UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2026/27
IN
BIOTECHNOLOGY FOR THE BIOECONOMY (Classe LM-7 R)
Enrolled in the 2026/2027 academic year

HEADING

Degree classification - Denomination and code:	LM-7 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:	GBC

PERSONS/ROLES

Head of Study Programme
Prof. Alessio Scarafoni

Tutors - Faculty
Academic guidance tutor
Prof. Fabio Forlani (student surname A-L); Prof.ssa Eleonora Rolli (student surname M-Z)

Erasmus and international mobility tutor
Prof. Fabio Forlani

Study plan tutor
Prof. Fabio Forlani

Seminar and workshop tutor
Prof. Fabio Forlani

University and programme transfer tutor
Prof. Alessio Scarafoni

Master's degree admission tutor
Prof. Alessio Scarafoni

Credit recognition tutor
Prof. Alessio Scarafoni

Specific Learning Disabilities (SLD) tutor
Prof. Sara Borin

Degree Course website
https://biotechnologybioeconomy.cdl.unimi.it/

Didactic Secretariat of the Faculty of Agricultural and Food Sciences

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Head of study programme

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Students administrative office

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CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

Bioeconomy responds to the environmental challenges the world is facing, oriented to reduce the dependence on natural resources, transform manufacturing, promote sustainable production of renewable plant, microbial and animal resources and their conversion into food, feed, materials, bio-based products and bio-energy, while growing new jobs and industries.

Biotechnology is one of the key enabling technologies to sustain a new green and sustainable economy (i.e. bioeconomy), offering solutions for an efficient and sustainable production of plant and microbial biomasses; the production of bioenergy from (waste) biomasses; environmental protection and safety in terms of bioremediation; green chemistry processes and applications; sustainable agri-food production and processes, circular economy.

In this context, the Biotechnology for the Bioeconomy (BforB) Master degree aims at providing students with advanced molecular and cellular background of microbe and plant systems, which are the basis for the several sectors of the biotechnologies applied to the bio-economy. The BforB Master degree will equip students with a solid and broad expertise about the structure and function of biological macromolecules of interest for the bioeconomy sector, and complete knowledge about the analyses of informational molecules and the expression of characters with a special focus on multidisciplinary and integrated approaches. The BforB Master degree will provide theoretical and practical instruments for the set-up, analyses and improvement of biotechnological processes for i) the transformation of renewable raw materials in biotechnological processes exploiting microorganisms, plants and enzymes, ii) plant and microbial-based bioremediation strategies, iii) bio-based approaches in food and agriculture sustainable development.

The BforB Master?s degree will be taught entirely in English, providing the students with knowledge and competences that can be applied at European and extra European level, to which the bioeconomy sector is faced. Moreover, the English language will allow the participation of students from out of Italy, making the Master degree a stimulant international learning environment.

Expected learning outcomes

The students of the BforB Master degree will acquire:

- the ability to perform biotechnological interventions aimed at optimizing the production efficiency of biological systems (with particular reference to microorganisms, plants, enzymes) involved in bioprocesses of agricultural, food and environmental interest. These objectives will be achieved thanks to specific teaching of advanced biotechnological methodologies and more specific teachings in the field of microbial and protein biotechnologies included in the educational path; furthermore, specific teachings dedicated to fermentation biotechnologies and bioprocesses aimed at recycling and valorizing plant and waste biomasses are foreseen;
- knowledge of innovative biotechnological techniques regarding processes based on the use of microbial and plant systems, to modify their characteristics also concerning consumer needs, environmental sustainability concerning the agri-food sector and the analysis of risks associated with the use and release of biotechnological products. These objectives will be achieved with mandatory teachings dedicated to microbial, plant and environmental biotechnologies.
- knowledge of the effects of biotechnological products on an environmental level. Specific courses dedicated to microbial and plant biotechnologies applied to the environment are planned;
- an advanced knowledge of IT tools, with particular reference to bioinformatics, developing aspects of computational biology both at the level of genomic annotation and structural bioinformatics in general methodologies courses and in specific courses of plant, microbial and protein biotechnologies. The ability to organize, build and access databases for the analysis of genomes, proteomes and metabolomes will be deepened;
- in-depth knowledge of the structure, function and organisation of plant and microbial systems, in particular on the molecular, informational, integrated and interactive logics that direct their activities. These aspects will be covered in various compulsory courses, in particular, those dedicated to the development of plant and microbial cell factories;
- the preparation necessary to develop and fine-tune analytical methods of biotechnological and chemical investigation, in particular for the characterization and quality control of agri-food and industrial products deriving from microbial and plant bioprocesses. Courses dedicated to the study of the function and structure of biomolecules and the molecular analysis of food and plant products are offered to students;
- the preparation to design and develop biotechnological approaches aimed at optimizing the efficiency and defence from biotic and abiotic stress of organisms of agricultural interest, for the protection and remediation of the agro-industrial environment and for the valorization of by-products of the agri-food sector, implementing the circular economy model;
- the achievement of a high mastery of the scientific method of investigation and design in order to be able to conceive, design and manage technical-scientific projects related to biotechnological processes that transform renewable resources into products of applicative interest;
- the ability to operate with great autonomy, assuming responsibility for structure and design will be acquired in particular during the experimental thesis and in courses in which the student will be encouraged to develop project ideas independently;
- being able to use fluently, in written and oral form, at least one language of the European Union; the course will be held entirely in English, to promote the widest and most complete communication in the biotechnology field at a global level;
- the acquisition of knowledge and techniques to carry out basic and applied research, as well as the promotion and development of scientific and technological innovation in the bioeconomy sector. This knowledge will be acquired in particular during the experimental thesis (36 CFU) and in most of the courses made available by the course of study;
- basic knowledge related to legislation, intellectual property management and business planning, and aimed at acquiring skills related to the bioeconomy in terms of assessing the environmental footprint of bioprocesses, project management, and

