the public discussion, before a Commission appointed by the Rector himself, of a thesis research that contributes to the advancement of knowledge or methodologies in the chosen field of investigation, in accordance with the provisions of the University Regulations regarding Research Doctorates.

Art. 12 Ownership of the results

1. Intellectual property rights on the possible results achieved by the doctoral student, including, by way of example and not limited to, software, patentable or non-patentable industest inventions, know-how, models, data and data collections, are regulated in accordance with current legislation, the University regulations and based on what is established in the individual agreements with the Universities, Companies or Bodies involved.
2. The doctoral student has the obligation to communicate the achievement of the results without delay to the Coordinator, undertaking not to disclose them or use them without the prior authorization of the University. In the event that the doctoral student collaborates in research groups, he may be invited to sign a specific commitment to recognize intellectual property rights and confidentiality in relation to information, data and documents of a confidential nature that he becomes aware of in carrying out his activity at and/or on behalf of the University.

Art. 13 Processing of personal data

1. Pursuant to art. 13 of the General Data Protection Regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016), candidates are informed that the processing of personal data provided by them during participation in the selection or otherwise acquired to this end by the University of Calabria is aimed solely at carrying out the competition activities and will be carried out by the people in charge of the competition proceedings, also by the Judging Commission, at the University of Calabria, with the use of also computerized procedures , in the ways and within the limits necessary to pursue the aforementioned purposes, even in the event of any communication to third parties. The provision of such data is necessary to verify the participation requirements and possession of qualifications and failure to provide them may preclude such verification.

The data collected by the University of Calabria, for the aforementioned purposes, will be processed through an automated database even after the conclusion of the selection procedure for the purposes inherent to the management of the academic careers of the winners. They may also be used, in aggregate form and for statistical purposes, also by the MUR.



2. The personal data provided by the candidates will be communicated to the administrative structures of the University of Calabria and to the public bodies directly interested in the legal and economic position of the successful candidates.

3. Candidates are granted the rights referred to in the articles 15 et seq. of the aforementioned Regulation 2016/679, in particular, the right to access their personal data, to request rectification, cancellation, limitation of processing, as well as to oppose their processing, addressing requests to the University of Calabria.

Interested parties who believe that the processing of personal data relating to them occurs in violation of the provisions of the Regulation have the right to lodge a complaint with the Guarantor for the protection of personal data, as provided for by the art. 77 of the Regulation itself, or to take action in the appropriate judicial offices (art. 79 of the Regulation).

4. All documentation and information relating to the protection of personal data of the University of Calabria are available at the following link: <https://www.unical.it/privacy/>.

5. The data controller is the University of Calabria, via Pietro Bucci, 87036 Arcavacata di Rende (CS), tel. (+39) 0984 4911.

6. The contact details of the Data Protection Officer (RPD - Responsabile Protezione Dati) are: via Pietro Bucci, Cubo 7/11, 87036 Arcavacata di Rende (CS), tel. (+39) 0984 493918; e-mail: rpd@unical.it.

Art. 14 Responsible for the procedure

Pursuant to the Law 7 August 1990, n. 241, the person responsible for the procedure of this selection notice is the Head of the Research Doctorates Sector of the Research, Innovation and Social Impact Area - University of Calabria (e-mail: dottorati@unical.it).

Art. 15 Final rules

1. For anything not explicitly specified in this selection notice, the provisions established by the current legislation on the matter, by the University Regulations on research doctorates, as well as by the relevant ministerial implementing decrees and by the reference legislation on funding sources, apply.

2. This selection notice is translated into English but in the event of disputes the legal text of reference will be the one in Italian.

The Rector
Nicola Leone

Within this notice, terms relating to people appear only in the masculine form. They refer indiscriminately to people of the female and male gender. Formulations that respect gender identity were renounced so as not to compromise the readability of the text and satisfy the need for simplicity of the same.

Document digitally signed pursuant to the Digital Administration Code and related regulations.



