



Call for presentation of applications for assignment of PhD scholarships in “ADVANCED CATALYTIC PROCESSES FOR USING RENEWABLE ENERGY SOURCES (ACCESS)”, “MATHEMATICS AND COMPUTATIONAL SCIENCES”, “CHEMICAL SCIENCES” and “VETERINARY, BIOTECHNOLOGICAL AND AGRICULTURAL SCIENCES”, by evaluation of research Projects, only for candidates eligible who are not already recipients of D.M. 117/2023 or D.M. 118/2023 Scholarships, of Scholarships funded by the PNRR and/or financed with research Projects in the general merit rankings relating to the Call for admission to the PhD Courses activated at the University of Messina – 39th CYCLE - referred to in D.R. No. 1854 of 15th June 2023

THE RECTOR

IN VIEW OF Law of 3rd July 1998, No. 210, and in particular Art. 4 in the matter of PhD courses, as amended by Art. 19, paragraph 1, of Law of 30th December 2010, No. 240;

IN VIEW OF the Statute of the University, issued with D.R. No. 1244 of 14th May 2012 (published on G.U. - General Series No. 116 of 19th May 2012) and amended with D.R. No. 3429 of 30th December 2014 (published on G.U. - General Series No. 8 of 12th January 2015);

IN VIEW OF D.M. No. 226 of 14th December 2021 concerning *“Regulation laying down procedures for the accreditation of PhD centers and PhD courses and criteria for the establishment of PhD courses by accredited bodies”*;

IN VIEW OF *the Regulation of the University of Messina concerning PhD courses*, issued with D.R. No. 834 of 25th March 2022;

IN VIEW OF D.M. No. 301 of 22nd March 2022 with which the *“Guidelines for the accreditation of PhD courses”* were approved (Ministerial Note No. 8424 of 23rd March 2022, prot. No. 38641 of 24th March 2022) and D.M. No. 289 of 25th March 2021, with which the “General guidelines of the programming of the Universities 2021-2023 and indicators for the evaluation of the results” were defined;

IN VIEW OF Ministerial Decree No. 118 of 2nd March 2023 which decrees for a. y. 2023/2024 the allocation of resources aimed at financing three-year PhD scholarships for programs dedicated to digital and environmental transitions, PNRR research, Public Administration and cultural heritage under the PNRR, Mission 4, Component 1, Investment 3.4 and Investment 4.1;

IN VIEW OF Ministerial Decree No. 117 of 2nd March 2023 which decrees for a. y. 2023/2024 the allocation of resources aimed at co-financing PhD scholarships for dedicated programs with the contribution and the involvement of companies, under the PNRR, Mission 4, Component 2, Investment 3.3;

IN VIEW OF letters of intent and agreements with Universities and public or private research Institutions and Italian and foreign Companies for the activation and/or financing of PhD courses of the 39th cycle;

IN VIEW OF the resolutions of the Academic Senate and the Academic Board of 30th May 2023, respectively, prot. no. 76167/23 and prot. no. 76163/23 with which, for the 39th cycle, once consistency with the objectives of the PNRR was evaluated, the proposals for renewal, new activation, and participation in PhD courses in a partnership or in PhD courses of national interest and the allocation of positions, were approved, as well as, with regard to no. 15 PhD courses based at the University of Messina, the start of the selection procedures, based on qualifications and exams, for admission to the PhD Courses of the 39th cycle, was established;



IN VIEW OF D.R. No. 1854 of 15th June 2023, with which the public competition, by qualifications and examinations, for admission to the PhD Courses activated by the University of Messina for the 39th cycle, whose notice was published on the University Register at No. 58 of 15th June 2023, the subsequent Rector's Decree No. 2030 of 30th June 2023 of partial amendment of the PhD Call Attachments No. 2,7,13 and 15, published on the University Register at No. 65 of 30th June 2023, and the subsequent Rector's Decrees, with which the competition proceedings were approved and the merit rankings and admissions to the 15 PhD Courses available with the Call referred to in D.R. No. 1854 of 15th June 2023 were published;

