UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2026/27
IN
MOLECULAR BIOLOGY OF THE CELL (Classe LM-6 R)
Enrolled in the 2026/2027 academic year

HEADING

Degree classification - Denomination and code:	LM-6 R
Degree title:	Dottore Magistrale
Length of course:	2 years
Credits required for admission:	180
Total number of credits required to complete programme:	120
Course years currently available:	1st
Access procedures:	open, subject to entry requirements
Course code:	FBI

PERSONS/ROLES

Head of Study Programme

Prof.ssa Isabella Dalle Donne

Degree Course Coordinator

Prof. Paolo Pesaresi (mbc.coordinatore@unimi.it)

Tutors - Faculty

Academic guidance advisors - Marta Valenza, Nicola Manfrini and Federica Marini
Erasmus and International Mobility advisors - Cristina Bonza and Federica Marini
Study plan advisor - Monica Beltrame
Thesis advisors - Paolo Pesaresi, David Horner
Master's Degree admission advisor - Paolo Pesaresi
Credit recognition advisor - Paolo Pesaresi

Degree Course website

http://mbc.cdl.unimi.it

Academic Services Office

Address: via Celoria, 26, 20133 Milan – ground Floor, Tower C Desk by appointment, either online or in person. Please book your appointment via email: cl.biol@unimi.it https://informastudenti.unimi.it/ Email: cl.biol@unimi.it

International Students Office

http://www.unimi.it/en/international/coming-abroad/international-students-office-welcome-desk

Matriculation and enrollment

http://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment/enrolment-masters-programme

MBC email

http://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment/enrolment-masters-programme Email: mbc.coordinatore@unimi.it

Representative for disability services and specific learning disabilities (appointed by the Academic Board)

Prof. Diletta Dolfini Email: diletta.dolfini@unimi.it

Student Desks

Address: via Celoria, 18, 20133 Milan. Tel. 0250325032 https://www.unimi.it/en/node/360 https://www.unimi.it/en/node/359

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

The MBC course covers all principal areas of the LM-6 Biology course, with a unique focus on biomolecular subjects that distinguishes it from other courses of the same LM Class. The main goal of the MBC course is to train biologists in

advanced biomolecular research, to address present and future scientific challenges.
In-depth and up-to-date knowledge will be provided for the following subjects: molecular analysis of the genome; regulation of gene expression; structure and function of biological macromolecules and their interactions in pramolecular complexes; cellular communication, signal perception and transduction, metabolic regulation, biomolecular engineering, bioinformatics, biostatistics and biotechnological applications in both pharmaceutical and agri-food sectors. Both theoretical and practical aspects of biomolecular research will be addressed. Graduate students will learn to apply novel and emerging research technologies/approaches, cutting-edge data acquisition systems and analysis, and will have hands-on experience with top-level nanotechnology, hosted in the research laboratories of the DBS. MBC graduates will be well-equipped to enter further, postgraduate-level education programmes as well as R&D departments of different biotech companies.

Expected learning outcomes

According to the Dublin Descriptors, expected learning outcomes are:

KNOWLEDGE AND UNDERSTANDING. Comprehensive knowledge in specific areas of molecular and cellular biology: protein biochemistry, microbiology and genetics, biomedicine and bioinformatics, biotechnology.

APPLYING KNOWLEDGE AND UNDERSTANDING. The student will gain:
- Expertise in carrying out research in the fields of molecular and cell biology, genetics and microbiology and in related research areas, e.g. chemistry, biomedicine, bioinformatics and biotechnology.
- Analytical skills to investigate complex bio-molecular systems using state-of-the-art techniques and instrumentation.
- Competences in experimentally-derived data analysis and interpretation, including biostatistics and bioinformatics.
- Learning up-to-date methodologies for biological analysis and data processing; the development of interpretative models will be assessed throughout the Master's thesis.
- Training and awareness of bio-safety aspects and the appropriate procedures for chemical waste management, and knowledge of related laws and regulations.

DECISION-MAKING. The student will acquire skills in:
- Critical evaluation of research data, e.g. data interpretation and identification of the appropriate logical approach and methodological strategies to gain further experimental and theoretical knowledge during research development.
- Experimental planning, including time management and the application of appropriate scientific methods to different biomolecular problems.
- Development of innovative research strategies.
- Critical analysis of scientific literature and data.
- Awareness of ethical aspects of scientific research and responsibility

COMMUNICATION SKILLS. The student will gain experience in:
- Scientific dissemination and the ability to adopt an appropriate use of scientific English, in order to communicate with both specialist and non-specialist audiences.

