



**Public Competition for Admission to PhD Program in Systems Medicine at the  
University of Milan  
A.Y. 2019/2020.**

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UNIVERSITÀ  
DEGLI STUDI  
DI MILANO



**Public Competition for Admission to PhD Program in Systems Medicine at the  
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**THE RECTOR OF THE UNIVERSITY OF MILAN AND THE RECTOR OF THE  
UNIVERSITY OF NAPLES "FEDERICO II"**

- in accordance with the ministerial decree nr. 270 dated 22 October 2004, "Amendment to the Regulation covering rules relating to the right of universities to autonomously determine the educational contents of their degree courses; approved with the decree of the Ministry of Education, Universities and Research dated 3 November 1999, n. 509";
- in accordance with article 4 of Law nr. 210 dated 3 July 1998, and following modification in the art. 19, comma 1, of Law n. 240, dated 30 December 2010;
- in accordance with the ministerial decree nr. 45 dated 8 February 2013, "Regulation containing the accreditation methods of the PhD courses and locations and the criteria for the foundation of PhD courses on behalf of accredited bodies";
- in accordance with the Regional Law n. 33, dated 13 December 2004 "Rules governing activities of the Region for the right to study at university," which makes provisions for services to be furnished to facilitate students enrolled in PhD programs;
- in accordance with the cooperation agreement stipulated among the University of Milan, the University of Naples "Federico II", and the Fondazione "Scuola Superiore Europea di Medicina Molecolare" (SEMM), that implements the interuniversity doctorate research course called "PhD (Philosophiae Doctor) in Systems Medicine";
- having regard to the fact that for the 2019/2020 academic year the University intends to activate a new cycle of doctoral programmes;
- having regard to the note of MIUR protocol no.6623 of 27 February 2019;
- having regard to the decisions of the Academic Senate in the session of 12 March 2019 and of the Board of Directors in the session of 26 March 2019, concerning activation of the 35th doctoral cycle;

**HEREBY DECREE**



## Art. 1 - Activation of PhD program

In compliance with the regulations currently in force, the University of Milan, the University of Naples “Federico II”, and the Fondazione “Scuola Superiore Europea di Medicina Molecolare” (SEMM) will set up, subject to confirmation of their accreditation by MIUR, a research doctorate of a highly innovative nature, called “PhD (Philosophiae Doctor) in Systems Medicine”, with the University of Milan as administrative site.

The Medicine field is going through a cultural revolution, pressed by the new knowledge emerging from the fundamental biology (molecular biology, and, more recently, genomics). This knowledge has brought to the development of the Personalized Medicine, based on the identification of the mechanisms in the disease, specific to the given disease and to the patient, and the consequent molecular treatments. Although the Personalized Medicine changed the story of some diseases, for some others there exists a rising discrepancy between the scientific discoveries and their turning into a benefit for the patient. This discrepancy is considered a problem by both the scientific community and the society. The aim of the PhD course is the training of a new generation of basic researchers, able to follow the changes occurring in the biomedicine.

The fundamental elements of the training program are:

- the introduction of basic subjects (mathematics, physics, informatics, statistics);
- the teaching of new models of Translational Research, where the basic researchers work along with the clinicians on the same biomedical problems;
- the foundation of a humanistic culture of the new scientific discoveries (foundational, ethical and sociological basis) and the operative tools (cognitive sciences) which allow the new scientists to interact with the society (patients, policy-makers).

The official language of the “PhD in Systems Medicine” is English.

Scientific-disciplinary sectors covered by the course:

05/E (Biochimica e biologia molecolare sperimentali e cliniche)

05/F (Biologia applicata)

05/I (Genetica e microbiologia)

06/A (Patologia e Diagnostica di Laboratorio)

06/D (Clinica Medica Specialistica)

06/I (Clinica radiologica)

06/M (Sanità pubblica)

11/C (Filosofia)

11/E (Psicologia)



13/D (Statistica e metodi matematici per le decisioni)

Length of the course: 4 years

Curricula:

- Molecular Oncology
- Computational Biology
- Medical Humanities
- Human Genetics

Research subjects

The research subjects proposed by the program, are reported at the following link of the University of Milan website:

<https://www.unimi.it/it/postgraduate/phd/aa-2019-2020-dottorato-medicina-dei-sistemi> :

The proposed research subjects are coherent with the aim of the course and the related research and training program and they will be proposed to the admitted candidates. How and when the candidate will be asked to choose a research subject are reported at the art. 21 of the University of Milan (administrative site) Regulations on the PhD courses.