ANNEX A
“ANALYTICAL SHEETS OF RESEARCH DOCTORAL COURSES - XL cycle - AY 2024/2025”




SUMMARY OF AVAILABLE POSITIONS				
No°	PhD Course	Coordinator	Positions available	Pages
1	Civil and Industrial Engineering	Prof. Domenico Mundo	n. 1 position with fellowship financed by DiMEG under the CERERE project	13-15
2	Life Science and Technology	Prof. Tommaso Angelone	1 position with fellowship financed by DiBEST under the PNRR project “Tech4You” e “Space It Up”	16-19
3	Mathematics and Computer Science	Prof. Giorgio Terracina	1 position with fellowship financed by DeMACS with resources from INVITALIA S.p.A.	20-22
4	Geology, Engineering and Science of Sustainable Earth and Energy Transition	Prof. Salvatore Critelli	1 position with fellowship financed by DIAM with resources from INFN	23-25



PhD Course in “Civil and Industest Engineering”

Coordinator	Prof. Domenico Mundo - Department of Mechanical, Energy and Management Engineering (DIMEG) - Via Pietro Bucci - Cubo 45/C, 87036 Arcavacata di Rende (CS) Tel.: +39 0984.494159 - e-mail: domenico.mundo@unical.it - SSD: ING-IND/13
Duration	3 years
Main Department	Department of Mechanical, Energy and Management Engineering (DIMEG)
Other Departments involved	Department of Civil Engineering (DInCi) Department of Computer Science, Modelling, Electronics and Systems Engineering (DIMES) Department of Environmental Engineering (DIAM)
CUN Areas and Scientific Disciplinary Sectors	CUN Area 08: ICAR/01, ICAR/02, ICAR/04, ICAR/05, ICAR/07, ICAR/09, ICAR/10, ICAR/14 ICAR/17, ICAR/20 Area CUN 09: ING-IND/08, ING-IND/09, ING-IND/10, ING-IND/11, ING-IND/13, ING-IND/14, ING-IND/15, ING-IND/ 16, ING-IND/17, ING-IND/22, ING-IND/24, ING-IND/25, ING-IND/26, ING-IND/35
Research Topics	The doctoral course aims to develop skills in the topics relating to the two reference curricula: Civil Engineering and Industest Engineering.
Participation Requirements	<ul style="list-style-type: none"> - Master's Degrees (ex DM 270/2004): LM-3 Landscape Architecture, LM-4 Architecture and Building Engineering-Architecture, LM-4 cu Architecture and Building Engineering-Architecture (five-year), LM-20 Aerospace and Astronautical Engineering, LM -21 Biomedical Engineering, LM-22 Chemical Engineering, LM-23 Civil Engineering, LM-25 Automation Engineering, LM-26 Safety Engineering, LM-28 Electrical Engineering, LM-30 Energy and Nuclear Engineering, LM-31 Engineering Management, LM-32 Computer Engineering, LM-33 Mechanical Engineering, LM-35 Environmental and Land Engineering, LM-53 Materials Science and Engineering. - Specialist Degrees (ex DM 509/1999): 3/S (Specialist Degrees in Landscape Architecture), 4/S (Specialist Degrees in Architecture and Construction Engineering), 25/S (Specialist Degrees in Aerospace and Astronautical Engineering), 26/S (Specialist Degrees in Biomedical Engineering), 27/S (Specializations in chemical engineering), 28/S (specialists in Civil Engineering), 29/S (specialists in Automation Engineering), 31/S (specialists in Electrical Engineering), 33/S (specialists in Energy and Nuclear Engineering), 34/S (specialists in Management Engineering), 35/S (specialists in computer engineering), 36/S (specialists in Mechanical Engineering), 38/S (specialists in Environmental and Territorial Engineering), 61/S (specialists in Materials Science and Engineering);