LEARNING SKILLS. The student will:
- Receive adequate training to become autonomous in his/her scientific thinking, planning and professional development, and he/she will acquire competences in the independent management of his/her research projects and related team working skills.
- Build strong foundations in order to understand the continuous technological advances in general or specialist areas of molecular and cellular biology, bioinformatics and biotechnology.

All above-mentioned skills will be gained through attending lectures, independent study, and through an experimental internship that will lead to the preparation of the final dissertation. The achievement of course-specific educational goals will be assessed:
- by regular written and/or oral exams
- during the experimental thesis, assessed by continuous discussion of research progress/results with the scientific team and tutor.
- by the thesis committee who will assess overall presentation skills and the ability to proficiently write and discuss his/her work in proper scientific terms.

Professional profile and employment opportunities

Biologist
Role in a work context:
The offering of the Master's Degree in Molecular Biology of the Cell entirely in English enables graduates to access both national and international job markets.
Graduates of the Master's Degree in Molecular Biology of the Cell perform high-responsibility roles in professional contexts that include:
- promotion and development of scientific methodologies;
- managerial roles in public or private institutions dedicated to environmental conservation and management, biological research laboratories, biotechnological, pharmaceutical, and food industries, as well as professional fields requiring a multidisciplinary approach to molecular biology-related issues;

- management of clinical trials;
- activities in scientific publishing and dissemination.

According to DPR 328/01, graduates are eligible to take the state exam to obtain the qualification for the profession of biologist and to enroll in the National Order of Biologists. To achieve higher levels of responsibility, graduates may also pursue PhDs, Specialization Schools, and second-level Master's programs, subject to passing the respective admission exams.

Skills associated with the role:
Graduates of the Master's Degree in Molecular Biology of the Cell possess advanced and modern knowledge in the fields of molecular biology and bioinformatics. Their strong theoretical foundation and in-depth understanding of analytical methodologies, data acquisition, and analysis techniques in molecular cell biology provide specific preparation for professional and project activities in areas related to biological disciplines in the healthcare, pharmaceutical, agri-food, environmental, and biotechnological industries.

Career opportunities:
- Universities and public or private research institutions;
- Public and private laboratories specialized in biological, microbiological, genetic analyses, and quality control;
- Pharmaceutical, chemical, biotechnological, and agri-food industries;
- Communication, dissemination, and scientific information sectors, including scientific publishing in the biomolecular field.

Molecular Biologist
Role in a work context:
Graduates of the Master's Degree in Molecular Biology of the Cell perform high-responsibility roles in all professional contexts involving advanced research in biological and applied sciences. They work in university laboratories, other public or private research centers, and industries, with a particular focus on biochemical, genetic, biophysical, molecular, bioinformatic, and biotechnological aspects.

According to DPR 328/01, graduates are eligible to take the state exam to qualify for the profession of biologist and, consequently, to register with the National Order of Biologists. They can also pursue PhDs, Specialization Schools, and second-level Master's programs, subject to passing the relevant admission exams.
Skills associated with the role:

Graduates of the Master's Degree in Molecular Biology of the Cell possess a specific and modern cultural preparation in molecular biology and bioinformatics. They are particularly equipped to conduct basic and applied research in the industrial, healthcare, and public and private sectors. Their work focuses on understanding the molecular bases of biological phenomena, developing biological and molecular analysis methodologies, and applying biological, genetic, and biochemical knowledge in healthcare, agri-food, and environmental fields.

Career opportunities:
- Universities and public or private research institutions;
- Public and private laboratories specialized in biological, microbiological, genetic analyses, and quality control;
- Pharmaceutical, chemical, biotechnological, and agri-food industries;
- Fields related to communication, dissemination, and scientific information, including scientific publishing in the biomolecular domain.

Researchers and Technicians with Degrees in Biological Sciences
Role in a work context:
Graduates of the Master's Degree in Molecular Biology of the Cell perform high-responsibility roles in all professional contexts requiring the development of research on concepts and theories related to molecular cell biology:
- collaborate with university professors, assisting them in the design and implementation of teaching and curricular activities;
- support students in their academic activities;
- design and conduct theoretical and experimental research in academia aimed at expanding and innovating scientific knowledge or its application in productive contexts;
- ensure the proper functioning of laboratories and scientific equipment;
- define and implement scientific protocols in laboratory experiments and research activities.