Available positions: **18**

Fellowships

- 5 fellowships funded by the University of Milan;
- 8 fellowships funded by the University of Naples "Federico II";
- 3 fellowships funded by the European School of Molecular Medicine (SEMM);

The fellowships may be increased if external funding becomes available before the start of the entry examinations.

Foreign candidates who are in receipt of scholarships issued by their country of origin may be admitted to the doctoral programs over and above the prescribed number, provided that they have passed the admission exams set out in this decree.

Coordinator: prof. Giuseppe Viale, full professor, scientific-disciplinary field MED/08 (phd@semm.it).

The PhD training activities will be carried out in the premises of the following Centres:

- FIRC Institute of Molecular Oncology (IFOM), Milan;
- European Institute of Oncology (IEO), Milan;
- Italian Institute of Technology at the "Center for genomic Sciences", Milan;
- Human Technopole di Milano;
- Istituto Nazionale di Genetica Medica (INGM) di Milano;



- CEINGE – Advanced Biotechnologies, Naples;
- TELETHON Institute of Genetics and Medicine (TIGEM), Naples.

In order to be admitted to the PhD program, candidates have to sit an examination in which they will be evaluated according to their university titles and qualifications; this examination complies with the provisions outlined in the following articles.

## Art. 2 - Admission Criteria

Candidates who wish to apply to the PhD program have to possess a second level degree, called *Laurea magistrale* in Italian, or a comparable university degree obtained in foreign universities (Master's degrees).

The suitability of the foreign academic qualifications in terms of content is appraised by the Examining Board constituted for admission to each PhD program, in compliance with the regulations in force in Italy and in the country in which the academic qualification was issued, and the international treaties or agreements pertaining to the conferment of qualifications for the continuation of studies.

For the validation of the degree, the candidate will have to possess the following documents:

- a) University qualification
- b) Italian translation of the qualification, done by an official translator and authenticated by the Italian Representative (Embassy or Consulate) in the country where the applicant obtained the qualifications;
- c) "certificate of equivalence of qualification" to be requested from the Italian diplomatic office in the country in which the qualification was obtained.

The documents in paragraph b) and c) may be replaced by a Diploma Supplement issued by the University according to European Commission, Council of Europe and UNESCO/CEPES standards. The University reserves the right to request the "certificate of equivalence of qualification" where any doubt arises regarding the validity of the qualification.

Verification of the validity of foreign qualifications is made on consignment of the official documents.

Candidates without a second level degree may also apply, but admission to the PhD program is subject to achieving a second level degree by 31 October 2019, on pain of exclusion. The applicant must self-certify, that he/she will physically possess the *Laurea magistrale* within five days from the date of actually being awarded it. This self-certificate, along with a copy of an identity document, should be emailed to the SEMM Graduate Office: [phd@semm.it](mailto:phd@semm.it).

## Art. 3 - Application for admission

Applications must be submitted electronically by **11 July 2019** at 13.00 PM Italian time,



by accessing the web site <http://www.semm.it>. The application form consists in the filling of an electronic CV, to be submitted through the web site.

Every application form will be automatically assigned an ID number, which will be communicated to the applicant via e-mail as confirmation of the application being received. This number will be used as identification of the candidate for any further communication (admission to examination, final ranking, etc.) through the web site.

The CV must include the following information:

- key personal data;
- the key elements of the candidate's educational track;
- the exams passed with score and credits;
- a research project;
- publications and work experiences, if any;
- the curriculum of interest;
- a description of the reasons why the applicant wishes to attend the course;
- names of the two referees who will support the candidate.

Applicants must upload the Diploma Supplement, issued by the university according to European Commission, Council of Europe and UNESCO/CEPES standards, or degree certificate in Italian or English from the university of provenance, indicating exams taken, corresponding grades and credits, and showing the statistical distribution of exam grades of each course. These documents must be uploaded as .pdf files, through the application system of the SEMM website. Failure to upload one of them will result in the candidate being excluded from the competition.

Furthermore, the Academic Board requires two reference letters to support the application. In an appropriate section of the application form, the candidate is asked to indicate the names, affiliations and email addresses of the two chosen referees. The referees will receive an automatic email with a link, through which they reach a reference form to fill. The referees will take care to submit their letters through the online system within the deadline. The referees should hold an academic or project leader position.