	<ul style="list-style-type: none"> - Bachelor's Degrees (before Ministerial Decree 509/1999) equivalent to the Master's Degrees mentioned above pursuant to Ministerial Decree 09/07/2009. - Qualification obtained from legally recognized foreign universities, equivalent to one of the above. 	
Admission Procedures	<p>Assessment qualifications and oral exam.</p> <p>During the oral test, knowledge of the English language will be tested.</p>	
Assessable Qualification	<ul style="list-style-type: none"> - Curriculum Vitae et Studiorum (CV) with attached certificate of Master's Degree (or equivalent) with analytical indication of the exams taken and related grade; for undergraduates it is sufficient to certify the exams taken and the related grade. - Research project. - Any publications relating to the topics of the Doctorate. - Any Masters, Grants and Research Grants relating to the topics of the Doctorate. 	
Assessment Criteria	Maximum overall score 60 points	
	Assessment Qualification	Maximum score 30 points
	Research project	Maximum score 15 points
	Curriculum Vitae et Studiorum (CV) with attached certificate of Master's Degree (or equivalent) with analytical indication of the exams taken and related grade; for undergraduates it is sufficient to certify the exams taken and the related grade	Maximum score 9 points
	Publications relevant to the topics of the Doctorate	Maximum score 3 points
	Masters, grants and research grants related to the topics of the Doctorate	Maximum score 3 points
	Oral exam	Maximum score 30 points
	Method of implementation: Discussion of the proposed research project and the scientific and professional experiences gained. During the oral test, knowledge of the English language will be tested.	
	Minimum score for access to the oral test and for passing the interview: 21 points	
Positions and Fellowships	<p>1 (one) position financed by Department of Mechanical, Energy and Management Engineering with funds based on the CERERE project - CEreals REsiliency REvolution for agile supply chain management in the Mediterranean (CUP H23C24000170006), European call 2023 Section 1 AGROFOOD RIA - PRIMA on the following research topic:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>PRIMA IN THE MEDITERRANEAN AREA</p> </div> <div style="text-align: center;">  <p>PRIMA programme is supported by Horizon 2020, the European Union's Framework Programme for Research and Innovation.</p> </div> <div style="text-align: center;">  <p>CERERE</p> </div> </div> <p>“Design and development of smart systems and simulation models in industry 4.0 and 5.0 optics for the agrifood sector”</p>	



	Test	Date	Time	Place
Agenda	Result of Qualification Assessment	January 27, 2025		dici.unical.it
	Oral exam	January 30, 2025	4.30 p.m.	Seminar room DIMEG (cube 44/c, pedestrian bridge level), University of Calabria Arcavacata di Rende (CS)
	The results of the exam will be posted on the website: dici.unical.it			
Contact details for information	domenico.mundo@unical.it			
PhD Course website	dici.unical.it			



PhD Course in “Life Science and Technology”

Coordinator	Prof. Tommaso Angelone - Department of Biology, Ecology and Earth Sciences (DiBEST) - Via Pietro Bucci - Cubo 6/C, 87036 Arcavacata di Rende (CS) Tel.: +39 0984.492902 - e-mail: tommaso.angelone@unical.it - SSD: BIO/09
Duration	3 years
Main Department	Department of Biology, Ecology and Earth Sciences (DiBEST)
CUN Areas and Scientific Disciplinary Sectors	CUN Area 01: MAT/09; CUN Area 03: CHIM/02, CHIM/06, CHIM/08, CHIM/09; CUN Area 04: GEO/01; Area CUN 05: BIO/01, BIO/02, BIO/03, BIO/05, BIO/06, BIO/07, BIO/09, BIO/10, BIO/11, BIO/15, BIO/16, BIO/ 18; CUN Area 06: MED/04; CUN Area 08: ICAR/03; CUN Area 09: ING-IND/24.
Research Topics	The Doctorate is multidisciplinary and aims to develop skills in the following research topics. Experimental cardiology. Cellular physiology. Signal transduction mechanisms. Biochemical and biomolecular aspects of membrane transport systems. Applications of membrane transport systems to human health and drug design. Analysis of genetic and epigenetic variability in relation to human aging and forensic issues; biology, genetics and epigenetics of microorganisms and their relationship with the host. New molecular mechanisms involved in the progression of hormone-sensitive tumors. Bioinformatic analysis of multi-omics data for cancer research through digital platforms and solutions. Biodiversity. Wildlife conservation and risk. Developmental biology. Neurobiology. Morphofunctional cellular alterations in eukaryotes. Adaptive biology of fish in aquaculture. Behavioral ecology. Morpho-functional organ adaptations in the presence of environmental, physical and chemical stress. Cyto-physiology of apical meristems. Molecular and cytophysiological aspects induced by secondary metabolites. Environmental stress and parasites. Identification and characterization of genes involved in key metabolic processes. Comparative study of the genome and mitochondrial gene expression of plants. Epigenetic mechanisms and developmental processes in plants. Response of plant organisms to environmental stress. Plant biosystematics. Flora and vegetation of Calabria. Biodiversity and conservation of plant resources. Cytophysiological and molecular analysis of seagrasses; ecological analysis and functioning of coastal marine ecosystems. Bioindicators of internal water quality. New synthetic and nutraceutical compounds of pharmaceutical interest. Profiling, proteomics, lipidomics and metabolomics of plant and animal matrices using high resolution MALDI-MS and MS/MS and NMR. Self-assembly of multifunctional biocompatible molecular nanoarchitectures for drug delivery and tissue reconstitution. Use of arthropods in the assessment of