technology transfer;
- the development of transversal skills (soft skills) of a relational and behavioral nature, which characterize the ethical and moral correctness with which the individual communicates and relates to others in the professional context and with which he can evaluate the implications of his activities in terms of environmental sustainability, will be guaranteed within the teaching activities of the courses.

Professional profile and employment opportunities

The professional profile of the graduate in Biotechnology for the Bioeconomy is that of a biotechnologist for the bioeconomy and concerns the coordination, management and development of research and development laboratories in public and private bodies and in the chemical, agri-food and biotechnology industries, in particular, those operating in the broad sector of the bioeconomy.
His function in a work context is to carry out and coordinate laboratory activities in the context of basic and applied research projects, developing and fine-tuning bioprocesses, and quality control.
The skills associated with the functions are mainly:
- skills to carry out basic and applied research, promotion and development of sustainability and scientific and technological innovation in the field of biotechnology disciplines in the agricultural sector;
- skills needed to design, develop and monitor fermentation processes, both on a laboratory scale and on an industrial scale, for producing primary and secondary metabolites and obtaining renewable energy sources;
- ability to develop new biological and biotechnological products in the agricultural, food and other sectors of the bioeconomy (e.g. biomaterials, bioenergy), also through the valorization of waste biomass;
- skills in selecting, obtaining and developing plant and microbial cells as biofactories for producing molecules of interest in the sectors of fine chemicals, polymers, agri-food and pharmaceutical industries;
- ability to develop and control biological processes for producing raw materials (plant and microbial biomass) suitable for transformation into molecules of applicative interest;
- skills in the development and application of bioremediation processes, in particular through the use of microorganisms and plants;
- ability to design, develop and control bioprocesses for the production of intermediates and products for green chemistry production activities and for the agri-food industry (use of cells or their parts, in particular enzymes);
- molecular and cellular skills in designing and developing innovative diagnostic techniques, particularly for the traceability of agri-food supply chains.
Career opportunities exist within public and private research and development institutions, including Ph.D. programs after passing the relevant competitive exams, and in the chemical, pharmaceutical, agri-food, and biotechnology industries.
BforB graduates can access the Italian State exams for professional qualification and registration in the Professional Register of the Order of Agronomists and Forestry Doctors (section A), and in the Professional Register of the National Order of Biologists (section A). Furthermore, graduates can participate in the qualifying exams for the profession of Agrotechnician and Graduate Agrotechnician.

