

Guidelines for composing “Free activities” (8 CFU) and “Other activities” (3 CFU)(a.y. 2022-2023)

These guidelines are compiled with the purpose to help the BforB students in addressing the technical aspects regarding the composition of “Free activities” (8 CFU) and “Other activities” (3 CFU) in the Study Plan.

Please note that these guidelines do not replace any formal rule stated in the “Manifesto degli Studi” (BforB Programme Description). Please consider the specific rules reported in the “Manifesto degli Studi” valid for the year of your first enrollment to BforB.

“Free activities” (8 CFU)

Master degrees students without a submitted study plan can take all the exams from the didactic offer of their own degree programme, but not those of other degree programmes.

In the frame of the “Free activities” (8 CFU) student can freely choose one or more courses among:

- A) the optional courses that are specifically activated by the BforB Master’s Degree and/or the courses not already chosen among the elective course list:
- Molecular biobased approaches for plant protection (4 CFU; semester I)
 - Developing soft skills in science: case-studies from microbial biotechnology (6 CFU; semester I)¹
 - Biomolecular experiment planning (2 CFU; semester II)
 - REE CRISPRs - A workshop on genome editing technologies (3 CFU; semester II)²
 - Plant microbiome-based strategies for agri-environmental biotechnologies (4 CFU; semester II)
 - Molecular analysis and traceability of biotechnological products (6 CFU; semester I)
 - Applied biocatalysis (6 CFU; semester II)
 - Bio-based innovation in food industry (6 CFU; semester I)
 - Biostatistics and design of experiments in biotechnology (6 CFU; semester I)³
 - Functional foods and nutraceuticals (6 CFU; semester II)
- B) any other course among all the courses activated by the University of Milan (Università degli Studi di Milano) for Master’s Degrees having a scored examination as the registered assessment⁴. Such courses must be consistent with the aims of BforB Master’s Degree and cannot be a repetition of the other BforB compulsory courses and any other selected course included in own study plan. Note that

¹ For the students enrolled in years prior 2022-2023, this course cannot be chosen in the study plan if they have given the exam “Microbiology and Biotechnology of Extremophiles: case studies to develop soft skills in science” which has an overlapping program.

² Access is limited, please contact the teacher to know how to be admitted to the course and the exact delivery period.

³ For students enrolled in years prior to 2022-2023, this course corresponds to “Experimental planning and biostatistics in biotechnology” and the exam will be verbalized with the proper title in accordance with their “Manifesto degli Studi”.

⁴ The database of the courses of the University of Milan is displayed here: <https://www.unimi.it/en/education/degree-programme-courses/degree-courses-2022-2023>. If you intend to follow a chosen course next year, you need to check whether the delivery characteristics of the chosen course are maintained also in **2023-2024**.

a teaching unit cannot be selected as a course since it is formally scored together the other teaching units of an integrated course. Contact the tutors for advices if needed.

As cue for the search of courses of interest for “Free activities”, a list of the courses selected by BforB students in previous years is available at the end of this document.

In the frame of the “Free activities” (8 CFU), it is possible to include an interdisciplinary laboratory activity, up to a maximum of 4 CFU. The laboratory activity can also regard a small additional project extending the final dissertation thesis and must be agreed with the Degree Internship supervisor⁵. One CFU is equivalent to 25 hours of laboratory activity. Also the Research Enriched Education (REE) laboratory activities, or similar laboratory activities organized by the University of Milan, can be included as interdisciplinary laboratory activity.

The interdisciplinary laboratory activity must start with a formal declaration of the Master’s Degree teacher (needed for insurance purposes) and the registration will be certified upon presentation of attestation of the teacher assessing the completion of laboratory activities. Both declarations (see forms, below) can be forwarded by email to Dr. Fabio Forlani for the final formal registration⁶ in agreement with the submitted Study Plan.

If the laboratory activity will be carried out outside⁷ the University of Milan (Università degli Studi di Milano), follow the instructions described in this part “Activating an external internship or a thesis project with external internship” in the site: <https://www.unimi.it/en/study/traineeships-and-work/traineeships-and-internships/tutors-curricular-internships-and-ects-credits/agricultural-and-food-sciences-internships>

In some few cases, the interdisciplinary laboratory activity (see for example most REE laboratory activities) is coded in the University system⁸. Only in these cases, the teacher of the laboratory activity will directly register the assessed activity and the registered activity will be automatically included in “Free activities” (8 CFU), according to the submitted Study Plan, and no declaration must be forwarded to Dr. Fabio Forlani.

