



**Call for applications to the Vocational Master in Bioinformatics and  
Functional Genomics  
Academic year 2022/2023**

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## THE RECTOR

- Having regard to art. 6 of Law no. 341 dated 19 November 1990;
- Having regard to art. 1, paragraph 15 of Law no. 4 dated 14 January 1999;
- Having regard to Ministerial Decree no. 270 dated 22 October 2004, containing new rules governing the educational autonomy of Universities and replacing Ministerial Decree no. 509 dated 3 November 1999;
- Having regard to the Academic Regulations of the University of Milan, issued by Rector's Decree no. 1208 dated 4 March 2020;
- Having regard to the Regulations for Master Programmes, Advanced Courses and Lifelong Learning, issued by Rector's Decree no. 1737 dated 23 April 2020;
- Having regard to the resolution of the Board of Directors dated 25 October 2022, authorising the institution of the vocational master programme set out below, after a favourable opinion had been issued by the Academic Senate on 11 October 2022;
- Having regard to the Regulations on Tuition and Fees, Waivers and Scholarships issued by Rector's Decree of 13 May 2022,

## HEREBY DECREES

The admission procedure to the second level Vocational Master in Bioinformatics and Functional Genomics for the 2022/2023 academic year is now open.

For information on learning objectives, employment prospects, programme organisation and any other specification regarding the programme, please refer to the data sheet attached to this call for applications, which forms an integral part thereof.

### **Art. 1 Summary of procedures and deadlines**



Steps	Deadlines
Online application for admission	Until 2 February 2023
Admission test (written, oral)	15 February 2023, 10 am
Publication of the ranking list on the Unimi portal	22 February 2023, after 2 pm
Enrolment	From 22 February 2023 to 1 March 2023
Payment of first instalment	From 22 February 2023 to 1 March 2023
Payment of second instalment	by 28 July 2023
Programme start date	15 March 2023

### Art. 2 Admission requirements

To be eligible for the programme, students must hold a master's degree in any of the following classes under Ministerial Decree no. 270/2004:

- LM-6 Biology;
- LM-7 Farm Biotechnology;
- LM-8 Industrial Biotechnology;
- LM-9 Medical, veterinary, and pharmaceutical biotechnology;
- LM-13 Pharmacology and Industrial Pharmacology;
- LM-17 Physics; LM-18 Information Technology;
- LM-21 Biomedical Engineering;
- LM-29 Electronic Engineering;
- LM-32 Computer Engineering;
- LM-40 Mathematics;
- LM-41 Medicine and Surgery;
- LM-44 Mathematical-physical modelling for engineering;
- LM-54 Chemistry;
- LM-60 Natural Science;
- LM-69 Farming Sciences and Technologies.



or an equivalent degree awarded by a foreign university.

Upcoming graduates in the above-mentioned classes may also apply for admission, provided they obtain their degree by the start date of the programme, or within the first three months of the programme itself. In such case, the candidate will be admitted “conditionally” and will be requested to self-certify possession of such degree within 30 days after obtaining it. Failure to comply will result in exclusion from the programme.

The suitability of a foreign academic qualification in terms of content is evaluated by the Examining Committee set up for admission to the programme, in compliance with the regulations in force in Italy and in the country in which the academic qualification was issued, and with the international treaties or agreements pertaining to the recognition of qualifications for the continuation of studies.

### Art. 3 Application for admission

Applications for admissions must be submitted by **11.59 pm on 2 February 2023**, as follows:

- 1) Register on the University portal at <https://registrazione.unimi.it/>. Candidates already registered on the portal or in possession of login credentials, such as students or graduates of the University of Milan, can skip this step;
- 2) Log in with your credentials and submit an application for admission to the programme using the online procedure available at <http://studente.unimi.it/ammissioni/a/master/checkLogin.asp>;
- 3) Pay a non-refundable fee of € 50.00 (Regulations on Tuition and Fees, Waivers and Scholarships);
- 4) Upload the following documents in .pdf, .jpg or .rtf format:
  - CV (specifying the full name of the degree held), to be assessed for the selection procedure and the award of scholarships, if any.