According to DPR 328/01, graduates are eligible to take the state exam to qualify for the profession of biologist and, consequently, to register with the National Order of Biologists. They can also pursue PhDs, Specialization Schools, and second-level Master's programs, subject to passing the relevant admission exams.

Skills associated with the role:
Graduates of the Master's Degree in Molecular Biology of the Cell possess a specific and modern cultural preparation in the fields of molecular biology and bioinformatics. Their solid academic background and in-depth knowledge of analytical

methodologies, as well as data acquisition and analysis techniques in molecular cell biology, provide them with the expertise necessary for professional and project activities. These include managing and operating productive technologies, technological platforms, analytical methodologies, and scientific instruments in the healthcare, pharmaceutical, and agri-food sectors.

Career opportunities:
- Universities and Research Institutions;
- Public and private research laboratories.

Pre-requisites for admission

QUALIFICATIONS AND KNOWLEDGE REQUIRED FOR ADMISSION

The admission to the MBC course is subjected to curricular requirements and a demonstrated background knowledge in suitable disciplines related to the course (DM 270/04). Admission is open to:
- Graduates in Biological Sciences (Class L-13) from any Italian University that follows CBUI rules, as adequately certified. In this case, credits (ECTS) acquired by the candidate as an undergraduate will be fully recognized and will meet the curricular prerequisites. The CBUI guidelines describe the compulsory SSD (scientific areas) and the related recommended number of ECTS (min-max):
- 66-96 CFU in basic biological disciplines, including 18-27 ECTS in the fields of botany, plant physiology, zoology, comparative anatomy, or ecology (BIO/01, BIO/02, BIO/04, BIO/05, BIO/06, BIO/07); 18-24 ECTS in physiology or biochemistry (BIO/09, BIO/10); 30-45 ECTS in molecular biology, genetics, and microbiology (BIO/11, BIO/18, BIO/19);
- 12-15 ECTS in non-biological basic chemical disciplines (CHIM/01, CHIM/02, CHIM/03, CHIM/06);
- 15-18 ECTS in non-biological basic disciplines such as mathematics, physics, and computer science (MAT/01-09, FIS/01-08, and INF/01).

The following candidates may also be admitted:
- Graduates from the same L-13 degree class who have not followed an academic path aligned with the CBUI guidelines, or from the L-12 degree class in Biological Sciences under DM 509/99, or from other degree classes, as well as those who have obtained a foreign qualification recognized as suitable under current regulations, provided they meet the required curricular prerequisites. Specifically, the curricular prerequisites consist of holding an adequate number of ECTS, usually no less than 90 CFU, distributed across SSDs of non-biological disciplines (CHIM/01-03, CHIM/06, MAT/01-09, FIS/01-08, and INF/01) as well as SSDs of basic and core biological disciplines (BIO/01-02, BIO/04-07, BIO/09-11, BIO/18-19), as described above;
- Graduates from the L-2 degree class (Biotechnology) who have obtained at least 57 CFU in basic biological disciplines (BIO/01-02, BIO/04-07, BIO/09-11, BIO/18-19).

Students lacking adequate curricular requirements should contact the Coordinator of the Master's course well in advance, to plan the acquisition of the requested ECTS prior to the application deadline. Any lacking ECTS can be acquired by passing the relevant exams and thus acquiring the credits at the University of Milan or any other University. Only students who possess the prerequisites will be invited to the interview.

ADMISSION ASSESSMENT

The admission exam will consist of a formal interview (that can be arranged online) with an Evaluation Committee that will verify the candidate's background knowledge in Molecular biology, Genetics, Microbiology, Biochemistry and Physiology. A Syllabus will be made available to students prior to their interview for a self-assessment of their level of knowledge.
For all students, knowledge of the English language must be at least B2 level ("Upper-intermediate") according to the Common European Framework of Reference (CEFR) for Languages or equivalent certification. The proficiency in scientific English will be verified by the committee during the interview.