In the frame of the “Free activities”, it is possible to exceed the total amount of 8 CFU. Students that already acquired courses for the 8 CFU in the “Free Activities” are allowed to follow additional courses, and they will be reported in the final study transcript, but they will not be computed in the final degree score.

Any out-of-plan (i.e. additional) exam can only be taken by students with a submitted study plan but should not be included in the plan.

⁵ See “[Guidelines for the Degree Internship \(DI\) and the Final Examination of Biotechnology for the Bioeconomy \(G64, BforB\)](#)”

⁶ The registration code will be G64L00.

⁷ Please notify the Academic Guidance Tutors in case you are planning to do the interdisciplinary laboratory activity outside. It can be also abroad.

⁸ The coded REE are those present in the University database of courses (for 2022-2023: <https://www.unimi.it/en/education/degree-programme-courses/degree-courses-2022-2023>)

“Other activities” (3 CFU)

For the international students (i.e., students without an Italian degree or diploma), the course “Additional Language skills: Italian” are mandatory in the frame of “Other activities” (3 CFU)(see below the paragraph “International students” for other details).

For the other students, in the frame of “Other activities” (3 CFU), any other activity different from university courses can be included, such as the participation to seminars, webinars, conferences, workshops, or external courses. All these activities must be consistent with the general aims of BforB Master’s Degree and cannot be formally a part of the program of an activated course that will be included in the Study Plan. In the presence of doubts regarding the possible validation ask to Dr. Fabio Forlani.⁹

These 3 CFU can also be acquired by the attendance to a language course: any language different from English and not the mother-tongue.

The announcements for specific activities are normally published in the News section of the BforB web site, in other University Departments Boards or in the BforB Team (Microsoft Team). Such activities can be also carried out outside the University of Milan and can be identified by the student herself/himself.

In order to be validated under “Other activities”, it is necessary to submit to Dr. Fabio Forlani by email a documentation (as pdf files) witnessing the student time commitment (in hours) involved in the activity.

Documentation that must be provided for each event must be:

-a formal signed attendance certificate, plus the flyer or announcement where i) the event details (e.g.: title, place, speaker, timetable, organization affiliation) and ii) the time (hours) commitment are clear, plus a short report** of the event (0.5-1 page). If formal certificates are not delivered by the event organizing committee, a simply attendance declaration is accepted, clearly handwritten in the back of a printout copy of the flyer/announcement and signed by the speaker or the organizer.

In the case of webinars/online courses these documentations must be presented:

- i) a pdf print of the webinar/online course description/program/syllabus where, possibly, it is also indicated the hourly time commitment
- ii) if expected, a receipt of the registration to the webinar/online course (which is usually an email)
- iii) a print screen of the beginning of the first slide of the webinar where there should usually be the title and name of the speaker, or the outline of the webinar (only for webinars)
- iv) a print screen of the last slide of the webinar with greetings or conclusions (only for webinars)
- v) a short report** (half page, maximum one page) with the clear indication of time commitment required (in hours).

*The iii) and iv) can be replaced by a certificate of attendance (if it is forwarded and if it is available for free), or by any document that can witness the participation of the student to the webinar or the online course completion.

**The short report must mainly synthesize in few lines the novel knowledge that the student has acquired and must include in the headings: student name, date (or period) and exact title and location of the event (including possibly the web link), name of organizing institution, the hourly time commitment, and proposed CFU to be assigned to the described event (see the CFU-assigning table below).

⁹ To find out the number of credits that can be assigned, use the CFU assignment table as a cue (see below). It should be noted that the exact number of credits can be attributed only when the hourly commitment is clear upon the presentation of the aforementioned documentation.