If you hold a qualification obtained abroad, please refer to art. 6.

Candidates who provide false data or fail to meet the requirements will be excluded from the programme.

### Art. 4 Candidates with SLD



Candidates with specific learning disabilities (SLD), who require accommodations for the test, must upload their certificates **when applying for admission online**.

SLD certificates must be issued by the National Health Service, by an authorised private medical team or by a private specialist pursuant to Law no. 170/2010, and must be accompanied by a document of compliance issued by the competent health authority.

If the candidate was a minor when the certificate was issued, documents older than three years will not be accepted.

For information please contact the SLD Services office at: [ausili.ammissioni@unimi.it](mailto:ausili.ammissioni@unimi.it).

#### **Art. 5 Candidates with disabilities**

Candidates with disabilities who require additional time and/or specific aids for the test must upload their certificates **when applying for admission online**.

The documents to be submitted must certify disability (*invalidità civile*) and/or handicap pursuant to Law no. 104/1992.

For information please contact the Disability Services office at [ausili.ammissioni@unimi.it](mailto:ausili.ammissioni@unimi.it).

#### **Art. 6 Candidates with international qualifications**

Candidates who have obtained their degree at a foreign university must comply with the same admission procedures and deadlines as the other candidates (see art. 4).

Moreover, they are required to upload the following documents:

- a) University qualification;
- b) Italian translation of such qualification, carried out by an official translator and legalised in accordance with existing regulations;
- c) *Dichiarazione di valore in loco* (statement of validity), to be requested to the Italian diplomatic mission in the country where the qualification was obtained;
- d) Degree certificate in Italian or English with transcript of records;
- e) Passport (only the page with personal data).

The documents listed in points b), c) and d) above may be replaced by a Diploma Supplement issued by the university in accordance with the standards established by the European



Commission, the Council of Europe and UNESCO/CEPES, or by any other declaration of validity issued by ENIC\_NARIC centres or by the relevant diplomatic mission in Italy.

The validity of foreign qualifications is verified upon submission of the official documents. Until then, candidates are admitted to the programme conditionally, and may be excluded from the programme at any time if they are found not to meet the requirements.

#### **Art. 7 Selection procedure and ranking criteria**

Candidates are selected through an interview as well as an assessment of their CV. The interview consists in a discussion on one or more recent scientific articles and aims at assessing the candidate's competencies in the bio-informatic domain.

Assessment criteria:

- Interview: up to 80 points;
- CV assessment: up to 15 points, to be assigned as follows:
  - Degree mark equal to 110 cum laude, 10 points
  - Degree mark equal to 110, 9 points
  - Degree mark equal to 109 or 108, 8 points
  - Degree mark equal to 107 or 106, 7 points
  - Degree mark equal to 105 or 104, 6 points
  - Degree mark equal to 103 or 102, 5 points
  - Degree mark equal to 101 or 100, 4 points
  - Degree mark equal to 99 or 98, 3 points
  - Degree mark equal to 97 or 96, 2 points
  - Degree mark below 96, 1 point;
- Publications or posters presented at conferences: at least 1 publication/poster, 3 points
- Work experience gained at institutions/universities/companies, or other experience abroad, pertaining to scientific training: 2 points
- Years passed from earning the degree: up to 5 points.



In order to be admitted to the programme, candidates must score at least 60/100 points.

The interview will take place on **15 February 2023 at 10 am** at IFOM (FIRC Institute of Molecular Oncology), Via Adamello 16, 20139, Milan.

#### **Art. 8 - Publication of the ranking list and enrolment**

The list of candidates admitted to the programme will be published on 22 February 2023.

The list will be published the University website at the following link:

<http://studente.unimi.it/ammissioni/g/graduatoriamaster/checkLogin.asp>.

Such publication serves as official notice. Therefore, no personal communication will be sent out to candidates.

The enrolment procedure is available at

<http://studente.unimi.it/immatricolazioni/master/checkLogin.asp>

Candidates admitted to the programme are required to enrol and pay the first fee instalment amounting to **€ 1,516.00** within 6 days from the publication of the ranking list.