KNOWLEDGE ASSESSMENT

The prerequisite to enter the MBC Master's Degree program is an adequate knowledge of the fundaments of biological disciplines as certified by the possession of the required ECTS as described in paragraph "Qualifications and knowledge required for admission". Knowledge will be verified by: 1) evaluation of the bachelor study program and 2) an interview with the Admission Committee, composed of teaching members appointed by the Academic Board. The interview will evaluate the expertise of the candidate in topics related to the MBC degree, and will ascertain proficiency in the English language.
The committee will evaluate the candidate on a 100-point scale and award:
- 25/100 points for the graduation grade, or, in the case of graduating students, the average grade of the exams taken;
- 10/100 points for the curriculum studiorum (degrees with higher number of ECTS in biology related disciplines will obtainmore points; the same applies to the presence of extra elective courses, Erasmus experience, others,...)
- 65/100 for interview performance

The minimum requirement for admission is 60/100 and an adequate English proficiency level (equivalent to B2 level). For the academic Year 2026--2027, applicant interviews for EU citizens, who submit their application by 25 August 2026 (see below, "Application and enrolment information and procedures"), will be held face-to-face on September 7th, 2026 at 14.30, for both graduate students and undergraduate students that plan to graduate by December 31, 2026; Students must bring official proof of their identity (identity card or passport).
Upon graduation, students not from University of Milan, must present certification of their awarded degree to the

Administrative Office or email via https://informastudenti.unimi.it

Non-EU citizens applying for a visa, who are not resident in Italy and who possess a foreign bachelor's degree title, must submit their application by 30 April 2026 and they will be invited to an online interview in the following days:
- February 27, 2026
- March 20, 2026
- April 08, 2026
- April 22, 2026
- May 06, 2026
- May 27, 2026

Foreign students who reside in Italy are classed as Italian citizens and must undergo the same evaluation. Check for updates on interview dates and times on the website: https://mbc.cdl.unimi.it

Programme structure

The MBC Master's has a duration of two years, each year is subdivided into two semesters.
120 educational credits (ECTS) are required for Master completion. Each credit corresponds to a standard student workload of 25 hours, including:
- 8 hours of lectures followed by 17 hours of individual study;
- 16 hours of practical labs followed by 9 hours of individual study;- 25 hours of training activities related to the thesis internship.

The curriculum includes mandatory, guided-and elective courses. Subject choices are made as follows:
- 7 mandatory courses (45 ECTS in total);
- 3 guided-choice courses on principal subjects (18 ECTS in total);
- 2 elective courses (12 ECTS in total), which may be freely selected by the student from all the courses offered by theUniversity (including the MBC courses in the guided-choice list, which have not already been selected), provided that they are coherent with the study plan. MBC recommends to select elective courses with a specific focus on biostatistics and bioinformatics. If unavailable in English, elective courses may be taken in Italian if the student is proficient in the Italian language.

During the first year (I and II semesters), students are encouraged to acquire credits by following at least 8 distinct courses.
The second year will center around the experimental research activities related to the thesis consisting of 9 ECTS of initial laboratory training and 30 ECTS related to the final thesis exam.

Study plan definition and submission for approval

The study plan should be coherent with all proposed MBC courses and in line with the experimental thesis topic. The study plan must be submitted online in the 1st Year, via the web address https://mbc.cdl.unimi.it/en/study/study-plan-submission, within the deadline set by the Student Administrative Office. Approval of the study plan by the Academic Board (Collegio Didattico Dipartimentale, CDD) is mandatory. To favour the correct planning of educational activities, students are encouraged to discuss their study plan with the tutors during the first year and/or contact the Academic Service Office, at the DBS (Ground Floor, Tower C). After the approval of the study plan, the student can take further exams in addition to his/her academic path.
Study plans including courses that differ from those suggested in the Progreamme Description (Manifesto degli Studi) must receive prior positive evaluation by the Study Plan Committee (Commissione Piani di Studio) and must be approved by the Academic Board.
Only courses that account for the requested ECTS are acceptable. Students taking elective courses not offered by MBC Master are requested to submit a study plan by email to the Study Plan Advisor (monica.beltrame@unimi.it) for approval by the end of January of the first year.
Admission to graduation depends on correlation between the list of passed exams and the last approved official study plan. In the event of discrepancies between the student's educational career and the relevant study plan, the student cannot be admitted to graduation.
In addition, students are invited to consider the activities included in the University project for the development of soft skills: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/soft-skills
The soft skills courses must be included in the study plan, they are of compulsory attendance, they have a defined number of places and they can only be selected by the students if they have been subscribed by the Master's degree program to which students belong. https://mbc.cdl.unimi.it/en/courses

Lecture timetable

The first Semester starts on September 28, 2026, and ends on January 15, 2027.
The second Semester starts on March 1, 2027, and ends on June 18, 2027.
The complete course timetable will be posted at the following address https://mbc.cdl.unimi.it/en/study/schedules-and-course-timetable