Pre-requisites for admission

Students with an Italian University degree: The BforB Master degree can be accessed by graduates of Laurea Triennale belonging to the L-2 class (Biotecnologia) and previous class 1 (Biotecnologia). It can also be accessed by any student with a Laurea Triennale providing a strong background in biotechnology-related subjects, specifically at least 35 university credits (CFU) in basic disciplines (mathematics, physics, chemistry, biology) among the following SSD: MAT/01-02-03-04-05-06-07-08-09, FIS/01-02-03-04-05-06-07-08, SECS-S/01-02, AGR/07-16, BIO/04-10-11-12-13-18-19, CHIM/01-02-03-06 and at least 25 CFU in "core disciplines" for the L-2 class of Laurea Triennale, among the following SSD: AGR/01-02-03-04-11-12-13-15-17-18, BIO/01-02-03-07-09-15, CHIM/04-05-08-10-11-12, MED/03-07-42, VET/03-04.
Students with a degree from a non-Italian institution: They must possess a Bachelor?s degree from an accredited college or University that includes exams in basic disciplines of mathematics, physics, general chemistry, biology, and also an adequate number of exams in all the following disciplines: organic chemistry, biochemistry, molecular biology, microbiology, genetics and plant biology, and disciplines included in the biotechnology area.

Proficiency in English at level B2 or higher according to the Common European Framework of Reference for Languages (CEFR) is required for admission.
The B2-level requirement will be ascertained by the University Language Centre (SLAM) upon admission as follows:
- Valid language certificate at B2 level or higher, issued no more than three years before the application date. The list of language certificates recognized by the University is available at https://www.unimi.it/en/node/39322 .The certificate must be uploaded when submitting the online application;
- English level achieved during a University of Milan degree programme and certified by the University Language Centre (SLAM) no more than four years before the application date, including levels based on language certificates submitted by the applicant during their Bachelor's degree at the University of Milan. Verification will be carried out automatically, no documents need to be uploaded.
- Entry test administrated by the University Language Centre (SLAM) according to the calendar published on the website: (https://www.unimi.it/en/node/39267/)
Applicants who fail to submit a valid certificate or do not meet the required proficiency level will be instructed during the admission procedure to take the Entry test.
Applicants who do not take or pass the Entry test will be required to obtain a language proficiency certificate recognized by the University (see https://www.unimi.it/en/node/39322) and submit it to SLAM via the InformaStudenti service by the

deadline set by the master's degree programme (https://www.unimi.it/en/node/39267/).
Applicants who fail to meet the requirement by said deadline will not be admitted to the master's degree programme and may not sit any further tests.

Eligibility assessment: the personal curriculum of the applicants and the certifications will be evaluated to verify that the requirements for admission are satisfied by an Admission Committee composed of the coordinator and at least one lecturer of the Master degree. For students with an Italian Bachelor degree the analysis of the curriculum aims to verify the level of knowledge in the "core disciplines" for the L-2 class of Laurea Triennale. Students who have qualified abroad equivalent to a Bachelor's degree must have passed, together with the basic disciplines of mathematics, physics, general chemistry and biology, also a suitable number of exams in all the following disciplines: organic chemistry, biochemistry, molecular biology, microbiology, genetics and plant physiology, and disciplines included in the biotechnology area.
Admission to the LM for all applicants requires, in addition to the specified curricular prerequisites, an evaluation of the candidate's overall personal preparation. This evaluation aims to verify the level of knowledge (assessed by ECTS/CFU acquired and grades obtained) in the following core disciplines: mathematics and statistics, organic chemistry, biochemistry, molecular biology, genetics, plant biology, and microbiology. It should be noted that preparation in the disciplines mentioned above may also have been achieved through attendance at individual courses. The assessment of overall personal preparation takes into account the final degree grade.
If deemed necessary, the Committee may integrate this documentary assessment with an interview with the applicants. The interview may be held remotely through an online conference platform. Should the candidates be called by the commission, the interview is mandatory for possible admission to the Master. The interview aims to examine the applicant's background knowledge thoroughly and thus assess their potential for the timely completion of studies.
The applicants will receive communication of their eligibility and be allowed to enroll in the Master's degree program. An online anonymous self-assessment test will be provided to enable admitted students to identify knowledge areas for focused and autonomous study. Faculty members are available to offer personalized guidance and relevant bibliographic resources.

Practical instructions
Applicants considered eligible by the Admission Committee can enroll in the BforB Master degree under the terms and conditions indicated at https://www.unimi.it/en/education/biotechnology-bioeconomy.
Students who have applied for admission to BforB prior to the conclusion of their bachelor degree (Laurea Triennale), if possessing the other admission requirements and a valid English proficiency certificate, will be granted the possibility to attend the first term classes (pre-enrollment). In this case students must present to Segreteria Studenti the bachelor degree up to December 31st 2026 to receive formal admission to the course. Only after admission are students allowed to enrol and only after enrolment can they take exams.