GIVEN THAT following the fulfillment of the competition **no. 7** Scholarships were not assigned, in particular: a) for the PhD Course in "*ADVANCED CATALYTIC PROCESSES FOR USING RENEWABLE ENERGY SOURCES (ACCESS)*", **no. 1 Position with scholarship D.M. No. 117/2023** co-funded at 50% by the company **ENI Spa** (PhD Scholarship No. 2); b) for the PhD Course in "*MATHEMATICS AND COMPUTATIONAL SCIENCES*", **no. 1 Position with scholarship** funded by **INGV**, **no. 1 Position with scholarship D.M. 118/2023** "*Digital and Environmental Transitions*", funded by **UNICT**, **no. 1 Position with scholarship** funded by **UNICT Project RESTART - PNRR**; c) for the PhD Course in "*CHEMICAL SCIENCES*" **no. 1 Position with scholarship D.M. No.117/2023** co-funded at 50% by the company **MEDIVIS S.r.l.** and **no. 1 Position with scholarship D.M. 118/2023** "*Cultural Heritage*"; d) for the PhD Course in "*VETERINARY, BIOTECHNOLOGICAL AND AGRICULTURAL SCIENCES*", **no. 1 Position with scholarship D.M. 117/2023** co-funded at 50% by the company **Rabat Pharmacy Group**;

IN VIEW OF the note of 18th September 2023 (prot. no. 115559/2023) with which Professor Massimo Villari, Scientific Coordinator of the **European Project Neurokit-2E**, has requested the activation of **no. 1 PhD scholarship** within the aforementioned Project (**CUP: J43C22001630005**) for the PhD Course in "*MATHEMATICS AND COMPUTATIONAL SCIENCES*", 39th Cycle, whose financial cover will be borne by the funds of the aforementioned Project, as stated in the certification prot. no. 117141/2023;

IN VIEW OF D.R. No. 2681 of 21st September 2023 with which, as a matter of urgency, the start of this selection procedure has been authorized;

IN VIEW OF Ministerial Decree No. 247 of 23rd February 2022 with which, starting from 1st July 2022, the annual amount of the scholarship for the attendance of the PhD courses was redetermined in € 16.243,00, gross of social security charges payable by the recipient;

WITHOUT PREJUDICE TO any subsequent amendments and/or additions to this Call that will be advertised on the website of the University of Messina at the following address <https://www.unime.it/bandi-e-concorsi>.

DECREES

Art. 1

Positions for which applications can be presented

Following the D.R. No. 1854 of 15th June 2023, with which the public competition, by qualifications and examinations, for admission to the PhD Courses activated at the University of Messina for the 39th Cycle was announced, the D.R. No. 2030 of 30th June 2023 of partial amendment of the PhD Call Attachments no. 2,7,13 and 15, and all the subsequent selective proceedings, this Call is made by means of an act addressed to the eligible candidates already in the approved merit rankings, in order to assign, by evaluation of the research Projects that will be presented by the interested candidates, holding the

requirements referred to in subsequent Art. 2, the following PhD Scholarships available:

PHD COURSE IN ADVANCED CATALYTIC PROCESSES FOR USING RENEWABLE ENERGY SOURCES (ACCESS)			
AVAILABLE POSITIONS	TYPE OF POSITIONS/ PHD SCHOLARSHIPS	RESEARCH TOPICS RELATED TO FUNDED SCHOLARSHIPS	PROCEDURE FOR CARRYING OUT THE TRAINING PROJECT
<p>PhD Scholarships funded ex D.M. No 117/2023</p> <p><i>M4C2 – Inv. 3.3. “Introduction to innovative doctorates responding to the innovation needs of companies and promoting the recruitment of researchers in companies”</i> CUP J14D23001350009</p>	<p>No. 1 ENI Spa</p>	<p><i>General topic:</i> Integrated direct capture of CO₂ and conversion into efuel through an innovative approach <u>PhD Scholarship No.2</u> Functionalised nanoporous films for the selective capture and transport of CO₂ (expected activity at UniSA)</p>	<p>The research Program includes a 6-month research period in the Company, and a 6-month research period abroad</p>