Testing and assessment procedures

University credits will be earned through exams and assessment of lectures, laboratories and thesis dissertation. Course grades are calculated on a 30-point scale, with grade/mark 18 being the minimum to pass. Assessment will consist of oral or written exams as clearly stated in the syllabus of each course. For courses structured into modules, a head lecturer will be identified as the coordinator, and evaluation procedures, and the registration of examination grades, will be agreed by all associated teaching members.
The schedule of the examination sessions for the assessment of the learning outcomes is available through the UNIMIA exams registration online service (available at http://mbc.cdl.unimi.it/en/study/exams). For each course, at least 7 sessions per year are scheduled, during January-February, June-July, September.

Procedures for exam registration and admittance
Exam registration is compulsory and must be carried out through the UNIMIA - exams registration online service (available at http://mbc.cdl.unimi.it/en/study/exams) in order to allow ECTS to be automatically accredited to the student's personal record.
Students may only sit exams during course breaks, when teaching activities are suspended.

Conscientious objection policy

During the MBC Master, the use of animals for teaching purposes is forbidden, according to law: art. 5f of the Legislative Decree 26/2014. Such procedures are allowed during the traineeships for thesis preparation. However, they must be carried out exclusively by authorized staff, to whom the Legislative Decree 26/2014 does not apply. According to Italian law n. 413, October 12 1993, "Norme sull'obiezione di coscienza alla sperimentazione animale", students have the uncontestable right to conscientiously object to their participation in any animal experimentation. In this case, the Teaching Board will suggest alternative traineeships, that are consistent with the educational goals of MBC, to ensure the correct acquisition of the study credits necessary to graduate.

Laboratories

Classrooms are located in the University buildings in: Via Celoria, 26 (Biology buildings); Via Celoria, 20 (Teaching Sector); Via Golgi, 19. Most laboratories are located in the Department of Biosciences, Via Celoria 26, 20133 Milano.

Libraries

The Biology, Chemistry, Physics and Computer Science library is located in Via Celoria, 18, Milano. See: https://sba.unimi.it/en/libraries/biology-chemistry-physics-and-computer-sciences-library-bicf

Tutoring

Tutors will provide students with academic advice, guidance on their course choices and advice on where and how to seek help with personal issues.

Core / compulsory activities

All above-mentioned training activities, including mandatory, guided and elective courses, and research thesis activities, are compulsory for completing the MBC Master'.

Language test / computer literacy test

Those who do not hold an Italian high school diploma or degree can obtain 3 credits in Additional language skills: Italian by demonstrating A2 level in Italian per the Common European Framework of Reference for Languages (CEFR). This level can be assessed in one of the following ways:
- by submitting a certificate of A2 or higher level issued no more than three years prior to the date of submission. You will find the list of language certificates recognized by the University at: https://www.unimi.it/en/node/349/). The language certificate must be uploaded through the dedicated Platform http://studente.unimi.it/uploadCertificazioniLingue;
- by an entry-level test administrated by SLAM that can be taken only once and is compulsory for all students who do not have a valid language certificate. Those who fail to reach A2 level will have to attend one or more than one 60-hour Italian course(s) geared to their level. Those who do not take the entry-level test or fail to pass the end-of-course test after six attempts will have to obtain language certification privately in order to earn the 3 credits of Additional language skills: Italian. As an alternative, they can modify their course programme by choosing a different course of soft skills recommended by MBC Master's Degree.

Compulsory attendance

Course attendance is strongly recommended.

Internship criteria

In the first part of the thesis period (about 2-3 months) the students will become acquainted with the methodologies and investigation techniques that are mandatory to properly collect research data. During this period the students will carry out practical hands on activities under the constant supervision of a trained senior researcher. At the end of this period upon positive written approval by the MBC coordinator and supervisor of the thesis project the student may start his/her research project in an autonomous manner (about 9-10 months).

Degree programme final exam

The MBC Master will be obtained by passing a final assessment, which is based on evaluation of the thesis dissertation and an oral presentation (both in English) that describes the research project performed by the student. Following the oral presentation, carried out in front of the thesis committee and a public audience, the student will be questioned by the thesis

committee on scientific aspects related to the presented work. The committee will evaluate the student's personal contribution to the design and experimental content of the thesis research project, the written (thesis dissertation) and oral thesis presentation skills, as well as the ability to answer to the questions posed by the thesis committee, together with the student's overall performance throughout the two-year Master's, before awarding a grade, calculated on a 110 - point scale.
More details on the web page: https://mbc.cdl.unimi.it/en/study/graduating. The awarded degree title is a Master's Degree in Molecular Biology of the Cell.