	<p>environmental quality and in forensic investigations, parasitosis in humans and animals caused by some species of insects.</p> <p>Study of fossil organic matter, in particular lipid biomarkers, in biogenic carbonates for the characterization of the evolution of their biocoenosis in the history of life.</p> <p>Agri-food and pharmacological processes. Characterization of weakly structured and multiphasic systems for food and pharmacological applications. Renewable energy sources. Efficiency of energy production processes. Air monitoring technologies. Development of water and industrial waste treatment and management systems. Innovative systems for optimizing the waste hierarchy and preventing the creation of waste. Development and characterization of new additives for the asphalt industry to safeguard the health of workers and the environment. Characterization and study of biomimetic membranes using chemical-physical techniques. Characterization and study of bituminous membranes using chemical-physical techniques</p>
<p>Participation Requirements</p>	<ul style="list-style-type: none"> - Master's Degrees (ex DM 270/204): LM-6 Biology; LM-7 Agricultural Biotechnology; LM-8 Industrial Biotechnology; LM-9 Medical, Veterinary and Pharmaceutical Biotechnologies; LM-11 Sciences for the conservation of cultural heritage; LM-13 Pharmacy and industrial pharmacy; LM-17 Physics, LM-18 Computer Science, LM-21 Biomedical Engineering; LM-22 Chemical Engineering; LM-23 Civil Engineering, LM-30 Energy and Nuclear Engineering, LM-31 Management Engineering, LM-32 Computer Engineering; LM-33 Mechanical Engineering; LM-35 Environmental and Territorial Engineering; LM-40 Mathematics; LM-41 Medicine and Surgery; LM-42 Veterinary Medicine; LM-44 Mathematical-physical modeling for engineering, LM-53 Materials science and engineering, LM-54 Chemical sciences; LM-60 Natural Sciences; LM-61 Nutrition Sciences; LM-69 Agricultural sciences and technologies; LM-70 Food science and technology; LM-74 Geological sciences and technologies, LM-75 Sciences and technologies for the environment and the territory; LM-79 Geophysical Sciences; LM-82 Statistical Sciences; LM-86 Zootechnical sciences and animal technologies. - Specialist degrees (ex DM 509/1999): 3/S (specialist in landscape architecture); 6/S (specialists in biology); 7/S (specialists in agricultural biotechnology); 8/S (specialists in industrial biotechnology), 9/S (specialists in medical, veterinary and pharmaceutical biotechnology); 12/S (specialists in conservation and restoration of the historical-artistic heritage), 14/S (specialists in pharmacy and industrial pharmacy), 20/S (specialists in physics), 23/S (specialists in IT), 26/S (specialists in specializations in biomedical engineering), 27/S (specializations in chemical engineering), 28/S (specializations in civil engineering), 33/S (specializations in energy and nuclear engineering), 34/S (specializations in management engineering), 36/S (specialists in mechanical engineering), 38/S (specialists in environmental and territorial engineering), 45/S (specialists in mathematics), 46/S (specialists in



	<p>medicine and surgery), 47/S (specialists in veterinary medicine), 50/S (specialists in mathematical-physical modeling for engineering), 61/S (specialists in materials science and engineering), 62/S (specialists in chemical sciences), 68/S (specialists in science of nature), 69/S (specialists in human nutrition sciences), 74/S (specialists in science and management of rural and forestry resources), 77/S (specialists in agricultural sciences and technologies), 78/S (specialists in agri-food sciences and technologies), 81/S (specialists in industrial chemical sciences and technologies), 82/S (specialists in environmental and territorial sciences and technologies), 85/S (specialists in geophysical sciences), 86/S (specialists in geological sciences), 92/S (specialists in statistics for experimental research);</p> <ul style="list-style-type: none"> - Bachelor's Degrees (before Ministerial Decree 509/1999) equivalent to the Master's Degrees mentioned above pursuant to Ministerial Decree 09/07/2009. - Qualification obtained from a legally recognized foreign university, equivalent to one of the above. 	
Admission Procedures	<p>Assessment qualifications and oral exam. During the oral test, knowledge of the English language will be tested.</p>	
Assessable Qualification	<ul style="list-style-type: none"> - Research project. - Curriculum vitae and studiorum (CV). - Any other titles (Publications, Conference participation). 	
Assessment Criteria	Maximum overall score 60 points	
	Qualification Assessment	Maximum score 30 points
	Research project to be drawn up in Italian or English only and exclusively according to the scheme at the following link: https://www2.unical.it/portale/portaletemplates/view/view.cfm?118202 .	Maximum score 20 points
	Curriculum Vitae et Studiorum (CV)	Maximum score 5 points
	Other titles: Publications, participation in conferences.	Maximum score 5 points
	<p style="text-align: center;">Oral exam</p> <p>Procedure: The oral test will focus on the discussion of the research project, the Curriculum Vitae et Studiorum (CV) and the other qualifications presented. The candidate's skills will be assessed for the purpose of carrying out the project presented. During the oral test, knowledge of the English language will also be tested. Foreign candidates will be able to take the oral test electronically.</p>	Maximum score 30 points
Minimum score for access to the oral test and for passing the interview: 21 points.		