PHD COURSE IN MATHEMATICS AND COMPUTATIONAL SCIENCES			
AVAILABLE POSITIONS	TYPE OF POSITIONS/PHD SCHOLARSHIPS	RESEARCH TOPICS RELATED TO FUNDED SCHOLARSHIPS	PROCEDURE FOR CARRYING OUT THE TRAINING PROJECT
<p>PhD Scholarships funded by an affiliated Public Institution</p>	<p>No. 1 INGV</p>	<p>Data Science and AI applications to volcanic processes</p>	
<p>Positions funded by other Universities</p>	<p>No. 1 University of Catania D.M. n. 118/2023 <i>M4C1 – Inv. 3.4 “Digital and Environmental Transition”</i> CUP J14D23001370002</p>	<p>Mathematical models of ecological systems. Mathematical models for desertification. Mathematical models for environmental pollution.</p>	<p>The research Program includes a 6-month research period in a Public Administration/Company/Research Center and a 6-month research period abroad.</p>
	<p>No. 1 University of Catania RESTART - PNRR project CUP E63C22002070006</p>	<p>Deterministic and stochastic optimization in networks and dynamical systems.</p>	

<p>PhD Scholarships funded by further University resources</p>	<p>No. 1 European Project Neurokit-2E CUP J43C22001630005</p>	<p>Determining algorithms and standards for federated data management, enabling federated learning at the edge. Analytics will run on a new edge-to-cloud continuum, supporting dynamic and transparent AI/DNN inference workload distribution for a large and afflicted region, federated computing, and edge-node-swarm-based organization. The continuum will allow to analyze data from heterogeneous sources in real time. The study of:</p> <ul style="list-style-type: none"> • knowledge distillation • Quantization • Sparsification and SNN modeling • Compression and pruning is planned. 	
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PHD COURSE IN CHEMICAL SCIENCES			
AVAILABLE POSITIONS	TYPE OF POSITIONS/PHD SCHOLARSHIPS	RESEARCH TOPICS RELATED TO FUNDED SCHOLARSHIPS	PROCEDURE FOR CARRYING OUT THE TRAINING PROJECT
<p>PhD Scholarships funded ex D.M. No 117/2023</p> <p><i>M4C2 – Inv. 3.3. “Introduction to innovative doctorates responding to the innovation needs of companies and promoting the recruitment of researchers in companies”</i> CUP J44D23001130009</p>	<p>No. 1 MEDIVIS S.r.l.</p>	<p>The research topic related to the scholarship will concern: innovative formulations based on Iodophors and other antimicrobial agents with cyclodextrins for novel pharmaceutical applications</p>	<p>The research Program includes a 6-month research period in the Company and a 6-month research period abroad.</p>

<p>PhD Scholarships funded ex D.M. No. 118/2023 <i>M4C1 – Inv. 4.1</i> <i>"Cultural heritage"</i> CUP J44D23001070002</p>	<p>No. 1</p>	<p>The research topics related to the scholarship will concern: chemistry and technology for the characterisation, conservation, restoration and monitoring of Cultural Heritage.</p>	<p>The research Program includes a 6-month research period in a Public Administration/Company/Research Center and a 6-month research period abroad.</p>
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<p>PHD COURSE IN VETERINARY, BIOTECHNOLOGICAL AND AGRICULTURAL SCIENCES</p>			
<p>AVAILABLE POSITIONS</p>	<p>TYPE OF POSITIONS/PHD SCHOLARSHIPS</p>	<p>RESEARCH TOPICS RELATED TO FUNDED SCHOLARSHIPS</p>	<p>PROCEDURE FOR CARRYING OUT THE TRAINING PROJECT</p>
<p>PhD Scholarships funded ex D.M. No 117/2023 <i>M4C2 – Inv. 3.3.</i> <i>"Introduction to innovative doctorates responding to the innovation needs of companies and promoting the recruitment of researchers in companies"</i> CUP J24D23000700009</p>	<p>No. 1 Rabat Pharmacy Group</p>	<p>Endangered animal biodiversity</p>	<p>The research Program includes a 18-month research period in the Company, and a 6-month research period abroad.</p>

The duration of the PhD courses is three academic years, starting from **1st November 2023**.

Please note that the PhD Scholarships referred to in D.M. No. 117/2023 and D.M. No. 118/2023 can be activated and launched, **only after** the finalization of the Agreement with the Companies partners in innovative PhD Courses available to co-fund at 50%, **and only after the positive outcome of the eligibility and consistency verification of the research projects carried out by MUR and ANVUR, in relation to the scholarships selected** according to the eligibility requirements identified by the aforementioned Ministerial Decrees.