The 3 CFU can also be acquired through a laboratory activity, possibly extending the CFU acquired as interdisciplinary laboratory activity in “free activities”. The laboratory activity can also be within the final laboratory internship, by prolonging the research activities with a small side project. The activities will be evaluated and certified (1 CFU = 25 hours) by Dr. Fabio Forlani on behalf of the BforB Study Plan Committee. The laboratory activity must start with a formal declaration of the supervising Master’s Degree teacher (needed for insurance purposes) and the registration will be certified upon presentation of attestation of the supervising teacher assessing the completion of laboratory activities. Both declarations (see forms, below) can be forwarded by email to Dr. Fabio Forlani for the final formal registration. If laboratory activity will be carried out outside the University of Milan (Università degli Studi di Milano), follow the instructions described in this part “Activating an external internship or a thesis project with external internship” in the site: <https://www.unimi.it/en/study/traineeships-and-work/traineeships-and-internships/tutors-curricular-internships-and-ects-credits/agricultural-and-food-sciences-internships>

Complete documentation can be submitted time by time, or in a cumulative email. In any case, the student is responsible in storing all the original documentation until Master’s Degree is obtained. The registration can be carried out once the student enrolls online (in SIFA) to a round of the “Other activities” and notices Dr. Fabio Forlani about. Many rounds (at least 6) of “Other activities” will be opened in an academic year.

REE CRISPR¹⁰ can be directly optioned for “Other activities” in the Study Plan.

International students.

To obtain the degree, the international students (i.e., students without an Italian degree or diploma) are mandatorily required to attain an Italian language proficiency at level A2 within the Common European Framework of Reference for Languages (CEFR). This level can be assessed by the end of the degree course in the following ways:

- i) by submitting a language certificate achieved no more than three years prior to the submission, at level A2 or higher, recognised by the University (see “Certificates of Italian as a Foreign Language accepted by the University of Milan” at: [Italian language for foreigners tests and courses | Università degli Studi di Milano Statale \(unimi.it\)](https://www.unimi.it/italian-language-for-foreigners-tests-and-courses)). The language certificate must be uploaded through the service <https://informastudenti.unimi.it/saw/ess?AUTH=SAML> by choosing the category SLAM;
- ii) by an entry-level test, organised by SLAM, which can be taken at the beginning of every semester.

Who fail to reach level A2 will have to attend a 60-hours Italian course organised by SLAM and to pass the final test during the I semester of the second year of study in order to earn 3 ECTS credits of “Additional Language Skills: Italian”. International students will be directly contacted by the SLAM office and subscribed to the Italian test and course.

The course “Additional Language skills: Italian” will be inserted by default in the frame of “Other activities” (3 CFU) in the Study Plan of international students.

¹⁰ Access is limited, please contact the teacher to know how to be admitted to the course and the exact delivery period.

Forms¹¹:**Starting-Laboratory-Activity Declaration¹²**

I, the undersigned, hereby declare that the student [name, surname] ([code number]), actually enrolled at the [enrolled year: first or second year] in the [academic year] a.y. of the Master's Degree in Biotechnology for the Bioeconomy, will start on [starting date] a laboratory activity (internship) about [short topic description]. The laboratories involved in this activity are located in the [name of the department or building and address], and the student will be supervised by the undersigned..... [or by name. surname: if different by the undersigned].

Teacher [name surname and affiliation]

Place and Date

Signature

Attestation of Completion¹³ of the Laboratory Activity/REE¹⁴

I, the undersigned, hereby declare that [name, surname] ([code number]), actually enrolled at the [enrolled year: first or second year] in the [academic year] a.y. of the Master's Degree in Biotechnology for the Bioeconomy, has fruitfully participated in the laboratory activity [or internship / or Research Enriched Education (REE) laboratory] about [short topic description] [any comment about his/her activity as a typical "reference letter"] during the [period] for [total hours of the lab activity] in laboratories of the [name of the department or building and address], under the **supervision of the undersigned..... [or of name surname of supervisor appointed by the undersigned].**

Teacher [name surname and affiliation]

Place and Date

Signature

Attendance declaration

I, the undersigned, hereby declare that the student [name, surname] ([code number]), actually enrolled at the [enrolled year] in the [academic year] a.y. of the Master's Degree in Biotechnology for the Bioeconomy, has attended to the [title, date of the event, other details to identify the event].

Speaker or Organizer of the event [name surname and affiliation]

Place and date

Signature

¹¹ The boldface parts are important

¹² Not needed for REE

¹³ This can be freely structured as a reference letter for the student, but the boldface information must be present.