The enrolment procedure redirects automatically to the PagoPA platform, where candidates can choose their preferred payment method (e.g. credit card, bank transfer or cash payment at a licensed establishment).

Late payment will be subject to a penalty fee of € 30.00 (Regulations on Tuition and Fees, Waivers and Scholarships).

Those who do not wish to enrol are required to promptly notify the Student Office for Phd, Vocational Masters, State Exams and Post-Graduate Programmes via the [InformaStudenti online platform](#).

#### **Special cases**

Students whose **enrolment fee is to be paid by an institution, organisation or company** must contact the Student Office for Phd, Vocational Masters, State Exams and Post-Graduate Programmes via the [InformaStudenti online platform](#) **before the deadline**, in order to receive specific instructions.

As the programme is part of the University's institutional activities, no VAT is applied to the



enrolment fee, and no invoice will be issued.

**Admitted candidates who are enrolled on another programme** cannot enrol online. They must instead contact the Student Office for Phd, Vocational Masters, State Exams and Post-Graduate Programmes via [InformaStudenti](#).

**Foreign candidates** are required to provide a copy of their tax ID (*codice fiscale*) and, for non-EU citizens, their residence permit, through the online enrolment procedure.

Further details on the enrolment procedure are available on the University website [www.unimi.it/en](http://www.unimi.it/en) at <https://www.unimi.it/en/study/postgraduate-study/vocational-masters>

### Art. 9 Payment of second instalment

The second instalment must be paid by the deadline set forth in art. 1 using the [online payment service](#), which can be accessed from [UNIMIA](#), the student portal (also for postgraduates).

The service redirects automatically to the PagoPA platform, where candidates can choose their preferred payment method (e.g. credit card, bank transfer or cash payment at a licensed establishment).

For large amounts it is advisable to choose the payment notice option (*Emissione avviso di pagamento*) and pay via online banking or at your bank.

Late payment of the second instalment will be subject to a penalty fee amounting to € 30.00, if payment is made within the first 15 days after the deadline, or to € 60.00, for payments made after the 15<sup>th</sup> day following the deadline.

### Art. 10 Obligations of the students

Course attendance is mandatory and verified according to course-specific procedures.

Only those who have attended at least two thirds of the planned training activities may take the final exam.

Studies cannot be interrupted for any reason whatsoever.

Students are subject to the applicable provisions of the Regulations on Tuition and Fees of the current academic year regarding payment settlement, withdrawal, refunds and tuition waivers for students with a disability over 66%.





# UNIVERSITÀ DEGLI STUDI DI MILANO

## Academics and Training Division

Post-Graduate and International Relations Sector

Enrolled students who intend to withdraw from the programme must fill the [form available on the website](#) and send it to the Student Office for Phd, Vocational Masters, State Exams and Post-Graduate Programmes [via the InformaStudenti online platform>Postgraduate>Vocational masters](#).

If withdrawal occurs prior to the actual start of the programme, any fees paid will be reimbursed, minus 10% of the enrolment fee, which will be withheld to cover general and administrative costs.

### **Art. 11 Further information, privacy policy and contact details**

For further information on the organisation of this vocational master, please refer to the annex and the University website: <https://www.unimi.it/en/education/postgraduate-and-continuing-education-programmes/vocational-masters-programmes-and-advanced-courses/vocational-masters-programmes-list>

Pursuant to Legislative Decree no. 196 of 2003 (Personal Data Protection Act) as subsequently amended and supplemented, and to EU Regulation 679/2016 (General Data Protection Regulation, in short GDPR) the University is committed to maintaining confidentiality over any information provided by candidates. All data will be processed solely for purposes related to the programme and possibly for managing the candidates' relationship with the University, in compliance with current legislation.

The privacy policy is available at <https://www.unimi.it/en/university/legislation/privacy>.

For any information on enrolment or any request regarding certificates and forms, please visit <https://www.unimi.it/en/study/postgraduate-study/vocational-masters> or contact the Student Office for PHD, Vocational Masters, State Exams and Post-Graduate Programmes via the [InformaStudenti online platform](#), selecting the category POSTGRADUATE>Vocational masters.