Programme structure

The BforB Master degree is a 2-year course, and each year is divided in two terms. The program includes different activities: frontal lessons, practical classes, field visits and a final experimental project leading to the final public dissertation.
The Master Degree encompasses the acquisition of 120 CFU. One CFU corresponds to a standard student workload of 25 hours and is calculated as follows:
- Frontal lectures: 8 hours of lecture and 17 hours of personal elaboration
- Practical classes: 16 hours of laboratory activity and 9 hour of personal elaboration
- Experimental project and laboratory internships: 25 hours of laboratory and/or training activity

To complete the study program, the student must acquire a total of 120 CFU as follows:
a) 61 CFU in 9 mandatory courses;
b) 12 CFU in two courses chosen from a list of 6 elective courses (see Table 1 below);
c) 8 CFU in one or more courses freely chosen among:
i) the optional courses activated explicitly by the BforB Master Degree (see Table 2 below),
ii) additional elective courses (see Table 1 below)
iii) any courses activated by the University of Milan for Master Degrees, as long as consistent with the aims of the BforB degree and not a repetition of other courses already inserted in the study plan.
iv) a maximum amount of 4 CFU can be acquired by interdisciplinary laboratory activities organized within other Master Degree courses or specifically agreed upon with one of the Master Degree teachers. Laboratory activities will be certified by Dr. Fabio Forlani on behalf of the BforB Study Plan Committee.
d) It is possible to exceed 8 CFU; however, students who have already acquired 8 CFU through free-choice courses are allowed to take additional courses, but these will not be included in the final degree score. It is not possible to exceed 8 CFU with interdisciplinary laboratory activities. 3 CFU with mandatory additional educational activities, which can be acquired:
i) by participating in educational activities not included in the list of University of Milan programme courses (seminars, workshops, external courses, etc.), language course (language other than English and not the mother tongue), or laboratory activities (interdisciplinary research activities, practical laboratory training, Research Enriched Education laboratories, and similar) which will be evaluated and certified as “Complementary activities” by Dr. Fabio Forlani on behalf of the BforB Study Plan Committee;
ii) by successfully completing “Ree Crispres - A workshop on genome editing technologies”.
Only in the case of international students, 3 CFU of additional educational activities can also be acquired through the successful completion of the Italian language course “Additional Language skills: Italian” organized by SLAM, proving

after the final exam an Italian language proficiency at level A2 within the Common European Framework of Reference for Languages (CEFR) (see table 3 below).
Guidelines for free and additional educational activities are annexed in https://biotechnologybioeconomy.cdl.unimi.it/en/study/study-plan-submission.
e) 36 CFU will be earned through an individual research thesis project, which includes a research internship and the final dissertation, to be initiated in the second year. The experimental project involves a minimum of at least six months of full-time work under the supervision of i) a BforB instructor in a laboratory, ii) a University of Milan faculty member or another university faculty, or iii) a private or public R&D laboratory in Italy or abroad. Options ii) and iii) must first receive approval from an academic advisor.
Guidelines for the degree internship and dissertation are annexed in https://biotechnologybioeconomy.cdl.unimi.it/en/study/internship.

Elective and optional courses can be followed during the first or the second year of the Master Degree program, as a student choice. The “Biostatistics and design of experiments in biotechnology” course is an exception and should be attended in the second year. The suggestion is to follow most of Elective and Optional courses during the second semester of the first year, and to leave the second semester of the second year free for the experimental thesis or stage abroad.

Core/mandatory activities
All training activities mentioned in “program structure” are considered mandatory for the Master degree. Lesson attendance is strongly suggested, exceptions must be motivated to the lecturer. All students must start lesson attendance in the fall semester of the first year: this Master Degree does not have a spring edition.

Testing and assessment procedures
Each course is followed by an exam, typically a written or oral test (or a combination thereof); students are graded on a maximum score of 30, with a minimum pass grade of 18/30. Credits for a course are only granted upon passing the corresponding exam. More than one instructor can teach courses, but in this case, only one lecturer will be responsible for the student's final assessment.

Lessons and exams
Exam sessions are scheduled during recess at the end of each term and during the one-week lesson break in the middle of each term. At least six tests are scheduled per academic year for each course. The exam calendar is at https://biotechnologybioeconomy.cdl.unimi.it/en/study/exams.