¹⁴ In the case of REE, this attestation is requested only for not coded REE. In the case of coded REE, this attestation is requested only for "Other activities", and **the REE teacher must also include: "I will not register the APPROVED evaluation on SIFA".**

CFU assignation table (approved on 24/06/2019, formally modified on 23/09/2020)¹⁵

Activity	Time involvement	CFU
Seminar/Conference/Journal Club	< 2 hours	0.1
Student oral speech in a seminar		0.25
Conference/workshop	half a day < 5 hours	0.25
	1 day > 5 hours	0.5
	more days	0.5 / day
Course		Theoretical: 1 / 8 hours
		Practical: 1 / 16 hours
Laboratory activity		1 / 25 hours

¹⁵ This table has no formal value, and it is used as a referring guideline in the CFU assignation.

Courses selected by students in previous years (2019-2022) for the composition of “Free activities” (8 CFUs).

This is a list of the courses selected in the past years by BforB students in their study plan as “Free activities”. The listed courses are all delivered in English language, and it is reported here as a not-exhaustive cue for the search of courses of interest to be selected for “Free activities”, for the whose composition you should read carefully the “Programme description” (“Manifesto degli Studi”) of the [Biotechnology for the Bioeconomy Master Degree Course](#).

It is strongly suggested to check carefully the updated course syllabus (see link), which can change year-by-year, the course activation in the year/semester in which you would plan to attend the lessons, and eventual restrictions to the number of participants. Only for courses not delivered by BforB, before the definitive inclusion in the study plan, it is necessary to undertake an email consultation with the professor of the course of interest, communicating her/him the academic year in which you intend to attend the course and checking together her/him the pre-requisites required for the attendance. Sometime basic requisites are met considering own previous bachelor studies. Please, then report the outcome of the consultation to the study plan tutor (fabio.forlani@unimi.it).

Course Name	Delivering Master Degree	Syllabus link	CFUs	Note
Applied Biocatalysis	G64, Biotechnology for the Bioeconomy	https://www.unimi.it/en/education/degree-programme-courses/2023/applied-biocatalysis	6	If not already selected as eligible mandatory course
Bio-based innovation in food industry	G64, Biotechnology for the Bioeconomy	https://www.unimi.it/en/education/degree-programme-courses/2023/bio-based-innovation-food-science	6	If not already selected as eligible mandatory course
Biomolecular experiment planning	G64, Biotechnology for the Bioeconomy	https://www.unimi.it/en/education/degree-programme-courses/2023/biomolecular-experiment-planning	2	
Biostatistics and design of experiments in biotechnology	G64, Biotechnology for the Bioeconomy	Biostatistics and Design of Experiments in Biotechnology Università degli Studi di Milano Statale (unimi.it)	6	If not already selected as eligible mandatory course
Developing soft skills in science: case-studies from microbial biotechnology	G64, Biotechnology for the Bioeconomy	Developing Soft Skills in Science: Case-Studies from Microbial Biotechnology Università degli Studi di Milano Statale (unimi.it)	6	If not already selected as eligible mandatory course
Functional Foods and Nutraceuticals	G64, Biotechnology for the Bioeconomy	https://www.unimi.it/en/education/degree-programme-courses/2023/functional-foods-and-nutraceuticals	6	If not already selected as eligible mandatory course
Molecular Analysis and Traceability of Biotechnological Products	G64, Biotechnology for the Bioeconomy	Molecular Analysis and Traceability of Biotechnological Products Università degli Studi di Milano Statale (unimi.it)	6	If not already selected as eligible mandatory course