Positions and Fellowships	<p>1 (one) position with fellowship financed by the Department of Biology, Ecology and Earth Sciences, with resource of PNRR project, in particular:</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div data-bbox="635 398 799 427">Finanziato dall'Unione europea NextGenerationEU</div>   </div> <p>Investment 1.5 - Creation and strengthening of "innovation ecosystems", construction of "territorial leaders of R&D" - financed by the European Union - NextGenerationEU - Notice Innovation Ecosystems, project "Technologies for climate change adaptation and quality of life improvement - Tech4You" - Identificativo ECS_000009, CUP H23C22000370006 and Investment 1.3 - Creation of "Partnerships extended to universities, research centres, companies for the financing of basic research projects" funded by the European Union - NextGenerationEU - Notice Extended Partnerships: "Space It Up" project, ASI funding contract no. 2024-5-E.0, CUP master: I53D24000060005, CUP project: H53D2400011000 on the topic: <i>"System and tools for the assessment of cardiovascular parameters of space crew"</i> (area: Pathology)</p>			
Agenda	Test	Date	Time	Place
	Results of Assessment Qualification	January 30, 2025		https://dibest.unical.it/didattica/formazione-post-laurea/dottorato-di-ricerca/dottorato-ricerca-life-science-technology/
	Oral exam	January 31, 2025	9.00 a.m.	Room B5 DiBEST (cube 4D, drive way), University of Calabria Arcavacata di Rende (CS)
	<p>The results of the exam will be posted on the website: https://dibest.unical.it/didattica/formazione-post-laurea/dottorato-di-ricerca/dottorato-ricerca-life-science-technology/</p>			
Contact details for information	<p>Coordinator of the doctoral course: Prof. Tommaso Angelone, DiBEST, Tel.: +39 0984.492902, e-mail: tommaso.angelone@unical.it Email secretariat: DottoratoLifeScienceAndTech@unical.it</p>			
PhD Course website	<p>https://dibest.unical.it/didattica/formazione-post-laurea/dottorato-di-ricerca/dottorato-ricerca-life-science-technology/</p>			



PhD Course in “Mathematics and Computer Science”

Coordinator	Prof. Giorgio Terracina - Dipartimento di Matematica e Informatica (Department of Mathematics and Computer Science) - Via Pietro Bucci - Cubo 31/B, 87036 Arcavacata di Rende (CS) Tel.: +39 0984.496465 - e-mail: giorgio.terracina@unical.it - SSD: INF/01
Duration	3 years
Main Department	Dipartimento di Matematica e Informatica - DeMaCS (Department of Mathematics and Computer Science)
Other Departments involved	Dipartimento di Ingegneria Meccanica, Energetica e Gestionale - DIMEG (Department of Mechanical, Energy and Management Engineering)
CUN Areas and Scientific Disciplinary Sectors (Subject Areas)	Area CUN 01: INF/01 - Computer Science, MAT/02 - Algebra, MAT/03 - Geometry, MAT/04 - Complementary Mathematics, MAT/05 - Mathematical Analysis, MAT/06 - Probability and Mathematical Statistics, MAT/07 - Mathematical Physics, MAT/08 - Numerical Analysis, MAT/09 - Operations Research
Research Topics	<p>The main research topics are listed below:</p> <ul style="list-style-type: none"> • Artificial Intelligence, Knowledge Representation and Reasoning, Answer Set Programming, Logic Programming, Constraint Satisfaction Problems • Artificial Intelligence in multidisciplinary contexts • Databases, Data and Knowledge Integration, Data and Text-Mining, Knowledge Management • Theoretical Computer Science, Game theory, Decidability and Complexity Theory. • Grid Computing, Computational Science, Cellular Automata • Optimization Models and Methods for solving problems in Transport and Logistics • Optimization Nonlinear e Machine Learning • Combinatorics • Study of canonical models of surfaces of general type. Algebraic curves and their moduli spaces. Groups and Graphs • Interactions between algebra and geometry and between geometry and mathematical physics in modern and contemporary Mathematics. Historical developments of the decisions theory. History of the mathematics in the didactical field. Mathematic teaching with particular interest in the role and in the use of the technology. • Calculus of variations. Variational methods in Nonlinear Analysis. Critical point Theory and applications to nonlinear PDE. Geometry of Banach spaces. Local and nonlocal ODE. Approximation methods. Minimum problems and projections. Equilibrium problems. Uniform distribution and discrepancy. Monte Carlo type integration methods.