The Master's thesis is composed of a dissertation (written in English) and reports the research activities performed by the student during the 2nd year thesis in a research laboratory, under the guidance of a supervisor (Relatore) and a co-tutor (Correlatore). The thesis describes original data generated on a given research subject, adherent to the principal disciplines of MBC. The thesis period lasts about one solar year and normally starts at the beginning of the second year.
Compilation theses are not permitted. Master theses may be internal or external. Internal theses are carried out at the DBS or in other Departments of the University, in which MBC and DBS teaching staff are based.
External experimental theses may be carried out in other public or private Institutions with adequate facilities. Authorization to perform an external thesis is given by the Academic Board, after careful evaluation of the proposed thesis subject and of the quality of the proponent laboratory. To apply for an external thesis, the student must follow the rules indicated at https://mbc.cdl.unimi.it/en/study/stage-and-internship. The application must be submitted well in advance, as it requires the approval of the MBC Coordinator. The Supervisor of an external thesis must be a member of the DBS and of the Academic Board.

HOW TO SELECT AND APPLY FOR A THESIS POSITION
In April of the first year and October of the second year, students will be informed of the research areas offered in potential host laboratories, the starting dates and the number of internships available are posted on the website (http://tesi.bioscienze.unimi.it). Informative open-labs are held in the second semester of the first year and the first semester of the second year to present the research interests of the DBS groups and application modalities. Teaching members will communicate place acceptance to students and the MBC coordinator, by a set deadline. The thesis officially starts upon submission of the appropriate form to the Student information office (via Celoria, 26– Ground floor, tower C).
The MBC Coordinator will ensure that every student is assigned a placement. The Coordinator will supervise the acceptance procedures of the external thesis by the thesis committee and will also assist the student to identify a Supervisor. The Supervisor must meet the student periodically and to critically evaluate his/her work progress. The Supervisor is responsible for the quality of the experimental work performed by the student and will decide if the
student may present his/her thesis in the final exam. The thesis must state on the front page where the internship has been carried out (https://mbc.cdl.unimi.it/en/study/stage-and-internship).

ADMITTANCE TO GRADUATION EXAM
The student is admitted to the graduation exam upon certified completion of:
1) the requested mandatory, guided-choice, and elective courses and acquisition of the required number of CFUs, and 9 CFUs of laboratory training; 2) the final thesis.

EXPERIENCE OF STUDY ABROAD AS PART OF THE DEGREE PROGRAM

The University of Milan supports international mobility by providing its students with the opportunity to spend study and internship periods abroad. It is a unique chance to enrich your educational path in a new exciting environment.

The agreements entered into by the University with over 300 universities from the 27 EU member countries under the European Erasmus+ programme allow regularly enrolled students to carry out part of their studies at one of the partner universities or to undertake internships at companies, training and research centres and other organisations.

Similar international mobility opportunities are provided outside Europe, through agreements with a number of prestigious institutions.

The University of Milan is a member of the 4EU+ European University Alliance that brings together eight public multidisciplinary universities: University of Milan, Charles University of Prague, Heidelberg University, Paris-Panthéon-Assas University, Sorbonne University of Paris, University of Copenhagen, University of Geneva, and University of Warsaw. The 4EU+ Alliance offers integrated educational pathways and programmes to promote the international mobility of students (physical, blended and virtual).

Study and internships abroad

MBC students are given the opportunity to spend part of their curriculum abroad, at a University within the European Union (EU), in the context of the Erasmus+ mobility for study program of the European Commission. Students can attend courses and sit exams that can be included in the core curriculum and/or perform their practical thesis in several European Universities (visit the link: https://dbs.unimi.it/it/rapporti-internazionali/il-dipartimento-nel-mondo/accordi-internazionali). Most of the European Universities offer master courses taught in English. The Erasmus+ mobility for study call is released each year, usually in February. More information can be found at https:// www.unimi.it/en/international/study-abroad/studying-abroad-erasmus.