#### **Art. 4 - Disabled applicants**

According to art. 20 of law nr. 104 dated 5 February 1992, disabled applicants can request, if they consider it necessary, to receive special aid and/or additional time to complete the assessment. In this case, applicants should transmit, via registered mail (with acknowledgement of receipt) to SEMM Graduate Office, Via Adamello 16, 20139 Milan, or via email to [phd@semm.it](mailto:phd@semm.it), medical certificates testifying the validity of their request within the deadline for the call.

#### **Art. 5 - Pre-selection**





Once the applications have been received, the Examining Board will pre-select the candidates.

The following are the pre-selection criteria used by the Examining Board:

- 1) Consistency between the qualifications possessed by the students and the aim of the PhD program: max 10 points;
- 2) The candidates' previous educational track (exams taken): max 10 points;
- 3) Publications and other titles: max 10 points.

Evaluation of the CV will take into account the candidate's entire university career, any publications, any professional experience and other qualifications held. In scoring the CV, the Examining Committee should take into consideration the conditions and the amount of time taken by the candidate to obtain their qualifications.

The minimum score needed to pass the pre-selection is 18/30.

Pre-selected candidates will be invited for the entry examination.

The list of pre-selected candidates will be published on the website <http://www.semm.it> on 23 July 2019 and represents a valid means of notification, in every respect.

#### **Art. 6 - Entry examination**

The preselected candidates will hold their examination at the IFOM-IEO Campus, via Adamello 16, 20139 Milan on **4, 5 and 6 September 2019**. The timetable of the examination will be published on the web site <http://www.semm.it>.

This publication will represent a valid means of notification, in every respect.

The entrance examination will take place in English and will include:

- a multiple-choice test, aiming at evaluating the knowledge of traditional and basic subjects in the field of biology and biomedicine (cellular and molecular biology, biochemistry, genetics);
- an oral examination with the members of the Examining Board. This interview will be based on the discussion of the applicant's proposed research project, which does not represent any obligation in the choice of the future PhD thesis.

The Commission will assign a score to each candidate based on:

- 1) the candidate's previous educational track (University career, publications, other relevant activities consistent with the aims of the PhD program): max 20 points;
- 2) multiple-choice test: max 30 points;
- 3) oral examination: max 50 points.

The evaluation of qualifications and titles will be communicated to each applicant before he/she carries out the examination.

The overall ranking will be calculated on the basis of the total number of points obtained by the applicants in the evaluation of their qualifications and in their examination, in compliance with the above-mentioned criteria.



The examination is passed if the candidates score 70/100 or more.

Personal interviews with faculty members will follow the oral examination. These interviews aim at presenting the research centers and their research projects, and are not scored for the admission exam's purposes.

### **Art. 7 - Examining Board**

The Examining Board for the entry examination to the PhD course is appointed, upon proposal of the teaching body, by the Rector of the University of Milan and the University of Naples "Federico II", with the jointly issued decree, under the existing legal framework.

The Examining Board must conclude its work no later than 11 September 2019.

### **Art. 8 - Admission to the program**

After the examination, the Examining Board will prepare the ranking list according to the scores obtained by each candidate. The ranking list is published on the web site <http://www.semm.it>.

Candidates are admitted to the PhD course according to the position in the ranking list and the number of available places. Should the results be equal, preference will be given to younger candidates, not considering the criteria used for the fellowship awarding, as reported in the art. 10 of this call. The scholarship is granted in accordance with the ranking order.

In case any admitted candidate withdraws, even within three months of the start of the program, it is possible to call candidates evaluated as eligible in the same ranking list, but not admitted in a first instance. If the withdrawing student has already received any monthly scholarship payments, he/she is required to return them.

Those admitted must show CEFR (Common European Framework of Reference for Languages) Level B2 proficiency in English or in another foreign language indicated in this call for applications, or they will lose their place. During enrolment (see art. 9), candidates must therefore submit a certificate of language skills that is recognised by the University. The certificate must have been awarded no earlier than three years from the date of application (two years for TOEFL) and must attest to proficiency in 4 areas: Listening, Reading, Writing and Speaking.