Milan, 5 december 2022

THE RECTOR  
prof. Elio Franzini  
signed Elio Franzini

Rep. n. 44753/22 \_ 05.12.2022



**UNIVERSITÀ DEGLI STUDI DI MILANO**  
Academics and Training Division

Post-Graduate and International Relations Sector



## **Annex: Data sheet of the 2nd level Vocational Master in Bioinformatics and Functional Genomics**

**Coordinator: Prof. Massimiliano Pagani**

### **Learning objectives of the programme**

This vocational master programme has been designed for those who intend to take an advanced bio / IT approach to computational sciences, statistics, and maths, to provide responses to complex biological questions. The course will tackle general principles of biology and biotechnology, with a specific focus on the most recent theoretical aspects and technological advancements, and will attempt to demonstrate how Next Generation Sequencing and other advanced experimental approaches might provide more accurate and targeted responses thanks to their ability to analyse and connect data through sophisticated bio-IT techniques.

This programme intends to instil students with an essential understanding of the mathematical and statistical concepts used to interpret and analyse data. These tools will be used individually or collectively to analyse various types of data already available across various databases.

Students will develop their skill-set to manage and analyse raw data, using the most modern programming languages for data science, and taking advantage as needed of technologies based on “cloud computing”. Students will gain a foundation in data visualisation, and techniques for developing web-based applications.

Legal aspects and ethical considerations regarding data analytics will be discussed as well.

### **Employment prospects**

By the end of the vocational master programme, students will have acquired a high level of technical acumen in the field of bio-informatics, basic and industrial research, and have acquired analytical skills typical of data scientists and designers. These skills will transfer into a variety of fields, from academia to a clinical setting, from biotechnology to the pharmaceutical industry.

### **Places available**

Places are capped at 16. The University reserves the right not to run the programme if the number of enrolled students is less than 10.

### **Programme organisation**



The programme will run from 15 March 2023 to 15 March 2024.

It will comprise face-to-face lectures for a total of 192 hours (24 CFU, i.e. university credits) and 320 hours of other training activities (20 CFU).

Lectures and training activities will cover the following subjects:

- From Molecular Biology to Functional Genomics;
- Structural Biology;
- Introduction to IT;
- Algorithms and Data Organization in Bioinformatics Analysis;
- Database for Biological Analyses;
- Next Generation Sequencing;
- Computational Biology;
- From Genetics to Precision Oncology;
- Statistical Analysis of Omic Data;
- Legal and Ethical Aspects of Science and Technology;
- Theory of Image Analysis and Microscopy;
- Foundations of Proteomics, Methods and Technologies for Analysing Qualitative and Quantitative Proteomics.

An internship period of **350 hours (14 CFU)** will follow.

During the programme, students will be assessed through interviews and/or practical tests.

For the final exam, students will have to present and discuss a poster on the results of their project.

Students are not awarded marks for interim or final exams, but a pass or fail; in the case of a “fail” outcome, the exam must be repeated.

The Master's qualification is worth **60 university credits (CFU)**.

### **Enrolment fee**

Candidates admitted to the programme must pay an enrolment fee amounting to € 4,016.00 (including insurance premium and stamp duty).

The enrolment fee must be paid in two instalments:

- First instalment, amounting to € 1,516.00, to be paid by the enrolment date;



# UNIVERSITÀ DEGLI STUDI DI MILANO

Academics and Training Division

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- Second instalment, amounting to € 2,500.00, to be paid by 28 July 2023.

The first instalment is inclusive of the stamp duty.

## Programme administrative office

Department of Medical Biotechnology and Translational Medicine

IFOM - FIRC Institute of Molecular Oncology, Via Adamello 16, 20139 Milan, Italy

[master.bfg@unimi.it](mailto:master.bfg@unimi.it)

## Administrative enquiries

For information regarding enrolment, payments and certificates please contact the Student Office for PHD, Vocational Masters, State Exams and Post-Graduate Programmes via the [InformaStudenti online platform](#), selecting the category POSTGRADUATE>Vocational masters.