Thanks to the participation of the University of Milan in the 4EU+ Alliance, MBC students have the opportunity to earn academic credits (up to a maximum of 12) by attending courses virtually at partner universities (Sorbonne Université in Paris, Paris-Panthéon-Assas University, Charles University in Prague, University of Copenhagen, University of Geneva, Heidelberg University, and the University of Warsaw).
Students interested in conducting research abroad as part of their thesis can also take advantage of the “Erasmus+ mobility for Traineeship” program and the "Thesis Abroad" call.
Accepted students must present a study plan outlining all the activities they intend to carry out abroad, including the corresponding CFUs; the number of proposed CFUs should approximately correspond to those the student would have achieved over the same time period in his/her university. The proposed Erasmus+ program study plan, must be coherent with the MBC course content and must be evaluated and approved by the Academic Board. If necessary, the Academic Board may request the student to integrate the program of exams taken abroad. In accordance with the rules established by the Academic Senate, following completion of the Erasmus+ program, approved exams will be registered, possibly with the original denomination, as part of the student’s curriculum, upon the conversion of the European Credit Transfer and Accumulation System (ECTS) into CFUs.
If the student performs the experimental thesis work abroad, he/she must follow the rules outlined above (see Internship criteria and Rules for the thesis and final exam).
The Erasmus and international mobility advisors for Biological area are prof. M. Cristina Bonza (cristina.bonza@unimi.it) and prof. Federica Marini (federica.marini@unimi.it).

How to participate in Erasmus mobility programs

The students of the University of Milan can participate in mobility programmes, through a public selection procedure.
Ad hoc commissions will evaluate:
• Academic career
• the candidate's proposed study programme abroad
• his/her foreign language proficiency
• the reasons behind his/her application

Call for applications and informative meetings
The public selection for Erasmus+ mobility for study generally begins around February each year with the publication of a call for applications specifying destinations and requirements. Regarding the Erasmus+ Mobility for Traineeship, the University of Milan usually publishes two calls a year enabling students to choose a destination defined by an inter-institutional agreement or to find a traineeship position on their own.

The University organises informative meetings to illustrate mobility opportunities and rules for participation.

Erasmus+ scholarship
The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which may be supplemented by the University funding for disadvantaged students.

Language courses
Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each year by the University Language Centre (SLAM).
https://www.unimi.it/en/node/8/

Learn more at https://www.unimi.it/en/node/274/

For assistance, please contact:
International Mobility Office
Via Santa Sofia 9 (second floor)
Tel. 02 503 13501-12589-13495-13502
Contacts: InformaStudenti;
Student Desk booking through InformaStudenti

ADMISSION CRITERIA: 1ST YEAR OPEN, SUBJECT TO ENTRY REQUIREMENTS

Application and enrolment information and procedures

Both Italian and foreign students must submit admission applications by the deadlines indicated in the "student area" of the University web portal - https://www.unimi.it/en/node/92/ . Those students who have already graduated before the application deadline (EU candidate by 25 August, 2026, Non-EU candidates applying for VISA by 30 April, 2026) or who will graduate by 31 December 2026 must matriculate by January 15th, 2027. The application form must be completed and electronically submitted to the above-mentioned address.

Practical instructions

MBC COURSE ENROLLMENT
Only graduates who have successfully passed the entrance interview may enroll in the MBC course.

Registration will open 5 working days after the interview, according to the terms and conditions indicated at https://www.unimi.it/en/node/92/

Students from the Università degli Studi di Milano that have acquired extra CFUs during their bachelor's degree by passing MBC exams, may request that such credits count towards the 120 CFUs required for MBC graduation.

N° of places reserved to non-EU students resident abroad

25

1st COURSE YEAR Core/compulsory courses/activities				
Scheduling	**Learning activity**	**Module/teaching unit**	**Ects**	**Sector**
1 semester	Advanced molecular biology		6	BIOS-08/A
1 semester	Molecular bioinformatics		6	BIOS-08/A
1 semester	Organic chemistry applied to biology		6	CHEM-05/A
2 semester	Molecular genetics		6	BIOS-14/A
2 semester	Protein biochemistry		6	BIOS-07/A
2 semester	Structural biology of the cell		6	(3) BIOS-04/A, (3) BIOS-01/A
		Total number of compulsory credits/ects	36	
Elective courses				
The student must choose one of the following four courses:				
1 semester	Developmental biology and genetics		6	BIOS-14/A
1 semester	Functional genomics		6	(1) BIOS-08/A, (5) BIOS-14/A
1 semester	Molecular microbiology and genetics of microorganisms		6	(5) BIOS-15/A, (1) BIOS-14/A
2 semester	Epigenetics and Epigenomics		6	(1) BIOS-08/A, (5) BIOS-14/A
The student must choose one of the following three courses:				
1 semester	Biomembranes		6	BIOS-06/A
1 semester	Molecular pharmacology and immunology		6	(3) MEDS-02/A, (3) BIOS-11/A
2 semester	Organelle Biology and Medicine		6	BIOS-14/A
2 semester	Stem cells and genetic diseases		6	BIOS-11/A
The student must choose one of the following four courses:				
1 semester	Synthetic biology		6	(2) BIOS-08/A, (1) BIOS-02/A, (1) BIOS-07/A, (1) BIOS-15/A, (1) BIOS-14/A
2 semester	Biostatistics		6	(3) BIOS-08/A, (3) BIOS-14/A
2 semester	Methods in biochemical investigation		6	BIOS-07/A
2 semester	Signal transduction		6	(3) BIOS-02/A, (3) BIOS-07/A