For the purpose of admission and matriculation, CEFR level B2 proficiency must be certified through one of the following certificates recognised by the University:

BRITISH CHAMBER OF COMMERCE FOR ITALY





*IPEC International Professional English Certificate*

- Executive

B2

**BRITISH INSTITUTES EXAMINATIONS**

*A.L.P 3 - Advanced Language Proficiency*

B2

*M.E.S 1 – Mastery English Skills*

C1

*M.E.S 2 - Mastery English Skills*

C2

**CAMBRIDGE ASSESSMENT**

*FCE First Certificate in English*

B2

*CAE Certificate in Advanced English*

C1

*CPE Certificate in Proficiency in English*

C2

*BEC Business English Certificates*

- Vantage

B2

- Higher

C1

*IELTS International English Language Testing System  
(both Academic and General)*

- 5.5 - 6.5

B2

- 7.0 - 8.0

C1

- 8.5 - 9.0

C2

*BULATS Business Language Testing Service*

- Upper Intermediate 60-74

B2

- Advanced 75-89

C1

- Upper Advanced 90-100

C2

**CAMBRIDGE INTERNATIONAL**

*Cambridge IGCSE First Language English*

- Grade D or above

B2

*Cambridge IGCSE English as a Second Language*

- Grade C or above

B2

*Cambridge O Level: English Language*

- Grade C or above

B2

*Cambridge A/AS Level: English Language*

- Grade E or above

B2

**CERTILINGUA**

B2

**DIPLOMA DI SCUOLA SECONDARIA DI SECONDO GRADO**

*IB Diploma International Baccalaureat*

B2

*Diploma della Scuola Svizzera di Milano*

B2

**ESB - ENGLISH SPEAKING BOARD (INTERNATIONAL)**



*ESOL International All Modes*

- Level 1 B2
- Level 2 C1

**ETS EDUCATIONAL TESTING SERVICE**

*TOEFL Test of English as a Foreign Language*

Internet based test (iBT):

- 72-94 B2
- 95-120 C1

ITP Assessment series:

- 543 B2
- 627 C1

*TOEIC Test of English for International Communication*

- Min. 785 (Listening & Reading) + Min. 310 (Speaking & Writing) B2
- Min. 945 (Listening & Reading) + Min. 360 (Speaking & Writing) C1

**OXFORD UNIVERSITY**

*Oxford Test of English*

- 111-140 B2

**PEARSON**

*PTE Pearson Test of English Academic*

- 59-75 B2
- 76-84 C1
- 85-90 C2

*PTE Pearson Test of English General*

- Level 3 B2
- Level 4 C1
- Level 5 C2

*LCCI London Chamber of Commerce and Industry Examinations Board*

- EFB Level 3 B2

**JETSET**

- Level 5 B2
- Level 6 C1
- Level 7 C2

*EDEXCEL - London Test in English*

- Level 3 B2
- Level 4 C1
- Level 5 C2

**PITMAN**

**ESOL**

- Inter. 1^ Class Pass+ SESOL Inter. 1^ Class Pass B2

**TRINITY COLLEGE LONDON**



*ISE Integrated Skills Examinations in English*

- |           |    |
|-----------|----|
| - ISE II  | B2 |
| - ISE III | C1 |
| - ISE IV  | C2 |

WEITERBILDUNG TEXTSYSTEME

*TELC (The European Language Certificates)* B2

CEFR Level B2: those who do not prove, when completing the matriculation procedure, that they meet the requirement, lose their right to admission and are excluded from the doctoral programme. In particular, forfeiture and exclusion apply in the following cases:

- i. failure to submit (or submission after the deadline for matriculation specified in the call for applications) one of the certificates recognized by the University, as specified above and definitively excluding any other kind of certificate of language proficiency;
- ii. submission of a certificate pursuant to point (i) in which proficiency in all four language skills (Listening, Reading, Writing and Speaking) is not expressly certified;
- iii. submission of a certificate awarded more than three years (two years for TOEFL) prior to the request for matriculation.

The following candidates are not required to provide certification:

- those who have obtained, or will obtain by 31 October 2019, a master's degree (where English is the specialist subject) in one of the following areas: LM-37 Modern European and American Languages and Literature, LM-38 Modern Languages for International Communication and Cooperation, LM-39 Linguistics, LM-94 Specialised Translation and Interpreting or equivalent master's degree;
- those who have obtained, or will obtain by 31 October 2019, a master's degree delivered entirely in English;
- those who have passed the test organised by the University Language Services (Servizio Linguistico d'Ateneo di Milano - SLAM) to ascertain level B2 language skills required for admission to 32nd cycle doctoral studies.
- those who during the degree programme of origin, were already awarded or will be awarded by the deadline for matriculation, a level B2 language skills certificate issued by the University Language Services (SLAM).

Those mentioned above are the only possible cases for exemption.