Any negative outcome of the aforementioned finalization and/or evaluation, which affects the assignment of the aforementioned Scholarships, will be communicated to the candidates by means of the publication on the institutional website. In this case, no claim can be laid by the candidates against the University of Messina. After the positive outcomes of the aforementioned evaluations, the activities of the PhD courses funded according to the aforementioned ministerial decrees, must be, in any case, **started by 30th December 2023**.

Art. 2 Admission requirements

For the PhD courses indicated in Art. 1, candidates **eligible** (admitted and not admitted), **who are not already recipients of Scholarships D.M. No. 117/2023 and D.M. No. 118/2023, of Scholarships funded by the PNRR and/or financed with research Projects**, in the merit rankings within the selection procedure referred to in D.R. No. 1854 of 15th June 2023, can participate in this Call, obviously, exclusively for the PhD course for which they are in the ranking.

Admission requirements indicated in Art. 2 of the Call referred to in D.R. No. 1854 of 15th June 2023, to which is made reference, are left unprejudiced.

Art. 3 How to apply

Candidates **eligible** (admitted and not admitted) **who are not already recipients of Scholarships according to D.M. No. 117/2023 or D.M. No. 118/2023, of Scholarships funded by the PNRR and/or financed with research Projects** in the aforementioned merit rankings, holding the requirements referred to in Art. 2, **must** submit, electronically, through the Esse3 platform <https://unime.esse3.cineca.it/Home.do> (where they are already registered as participants in the Call referred to in D.R. No. 1854 of 15th June 2023) an application to participate in this Call, according to the form available at the link <https://www.unime.it/bandi/avviso-pubblico-di-ricognizione-lassegnazione-di-borse-di-dottorato-di-ricerca-39deg-ciclo-aa> and on the Esse3 platform, and the research Project relating to the available PhD Scholarships within the PhD Course.

The candidate in drawing-up his/her own Project must comply with the research Topics indicated in Art. 1, as well as in the eligibility criteria referred to in Art. 7 of D.M. No. 117/2023 and in Articles 7,8,9 and 10 of D.M. No. 118/2023.

Submission of application through the online procedure implies acceptance by the candidates of the rules contained in this Call, in the current PhD Course Regulation of the University of Messina, in the rules contained in the Call referred to in D.R. No. 1854 of 15th June 2023 including the attachments and the subsequent aforementioned Rector's Decree of partial amendment of the PhD Call, in the rules established by the Funder of the Scholarship, as well as in the other current provisions.

The procedure for participation in the selection will be active **for 7 days** starting from the day following the online publication of the Call on the University Register at the following link <http://www.unime.it/it/ateneo/amministrazione/albo-online>. After this period, the connection will no longer be active and it will no longer be possible to complete the application form.

Applications received after the indicated deadline, or produced and/or received in a different way, **will be excluded.**

Candidates do not have to pay any contribution for participation in this procedure.

Art. 4 PhD examination Boards

The PhD examination Boards appointed for admission to the PhD Courses - 39th Cycle – referred to in D.R. No. 1854 of 15th June 2023 will be properly reconvened.

The examination Board proceeds with the evaluation of the research Project of the candidate, expressing, in a closed session, a judgement of suitability with regard to the Scholarships available in the PhD Course and covered by this Call. For this purpose, the examination Boards **must verify** if the

research Project presented by the candidates takes into account the Topics indicated in Art. 1 of this Call, as well as the eligibility criteria established by Art. 7 of D.M. No. 117/2023 and by Articles 7,8,9 and 10 of D.M. No. 118/2023.

Candidates **are not permitted** to attend this evaluation.

All the examination Boards must complete the work without delay **by and no later than 3rd October 2023**.

Art. 5 Admission to PhD courses

Candidates are admitted to PhD courses, according to the ranking order and taking into account the suitability expressed by the PhD examination Board with regard to the Scholarships referred to in D.M. No. 117/2023 and D.M. No. 118/2023 and to the Scholarships funded by the PNRR and/or financed with other research Projects, up to the number of available positions with Scholarship of this Call.