The student must acquire 12 ECTS by selecting any of the courses offered by the University of Milan, provided that they are coherent with MBC topics and that the course content does not overlap with those present in mandatory and guided-choice courses. Obviously, as open choice courses, the student can pick the remaining guided-choice courses that he/she had not inserted in the study plan. MBC recommends to select elective courses with a specific focus on bioinformatics and biostatistics. If unavailable in English, open-choice courses can be taken in Italian provided that the student is fluent in Italian language.

STUDENTS MUST ACQUIRE 6 ADDITIONAL ECTS

To obtain the degree, students must acquire 6 ECTS of soft skills offered through individual courses worth 6 ECTS, or, for international students who choose to earn the 3 ECTS in Italian Language Proficiency, one course worth 3 ECTS from those listed on the webpage - https://mbc.cdl.unimi.it/en/courses/soft-skills.

For international students, it is strongly recommended to acquire skills in the Italian language – 3 ECTS at linguistic level A2 – necessary for job and professional opportunities among those provided for the degree program in Molecular Biology of the Cell, limited to the Italian national context.

International students who do not hold an Italian high school diploma or degree can obtain 3 credits in Additional language skills: Italian by demonstrating A2 level in Italian per the Common European Framework of Reference for Languages (CEFR). This level can be assessed in one of the following ways:
- by submitting a certificate of A2 or higher level issued no more than three years prior to the date of submission. You will find the list of language certificates recognized by the University at: https://www.unimi.it/en/node/349/). The language

certificate must be uploaded through the dedicated platform;
- by an entry-level test administrated by SLAM that can be taken only once and is compulsory for all students who do not have a valid language certificate. Those who fail to reach A2 level will have to attend one or more than one 60-hour Italian course(s) geared to their level. Those who do not take the entry-level test or fail to pass the end-of-course test after six attempts will have to obtain language certification privately in order to earn the 3 credits of Additional language skills: Italian. As an alternative, they can modify their course programme by choosing a different course of soft skills recommended by MBC Master's Degree.

	Additional Language Skills: Italian (3 ECTS) *(For foreign students only)*		3	NN

2nd COURSE YEAR (available as of academic year 2027/28) Core/compulsory courses/activities				
Scheduling	**Learning activity**	**Module/teaching unit**	**Ects**	**Sector**
year	Biomolecular methods laboratory		9	(3) BIOS-08/A, (3) BIOS-07/A, (3) BIOS-14/A
	Laboratory training		9	NN
		Total number of compulsory credits/ects	18	

End of course requirements				
	Final dissertation		30	NN
		Total number of compulsory credits/ects	30	

COURSE PROGRESSION REQUIREMENTS

There are no propaedeutic courses in the MBC programme that limit progression from the first to the second year.

VALIDATION OF ECTS ACQUIRED IN OTHER/PREVIOUS DEGREE PROGRAMMES/ THROUGH PROFESSIONAL EXPERIENCE

Validations of previously acquired ects

ECTS ACQUIRED IN OTHER MASTER'S

Students requesting a transfer from another Master's programme to MBC, will be subject to audit by an ad hoc committee that will decide if and how many of the ECTS previously acquired by the student may be deemed valid upon admittance to MBC. In addition, the Academic Board retains the right to assess the background knowledge of the candidate by interview, or may request partial integration of pertinent exams.

ECTS ACQUIRED DURING PROFESSIONAL WORK EXPERIENCE

A maximum of 24 (extracurricular) ECTS may be acquired (according to DM 931/2024) by certified professional work experience and by post-secondary level educational activities performed in association with the University, upon approval by the MBC coordinator.