Molecular biobased approaches for plant protection	G64, Biotechnology for the Bioeconomy	Molecular Biobased Approaches for Plant Protection Università degli Studi di Milano Statale (unimi.it)	4	
Plant microbiome-based strategies for agri-environmental biotechnologies	G64, Biotechnology for the Bioeconomy	https://www.unimi.it/en/education/degree-programme-courses/2023/plant-microbiome-based-strategies-agri-environmental-biotechnologies	4	
REE CRISPRs - a workshop on genome editing technologies	G64, Biotechnology for the Bioeconomy	https://www.unimi.it/en/education/degree-programme-courses/2023/ree-crisprs-workshop-genome-editing-technologies	3	Check with the course teacher the admission rules
Agriculture and Sustainable Development	A41, Law	https://www.unimi.it/en/education/degree-programme-courses/2023/agriculture-and-sustainable-development	6	
Methods in Bioinformatics	F1B, Molecular biotechnology and bioinformatics	https://www.unimi.it/en/education/degree-programme-courses/2023/methods-bioinformatics	6	
Structural Bioinformatics	F1B, Molecular biotechnology and bioinformatics	https://www.unimi.it/en/education/degree-programme-courses/2023/structural-bioinformatics	6	
Photobiology and Bioenergy	F3B, Plant Science	https://www.unimi.it/en/education/degree-programme-courses/2023/photobiology-and-bioenergy	6	
Plant Development	F3B, Plant Science	https://www.unimi.it/en/education/degree-programme-courses/2023/plant-development	6	
Patents and Management of Innovation	F5Y, Chemistry	https://www.unimi.it/en/education/degree-programme-courses/2023/patents-and-management-innovation	6	
Environmental Law	F6B, Environmental change and global sustainability	https://www.unimi.it/en/education/degree-programme-courses/2023/environmental-law-0	6	
Waste Management and Sustainability	F6B, Environmental change and global sustainability	https://www.unimi.it/en/education/degree-programme-courses/2023/waste-management-and-sustainability	6	
Economics and Management	F7Y, Industrial chemistry	https://www.unimi.it/en/education/degree-programme-courses/2023/economics-and-management	6	
Protected Cultivation Systems	G58, Agricultural Sciences	https://www.unimi.it/en/education/degree-programme-courses/2023/protected-cultivation-systems	6	
Proximal Sensing and Data Analysis for Agricultural Products	G59, Crops and Plant Sciences	Proximal Sensing and Data Analysis for Agricultural Products Università degli Studi di Milano Statale (unimi.it)	6	
Molecular Bases of Taste	G60, Nutritional Sciences	https://www.unimi.it/en/education/degree-programme-courses/2023/molecular-bases-taste	4	Check if delivered in the academic year of interest
Food Product Design and Development	G60, Nutritional Sciences	Food Product Design and Development Università degli Studi di Milano Statale (unimi.it)	4	
Microbial Food Cultures	G60, Nutritional Sciences	https://www.unimi.it/en/education/degree-programme-courses/2023/microbial-food-cultures	4	

Nanotechnology in the food industry	G60, Nutritional Sciences	https://www.unimi.it/en/education/degree-programme-courses/2023/nanotechnology-food-industry	4	
Advanced techniques of microscopy, microanalysis and image analysis applied to foods	G60, Nutritional Sciences	Advanced Techniques of Microscopy, Microanalysis and Image Analysis Applied to Foods Università degli Studi di Milano Statale (unimi.it)	4	Check if delivered in the academic year of interest
Molecular Traceability of Foods	G60, Nutritional Sciences	https://www.unimi.it/en/education/degree-programme-courses/2023/molecular-traceability-foods	4	Only if "Molecular Analysis and Traceability of Biotechnological Products" is not inserted in study plan
Microbial Biotechnology in Oenology	G63, Viticulture and Enology Sciences	https://www.unimi.it/en/education/degree-programme-courses/2023/microbial-biotechnology-oenology	5	Check with the course teacher the delivering period
Sensory and Consumer Science for The Wine Industry	G63, Viticulture and Enology Sciences	Sensory and Consumer Science for The Wine Industry Università degli Studi di Milano Statale (unimi.it)	4	
Environmental and Food Law	K07, Environmental and food economics	https://www.unimi.it/en/education/degree-programme-courses/2023/environmental-and-food-law	6	
Food Industry Design Technology and Innovation	K07, Environmental and food economics	https://www.unimi.it/en/education/degree-programme-courses/2023/food-industry-design-technology-and-innovation-0	6	
Water Resources Sustainable Economy	K07, Environmental and food economics	https://www.unimi.it/en/education/degree-programme-courses/2023/water-resources-sustainable-economy	3	

Courses about soft skills that can be included as “Free activities” (8 CFUs).

Several degree programmes at the Milan University are complemented by training in soft skills to provide students with competencies, including interpersonal and communication skills, applicable across all professional careers. In May 2018 the Council of the European Union adopted recommendations on eight key competencies: literacy; multilingual; math, science, technology, engineering; digital; personal, social, and learning to learn; citizenship; entrepreneurship; cultural awareness and expression. The University of Milan has prepared a catalogue of training courses with the objective of supplementing the core subjects of the degree programme with teaching in four general areas (<https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/soft-skills>). University of Milan students are eligible to participate in these courses including them in their free activities. Please note that certain courses in the catalogue are specific to a particular programme and may only be chosen by students in that programme; for all of them enrolment is limited and attendance is obligatory: contact the teacher if you are interested in a course. Details for each course are provided in the specific course description.