With regard to the PhD Courses funded within the PNRR Calls, please note that all the positions must be covered with scholarship (non-waivable), for the entire three years of the PhD Course, also in order to achieve the PNRR EU targets, which refer to scholarships assigned and funded; with regard to the Scholarships financed with other funds or research Projects, compliance with constraints imposed by the Funder is left unprejudiced.

Reference is made to what is established in Art. 6 of the Call referred to in D.R. No. 1854 of 15th June 2023.

Art. 6 Enrollment Procedures

6.1 Candidates admitted to the PhD courses based on the final ranking must express their acceptance, **through their registration** to the PhD Course, **within 5 days from the publication** of the evaluation results on the website <https://www.unime.it/bandi-e-concorsi>.

Failure to complete the enrollment will result in the forfeiture of admission to the PhD Course. **No personal communications will be sent to candidates. Candidates admitted to the PhD courses are responsible for checking the dates and enrollment procedures.**

Candidates must use the enrollment procedure prepared by the Administration, available on the website <https://unime.esse3.cineca.it/>.

6.2 Undergraduates, immediately after the graduation and, however, **within 10 days from 31st October 2023**, deadline to obtain the qualification referred to in Art. 2 of the Call referred to in D.R. No. 1854 of 15th June 2023, **will have to** send to the Rector of the University of Messina at the email address protocollo@unime.it, the self-certification concerning the graduation together with a valid ID document (or the certification, in the case of qualification obtained abroad and the official translation in Italian or English issued by the University that awarded the qualification), indicating:

- type of qualification;
- name of the University that issued the qualification;
- date of graduation;
- final vote.

Those who, for any reason, do not communicate the graduation within the established terms **will be excluded** from the PhD Courses.

Reference is made to what is established in Art. 7 of the Call referred to in D.R. No. 1854 of 15th June 2023.

Art. 7 Scrolling of ranking and replacement

In the event of forfeiture or waiver by candidates recipients of Scholarship referred to in D.M. No.

117/2023 and D.M. No. 118/2023, as well as of Scholarships funded by the PNRR and/or financed with other research Projects, the scrolling will take place according to the general merit ranking, also taking into account the eligibility expressed by the examination Board with regard to the aforementioned Scholarships, in compliance with the specific timelines and procedures set out in the MUR financing and/or in the provisions concerning the individual financing Projects of this Call and within the limits of the financial cover available.

Reference is made to what is established in Art. 8 of the Call referred to in D.R. No. 1854 of 15th June 2023.

Art. 8 Taxes and fees

For payment of taxes and fees for enrollment and registration to PhD Courses, **reference is made to what is established in Art. 9 of the Call referred to in D.R. No. 1854 of 15th June 2023.**

Art. 9 Scholarships

The PhD scholarship of this Call starts from the date indicated in the Rector's Decree of assignment of the scholarship. The scholarship is annually renewed, following a positive verification by the PhD Board of Professors about the completion of the program of the activities planned for the previous year, as foreseen by Art. 20 of the PhD Regulation of the University of Messina.

Starting from 1st July 2022, the annual amount of the scholarship for the attendance of the PhD courses is equal to € 16.243,00, gross of social security charges payable by the PhD student.

The conduct of research activity abroad, prior authorization of the PhD Board of Professors, is regulated by the PhD Regulation of the University of Messina.

For the PhD positions with a Scholarship of this Call the mandatory study period abroad is reported in Art. 1 together with the mandatory periods in Companies/Public Administrations/Research Centers.

The scholarship **cannot be combined** with any other scholarship, assigned for any purpose, except for those granted by Italian or foreign Institutions useful for integrating the PhD student's training and research activity with stays abroad. The PhD scholarship is subject to the payment of social security contributions INPS "Gestione Separata" in accordance with current legislation, of which two-thirds shall be borne by the administration and one-third by the PhD student recipient of a scholarship.

Art. 10 Rights and obligations of the PhD Student

PhD students must attend the courses and continuously carry out study and research activities under the approved individual program, as foreseen by Art. 23 of the University Regulation.