Lectures timetable
The first term will be between 21 September 2026 and 15 January 2027, and the second term will be between 22 February 2027 and 11 June 2027.
Lesson timetables and course syllabus will be available at the URL: https://biotechnologybioeconomy.cdl.unimi.it/en

Study plan definition and submission for approval
In the first year of the Master Degree students will have to submit the study plan, following the indications reported in this web page: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/plan-study.
In the study plan, students will define which elective courses they plan to attend and how they want to obtain the 11 CFU of freely selectable activities (8 CFU of free activities and 3 CFU of additional educational activities).
In the subsequent year(s), submitting a revised study plan will be possible.
Furthermore, we highlight the activities included in the University project for the development of transversal skills https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/soft-skills
These training activities are mandatory to attend, have a defined number of places and can be included in the study plan, among the "Free activities", only if the relevant CdS has approved them.
Details are available on the page https://biotechnologybioeconomy.cdl.unimi.it/en/courses

Campus
Lecture rooms and laboratories are located in the “Città Studi” campus, mainly in the Agricultural and Food Sciences Faculty, Via Celoria 2 (https://www.unimi.it/en/education/faculties-and-schools/agricultural-and-food-sciences).

Libraries
In the faculty are located study room and library. A main campus scientific library is located in via Celoria 18 (Biblioteca di biologia, informatica, chimica e fisica).

Tutoring

Tutors will provide students with academic advice, guidance for course choice and personal advice. Students can contact the tutors at their standard institutional email addresses (name.surname@unimi.it).

Language test / computer literacy test

Additional Language Skills: Italian (foreign students).

Among the electives, 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 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 elective.

Internship criteria

The students will carry out an experimental research internship, culminating in writing a dissertation in English, whose public discussion will constitute the final examination. The experimental thesis project involves the attendance of a research laboratory either at University of Milan or in other research laboratories, in Italy or abroad, upon previous authorization of the Coordinator of the Master degree. The experimental thesis project accounts for 36 CFU, and thus it represents a main activity within the Master degree program. The internship duration is typically required to be at least six months when the commitment is on a full-time basis; for any lesser commitment, the duration will be proportionally extended, with the final overall duration to be agreed upon with the supervisor. The dissertation will describe an original research carried out by the student under the supervision of a lecturer within the BforB Master degree, and its subject must be consistent with the goals and the disciplines taught in the Master degree.

Degree programme final exam

The final exam consists of an oral presentation and discussion of the thesis's main results in front of a Graduation Committee (GC), which can award the presentation a maximum of ten points. One extra point may be assigned by the GC point if the student has completed a curricular training period abroad for at least three months. In no case will the points assigned by the GC exceed the total number of 10. The final grade will be assigned as the weighted average of the grades in the lecture courses, calculated on a scale of 110, to which the points assigned by the GC will be added.

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

The complete and updated bouquet of opportunities for participation in international programs can be found at https://www.unimi.it/en/international/study-abroad. It is possible to participate to each of them following selections on a competitive basis. The offer includes:
1) Thesis abroad (Tesi all'estero) program: the University of Milan calls twice every year for applications for a study-abroad scholarship to be used to prepare usually a portion of the student's Master's Degree thesis while in residence at an international academic or research institution. Students can choose any destination and institution worldwide, without any geographical restrictions. Specific information and deadlines: https://www.unimi.it/en/international/study-abroad/thesis-abroad.
2) ERASMUS+ Traineeship program: students can undertake a traineeship with a company, research or training center, university or other organization, in the member states of the European Union, and other associated countries such as Islands, Switzerland, and United Kingdom. Specific information and deadlines: https://www.unimi.it/en/international/study-abroad/traineeships-abroad/erasmus-traineeship-outgoing-mobility.
3) ERASMUS+ Study program: the time spent abroad can be used to attend courses and pass the relative exams, thus collecting credits towards the Master degree and carrying out the experimental project for the dissertation. The BforB Master course has established agreements with Universities from various European countries. Calls for participation will usually be open in February, and details can be found at the following link: https3) ://www.unimi.it/en/international/study-abroad/studying-abroad-erasmus.
The student admitted to any of the mobility programs must submit a study plan detailing the training activities that he/she plans to carry out, with the corresponding credits. The number of credits should correspond as much as possible to the number of credits that the student would acquire in a similar span of time at the home University. The proposed activities must be consistent with the goals and the contents of the Master degree. The study plan must be approved by the BforB