	<ul style="list-style-type: none"> • Random fields, namely: percolation, statistical mechanics, interacting particle systems, dynamic systems, quantitative finance, stochastic simulation and mathematical statistics. • Quantum Theory problems. Group-theoretic approach to the interaction theory. Semiclassical models for the electricity and heat transmission in semiconductors. Coupling problems in devices-electrical networks. • Sequences of Sheffer polynomials and approximation of the involved operators. Numerical approximation of solutions to high order partial differential equations under boundary conditions or initial data. Approximations for Scattered Data and rational interpolation. Applications to engineering problems and statistics. 	
Participation Requirements	<ul style="list-style-type: none"> - Italian Specialist/Master's Degree (ex DM 509/1999 e DM 270/2004) or equivalent - Degree awarded by an accredited foreign university or Italian University Degree (ante DM 509/1999). 	
Admission Procedures	Assessment qualifications and oral examination. The knowledge of the English Language will be assessed during the oral examination.	
Assessable Qualification	<ul style="list-style-type: none"> - Research project - Curriculum Vitae et Studiorum (CV) including a copy of Bachelor's and Master's Degree (in Italian or English), and the list of examinations taken with grades and final mark (download the template from www.mat.unical.it/phd/Admission) 	
Assessment Criteria	Maximum score 60 points	
	Qualification Assessment	Maximum score 30 points
	Research project	Maximum score 15 points
	Curriculum Vitae et Studiorum (CV)	Maximum score 15 points
	<p style="text-align: center;">Oral exam</p> <p>Procedure: Project discussion. Colloquium on disciplines related to the doctorate. Candidates residing abroad may take the test online. Italian candidates, subject to presentation of a justified request, may take the test online if authorised by the board.</p>	Maximum score 30 points
	Minimum score required for the admission to the oral admission and for the oral examination: 21 pt	
Positions and Fellowships	1 (one) position with fellowship financed by the Department of Mathematics and Informatics on funds INVITALIA S.p.A. on one of the following topics: " <i>Artificial intelligence techniques for process optimisation</i> " or " <i>Artificial intelligence techniques for fraud detection (fraud detection)</i> ".	



	Test	Date	Time	Place
Agenda	Qualification assessment	January 27, 2025		https://www.mat.unical.it/phd/HomePage
	Oral exam	January 30, 2025	9.30 a.m.	Room MT12 (cube 30B), Department of Mathematics and Computer Science University of Calabria - Arcavacata di Rende (CS) online - the link will be published on the web page http://www.mat.unical.it/phd/Admission
	The results of the exam will be posted on the website: http://www.mat.unical.it/phd/Admission .			
Contact details for information	arduino.dieni@unical.it			
PhD Course website	www.mat.unical.it/phd			



PhD Course in “Geology, Engineering and Science of Sustainable Earth and Energy Transition”