For the scholarships financed with resources referred to in D.M. No. 117/2023 and D.M. No. 118/2023 and with specific Projects funded by the PNRR and/or with other research Projects of this Call, the PhD student must comply with all the conditions imposed by the Funder and is committed to providing at any time all the documents considered necessary by the Funder, in relation to the reporting of the specific Project. With regard to these positions with Scholarship, where required by the Funder, PhD students must produce a report indicating the time commitment (divided into months spent at the company or research center or Public Administration, on-site and months spent abroad, **in the light of the mandatory periods reported in Art. 1 of this Call**) and a summary of the main activities carried out every six months. Verifying and validating what is indicated by the PhD student will be the PhD course Coordinator's responsibility.

Reference is made to what is established in Art. 11 of the Call referred to in D.R. No. 1854 of 15th June 2023.

Art. 11

Attendance, suspension, forfeiture and waiver

For regulation on attendance, suspension, forfeiture and waiver, reference is made to Art. 24 of the current PhD Regulation of the University of Messina, without prejudice, for the scholarships financed with resources referred to in D.M. No. 117/2023 and D.M. No. 118/2023 and with specific Projects funded by the PNRR and/or research Projects, covered by this Call, to the respect of the constraints imposed by the Ministerial regulations, having regard to the European obligations and constraints provided therein.

Art. 12

Processing of personal data

Pursuant to Art. 13 of European Regulation 2016/679, this University is the owner of the processing of personal data provided by the candidate to this selection and the same processing will be carried out in compliance with the aforementioned European Regulation for the purposes of fulfilling the disclosure requirements referred to in Legislative Decree 33/2013. Data may be used and stored exclusively for the legal obligations related to the activity of this selection. Provision of data is required for these purposes. Data will be processed by this University, as Data Controller, in compliance with the provisions of European Regulation 2016/679 in the manner foreseen by the full set of information published on the University website. In accordance with Art.15 ff. of European Regulation 2016/679, personal data collected by the Data Controller, may be checked and rectified, updated or deleted in any case and at any time, by contacting the Data Processing Officer (reachable at the email address: **rpd@unime.it**) and in the case of non-compliance with European Regulation 2016/679 a complaint may be addressed to the Personal Data Protection Authority. The notice is available in the privacy section of the University, <https://www.unime.it/privacy-e-cookie-policy>, and is an integral part of this Call. The candidate acknowledges having read the aforementioned notice by signing the application form.

Art. 13

Properties of Results and Confidentiality

Reference is made to what is established in Art. 14 of the Call referred to in D.R. No. 1854 of 15th June 2023.

Art. 14

Responsible for the procedure

The person in charge of administrative procedure is Dr. Angelina Venezia, Head of the "PhD Unit" of the Administrative Department "Scientific Research and Internationalization" of this University. For information, interested parties may contact the PhD Unit, telephone numbers: 090 676 8716/8502/8286/8277/8281 e-mail: dottorati@unime.it.

Art. 15

Final Rules

Although not expressly mentioned in this Call, reference is made to D.R. No. 1854 of 15th June 2023, to the subsequent Rector's Decree No. 2030 of 30th June 2023, of partial amendment of the PhD Call Attachments no. 2,7,13 and 15 and to the current legislation on the subject, and in particular to the rules

contained in Art. 4 of Law 210/1998, in Art. 19 of Law No. 240/2010, in D.M. No. 226/2021 and in the Regulation of the PhD courses of the University of Messina (D.R. No. 834/2022), in Legislative Decree No. 81/2015 and subsequent amendments and additions, in the Regulation for the discipline of the patent activity of the University of Messina (D.R. No. 2773/2020), including those contained in the Agreements for the establishment of PhD courses in agreement and/or for the financing of scholarships, in the rules concerning the PNRR and/or other funds or research Projects established by the Funder, including the guidelines, as well as in the other current provisions.

Participation in the procedure implies, as previously acquired, consent to the release of the documents presented and of the minutes of the competition, in the case of a request by the other competitors, pursuant to the legislation on access to documents.

The University assumes no responsibility for the dispersion of communications resulting from inaccurate indications of residence and telephone numbers and email by the candidate or failure or late communication of the change of the same, nor for any IT errors not attributable to the fault of the University itself.

This Decree, written both in Italian and in the English language, will be published on the register of the University at the following links <https://archivio.unime.it/it/ateneo/amministrazione/albo-online> and <https://www.unime.it/bandi-e-concorsi>.

THE RECTOR
Professor Salvatore Cuzzocrea