### **Art. 9 - Enrolment**

The registration to the PhD program must be made within 5 days of the publication of the ranking list on the SEMM website ([www.semm.it](http://www.semm.it)), by filling out the appropriate forms prepared by the University of Milan.

Candidates are admitted conditionally and may be excluded from the programme if they do not meet the requirements.



## Art. 10 - Scholarships

The scholarship is granted, pursuant to and in accordance with the procedures laid down in the current regulations, in accordance with the ranking order and consists of an annual gross amount of € **16.350,00** gross per year. The amount is not subject to IRPEF taxation, as per the art. 4, Law n. 476 dated 13/8/1984, and subject to the regulations of the art. 2, subs. 26, Law n. 335, dated 8 August 1995, as far as the pension contributions are concerned.

In the event of candidates ranked equally, scholarships are awarded by assessing the candidates' economic situation according to the ISEE (Equivalent Economic Situation Indicator).

The Universities will directly pay the funded fellowships.

The regional tax for university education and an expenses charge will be deducted from the scholarship.

Fellowships have a yearly duration and can be renewed if the doctorate candidate has completed the programme of activities of the previous year with a positive evaluation.

Starting from the second year, each doctorate student is ensured, in addition to the fellowship and depending on the existing financial resources of the University budget, a budget for research activity in Italy and abroad suitable to the type of course and in any case no less than 10% of the fellowship itself.

## Art. 11 - Taxes and contributions

Graduate students must pay a contribution towards the cost of the doctorate course, calculated in compliance with the regulations in force in each university, and including the regional tax for university education and the insurance premium against accidents.

Graduate students awarded with a University fellowship are exempted from the payment of the contribution towards the cost of the doctorate course. The regional tax for university education and the insurance premium against accidents will be deducted *ex officio*.

The following subjects are likewise exempted from the payment of the contribution towards the cost of the doctorate course:

- graduate students not awarded with a University fellowship;
- graduate students with a fellowship funded by the Ministry of Foreign Affairs;
- graduate students awarded with and eligible for grants for the right to study;
- disadvantaged persons with 66% disability and/or with disability under Law 104/92.

These students are required to pay only the amount corresponding to the regional tax for the right to study, the accident insurance premium and the stamp duty.



## **Art. 12 - Obligations of PhD Students**

Research doctoral programs include 1500 hours per year of tuition/teaching and research. The duties and rights of students are set out in art. 22 of the University PhD Regulations.

Graduate students are required to regularly follow the activities foreseen by their training plan and to devote themselves with great commitment. They are also required to comply with the requests by the Teaching Body in terms of individual and guided study programs and to carry out the research activities assigned to them.

The nature and duration of the course programs for each curriculum can be found on the web site <http://www.semm.it>.

In order to organize annual assessments, doctorate students are requested to deliver to the Faculty Committee, within its deadlines, a written report about their research activity and its results,

## **Art. 13 - Award of qualification**

The qualification of Doctor of Philosophy, abbreviated "PhD", is awarded jointly by the Rectors of the University of Milan and the University of Naples "Federico II" in compliance with the Ministerial decree dated 8 February 2013, n. 45; the institutional/scientific role of the Fondazione SEMM is expressly mentioned in the title and the degree diploma.

## **Art. 14 - Processing of personal data**

Pursuant to Legislative Decree no.196 of 30 June 2003, as amended by Legislative Decree no. 101 of 10 August 2018, as well as EU Regulation no. 676/2016 (General Data Protection Regulation, GDPR) the University undertakes to safeguard the confidential nature of the information provided by applicants; all data provided is processed solely for purposes related to the competition and possibly for managing the applicant's relationship with the University, in compliance with current legislation. SEMM Foundation will undertake the same prescriptions.

## **Art. 15 - Relevant regulations**

For everything not foreseen by this official call the legislative and regulatory provisions on the subject of research doctorates are valid.

## **Art. 16 - Person in charge of the procedure**

Pursuant to Law no. 241 of 7 August 1990, the person in charge of the present



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competition is dott.ssa Monica Delù (Head of the Doctoral, Master's and International Students Administration Office). For further information and clarification you are kindly requested to use the Infostudentiservice ([www.unimi.infostudente.it](http://www.unimi.infostudente.it)) selecting the category: Postgraduates/Doctoral research students.

Milan,  
THE RECTOR  
UNIVERSITY OF MILAN

(Prof. Elio Franzini)

Naples,  
THE RECTOR  
UNIVERSITY OF NAPLES  
"FEDERICO II"

(Prof. Gaetano Manfredi)