Coordinator	Prof. Salvatore Critelli - Environmental Engineering Department (DiAM) - Via Pietro Bucci - Cubo 45/A, 87036 Arcavacata di Rende (CS) Tel.: + 39 0984.496760 - e-mail: salvatore.critelli@unical.it - SSD: GEO/02
Duration	3 years
Main Department	Department of Environmental Engineering (DiAM)
Other Departments involved	Department of Mechanical, Energy and Management Engineering (DIMEG) Department of Biology, Ecology and Earth Sciences (DiBEST) physics department Department of Civil Engineering (DInCi) Department of Chemistry and Chemical Technologies (CTC) Department of Cultures, Education and Society (DiCES)
CUN Areas and Scientific Disciplinary Sectors	CUN Area 01: MAT/07; CUN Area 02: FIS/01, FIS/07, FIS/08; CUN Area 03: CHIM/06, CHIM/07; CUN Area 04: GEO/01, GEO/02, GEO/04, GEO/05, GEO/06, GEO/07, GEO/08, GEO/09, GEO/10, GEO/11; CUN Area 08: ICAR/01, ICAR/02, ICAR/07, ICAR/08, ICAR/09, ICAR/20; CUN Area 09: ING-IND/22, ING-IND/27, ING-IND/33; CUN Area 10: L-ANT/09.
Research Topics	The doctorate aims to develop skills in the fields of environmental geology and engineering, natural risks, georesources, large infrastructures and energy transition, basic and applied sciences to environmental sustainability. In particular: <ul style="list-style-type: none"> • Modeling and simulation of complex systems; • Measuring equipment and sensors; • Natural resources and risks, soil and environmental protection and pollution; • Geological evolution, geological processes and models, and resource geology; • Territory, architecture and buildings; • Energy, innovative materials and industrial transformations.
Participation Requirements	- Master's Degrees (ex DM 270/204): LM-4 Architecture and building engineering-architecture, LM-4 R Architecture and building engineering-architecture, LM-4 cu Architecture and building engineering-architecture (five-year) LM-10 Conservation of architectural and environmental assets, LM-17 Physics, LM -17 R Physics, LM-18 Computer Science, LM-22 Chemical Engineering, LM-22 R Chemical Engineering, LM-23 Civil Engineering, LM-23 R Civil Engineering, LM-24 Building Systems Engineering, LM-26 Safety Engineering , LM-26 R Safety Engineering, LM-30 Energy and Nuclear Engineering. LM-30 R Energy and nuclear engineering, LM-34 Naval engineering, LM-35 Environmental and territorial engineering, LM-35 R Environmental and territorial engineering, LM-40 Mathematics, LM-40 R Mathematics , LM-44 Mathematical-physical modeling for engineering, LM-44 R Mathematical-



	<p>physical modeling for engineering, LM-48 Urban and environmental territorial planning, LM-48 R Urban and environmental territorial planning, LM-53 Science and materials engineering, LM-54 Chemical sciences, LM-54 R Chemical sciences, LM-60 Natural sciences, LM-60 R Natural sciences, LM-69 Agricultural sciences and technologies, LM-69 R Agricultural sciences and technologies, LM -71 Industest chemistry sciences and technologies, LM-71 R Industest chemistry sciences and technologies, LM-72 Navigation sciences and technologies, LM-72 R Navigation sciences and technologies, LM-73 Forestry and environmental sciences and technologies, LM -73 R Forestry and environmental sciences and technologies, LM-74 Geological sciences and technologies, LM-74 R Geological sciences and technologies, LM-75 Environmental and territorial sciences and technologies, LM-75 R Forestry and environmental sciences and technologies environment and territory, LM-79 Geophysical sciences, LM-79 R Geophysical sciences, LM-80 Geographical sciences, LM-80 R Geographical sciences, LM Sc. Mat. Materials Sciences, LM-53. Materials engineering.</p> <p>- Degree (before Ministerial Decree 509/1999) or Specialist/Master's Degree (formerly Ministerial Decree 509/1999 and Ministerial Decree 270/2004): 28/S (specialist in civil engineering), 33/S (specialist in energy and nuclear engineering), 37 /S (specialists in naval engineering), 38/S (specialists in environmental and territorial engineering), 45/S (specialists in mathematics), 50/S (specialists in mathematical-physical modeling for engineering), 54/S (specialists in urban, environmental and territorial planning), 61/S (specialists in materials science and engineering), 62/S (specialists in chemical sciences), 68/S (specialists in natural sciences), 77/S (specialists in agricultural sciences and technologies), 80/S (specialists in science and technologies of navigation systems), 82/S (specialists in sciences and technologies for the environment and the territory), 85/S (specialists in geophysical sciences), 86/S (specialists in geological sciences).</p> <p>- Equivalent qualification obtained from foreign universities, legally recognised.</p>	
Admission Procedures	<p>Assessment qualifications and oral exam. During the oral test, knowledge of the English language will be tested.</p>	
Assessable Qualification	<p>- Curriculum Vitae and Studiorum (CV); - Research project composed of a minimum of 3 pages and a maximum of 6 pages, containing a brief state of the art, the description of the research objectives that are intended to be pursued during the doctorate, the main contributions and/or innovations of the research itself; - Any scientific and technical reports and publications.</p>	
Assessment Criteria	Maximum overall score 60 points	
	Assessment Qualification	Maximum score 30 points
	Research project	Maximum score 20 points
	Curriculum Vitae and Studiorum (CV)	Maximum score 5 points
	Scientific and technical reports and publications	Maximum score 5 points
Oral exam	Maximum score 30 points	