Erasmus and international mobility tutor, who can request changes or integrations. At the end of the mobility program, according to the guidelines provided by the University of Milan, the courses (with a passed exam) and laboratory trainings attended by the student are registered in his/her career, with its original name and with an indication of the ECTS (European Credit Transfer and Accumulation System) and their conversion in CFU (usually 1 ECTS= 1 CFU). The students willing to carry out their dissertation work as part of a mobility program abroad must have an internal supervisor (chosen among the BforB lecturers) and the study plan must be approved by the BforB Erasmus and international mobility tutor.
For conducting any experimental activity abroad, a letter of acceptance from the hosting supervisor is required as part of the admission process. As an indicative timeframe only, stays at the foreign laboratory shorter than six months generally require the student to complete the experimental thesis work at the internal supervisor's lab, or other facility indicated by the supervisor.

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

Deadlines to apply for admission are from 22th January up to 25th August, 2026. Non-EU citizens applying for a visa must apply from 22th January to 30th April 2026. Detailed information can be found at https://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment

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

15

1st COURSE YEAR Core/compulsory courses/activities

Scheduling	Learning activity	Module/teaching unit	Ects	Sector
1 semester	Biomass and waste recycling promoting the circular economy		7	AGRI-06/B
1 semester	Fermentation biotechnology		7	CHEM-07/C
1 semester	Methods in biotechnology		9	(4) AGRI-05/B, (5) AGRI-06/A
1 semester	Structure and functions of biomolecules		8	CHEM-07/B
2 semester	Environmental microbial biotechnology		6	AGRI-08/A
2 semester	Environmental plant biotechnology		6	AGRI-06/B
2 semester	Plants as biofactories		6	AGRI-06/A
2 semester	Protein engineering and proteomics		6	BIOS-07/A
		Total number of compulsory credits/ects	55	

2nd COURSE YEAR (available as of academic year 2027/28) Core/compulsory courses/activities

Scheduling	Learning activity	Module/teaching unit	Ects	Sector
1 semester	Bioeconomy: management, assessment and intellectual property		6	AGRI-01/A
		Total number of compulsory credits/ects	6	

Further elective courses

Table 1 - Elective courses: the student will choose 2 courses among the following:

1 semester	Bio-based innovation in the food industry		6	AGRI-07/A
1 semester	Biostatistics and design of experiments in biotechnology		6	AGRI-09/A
1 semester	Developing soft skills in science: case-studies from microbial biotechnology		6	AGRI-08/A
1 semester	Molecular analysis and traceability of biotechnological products		6	BIOS-07/A
2 semester	Applied biocatalysis		6	CHEM-07/C
2 semester	Functional foods and nutraceuticals		6	MEDS-08/C

Table 2 - Optional courses

To complete the study program the student must acquire 8 CFU by freely choosing among:
i) Courses activated by the University of Milan for Master Degrees, as long as consistent with the aims of the BforB degree and not a repetition of any course already inserted in the study plan;
ii) Optional courses specifically activated by the BforB Master Degree:
iii) Additional elective courses (see Table 1).

1 semester	Molecular biobased approaches for plant protection		6	AGRI-05/B
2 semester	Biomolecular experiment planning		2	BIOS-07/A
2 semester	Plant microbiome-based strategies for agri-environmental biotechnologies		4	AGRI-08/A
2 semester	Ree Crispres - A workshop on genome editing technologies		3	(1) AGRI-06/A, (2) BIOS-01/A

Table 3 - Additional educational activities:

STUDENTS HAVE TO ACQUIRE 3 CREDITS according to the following rules:
• students holding an Italian high school diploma or university degree must obtain 3 credits in "Other activities (laboratories, seminars)" or in "Ree Crispres - A workshop on genome editing technologies"
• foreign students, who do not hold an Italian high school diploma, an Italian bachelor's degree or a certificate of knowledge at the A2 or higher level per the Common European Framework of Reference for Languages (CEFR), can also acquire 3 CFU through "Additional Language Skills: Italian".

The acquisition of Italian language skills is strongly recommended for international students, as they may be necessary for employment and professional opportunities in the Italian national context, in accordance with the educational objectives of this Master's programme.

	Additional Language Skills: Italian (3 ECTS)		3	NN
	Other activities (laboratories, seminars)		3	NN
2 semester	Ree Crispres - A workshop on genome editing technologies		3	(1) AGRI-06/A, (2) BIOS-01/A

End of course requirements

	Internship and final exam		36	NN
		Total number of compulsory credits/ects	36	