	<p>Procedure: The oral exam will focus on the contents of the project presented. The candidate's skills for carrying out the doctoral project and motivations for scientific research will also be assessed. The candidate must also demonstrate knowledge of a foreign language.</p>			
	<p>Minimum score for access to the oral test and for passing the interview: 21 points</p>			
Positions and Fellowships	<p>1 (one) position with fellowship financed by the Department of Environmental Engineering on INFN funds on the topic: "Research and development of new detectors based on resistive plate chamber (RPC) technology, capable of achieving picosecond time resolution, to be used in the muon spectrometer for experiments at the Future Circular Collider e+e- and study of the trigger and detection efficiency of decay products of light particles with long mean lifetimes not belonging to the Standard Model"</p>			
Agenda	Test	Date	Time	Place
	Results of Assessment Qualification	January 27, 2025		https://diam.unical.it/didattica/formazione-post-laurea/dottorato-di-ricerca_siace/
	Oral exam	January 31, 2025	9.30 a.m.	Seminar room Department of Environmental Engineering University of Calabria Arcavacata di Rende (CS)
	<p>The results of the exam will be posted on the website: https://diam.unical.it/didattica/formazione-post-laurea/dottorato-di-ricerca_siace/</p>			
Contact details for information	<p>salvatore.critelli@unical.it; tel.: +39 0984.496760; marinella.tedeschi@unical.it; tel.: +39 0984.496650.</p>			
PhD Course website	<p>https://diam.unical.it/didattica/formazione-post-laurea/dottorato-di-ricerca_siace/</p>			



ANNEX B

DECLARATION IN SUBSTITUTION OF THE NOTATORY DEED (AFFIDAVIT)

(Art. 47 Presidential Decree no. 445/2000)*

The undersigned _____ tax code: _____ place of birth _____ date of birth _____ Gender M/F residence (city) _____ prov. ____ street _____ n. ____ postal code _____ e-mail address _____ telephone _____ aware of the provisions of the art. 76 of the Presidential Decree of 28 December 2000, n. 445, on the criminal liability to which he/she be subject in the event of falsification of documents and false declarations, pursuant to and for the purposes of the aforementioned Presidential Decree no. 445/2000, and under their own personal responsibility:

DECLARES

to be in possession of the following access title (qualification) in accordance with art. 2 of the call for UniCal PhD public selection: *(indicate precisely: exact name of the course, date of obtaining the qualification and grade, University, list of exams with grades if requested and for candidates not yet in possession of the entrance qualification)*

Degree _____ achieved on date _____

with a vote _____ at _____

list _____ of _____ exams _____ and _____ grades _____ (if any) _____

Please attach a copy of the following identity document:

The undersigned also declares that he/she is informed, pursuant to and for the purposes of Legislative Decree no. 196 of 2003 and Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 that the personal data collected will be processed, including with IT tools, exclusively within the scope of the procedure for which this declaration is made.

Place and date, _____

The declarant

**This declaration may concern states, personal qualities or facts that are of direct knowledge of the interested party as well as states, personal qualities and facts relating to other subjects of which the same person has direct knowledge. This declaration must prove any qualifications (e.g. qualifications, exams taken, professional qualifications held, specialization qualifications, qualifications, etc.) that are not attached to the application, self-certifying them. For the qualifications that are attached (e.g. deeds and documents issued by a Public Administration, copies of publications; copies of parchments or certificates of study or service qualifications, etc.) you must, in the same declaration, declare that they comply to the original. Finally, you have date, sign and attach a copy of a valid identification document.*

NBThe signing of the above-mentioned declarations is not subject to authentication if it is signed in the presence of the employee in charge. If this declaration is sent or presented directly by a person other than the candidate, a photocopy, front and back, of an identity document of the signatory must also be produced. Only identity documents with a photograph and issued by a valid state administration will be considered valid.