



UNIVERSITÀ DI PAVIA
Dipartimento di
Biologia e Biotecnologie
“Lazzaro Spallanzani”

COURSE REGULATIONS

(art. 12 – M. D. no. 270, 22 October 2004)

MASTER’S DEGREE IN
MOLECULAR BIOLOGY AND GENETICS

Class LM-6 Biology

Entering class 2026/2027

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PART ONE – GENERAL PROVISIONS

Art. 1 – Name, class, department and duration

1. The second cycle degree course in Molecular Biology and Genetics, set up by the Department of Biology and Biotechnology “L. Spallanzani” of the University of Pavia, belongs to class LM6 of second cycle degree courses in Biology, in accordance with Ministerial Decree n. 1649, 19 December 2023.
2. The duration of the second cycle degree course is two years.

Art. 2 – Regulatory texts

1. In accordance with the freedom of teaching and the rights/obligations of teaching staff and students, the course organization and the carrying out of training activity envisaged for the second cycle degree course in Molecular Biology and Genetics is regulated by the present text, by the Statute of the University of Pavia, by the general University Regulations ([Statuto e Regolamenti | Università di Pavia](#)), by University Didactic Regulations, by Student career Regulations ([Statuto e Regolamenti | Università di Pavia](#)) and by the Regulations of the Department of Biology and Biotechnology “L. Spallanzani” of the University of Pavia ([Department of Biology and Biotechnology](#)).
2. For all matters not expressly provided for in these Regulations, the existing provisions of the law apply.

Art. 3 – Body responsible for didactic and organizational coordination

1. In respect of the competencies and criteria established by the Regulations listed in Art. 2, as well as those covered by the Regulations for the organisation and operations of the Teaching Boards, the body responsible for coordinating teaching and organization of the Master’s Degree Program is the Teaching Council of Biological Sciences, hereinafter referred to as the Teaching Council, subject to the authority of the Department of Biology and Biotechnology “L. Spallanzani”.
2. Responsibility for didactic activity and organization of the course (CdS) is assumed by a member of the teaching staff who is nominated for that purpose by the Teaching Council, without prejudice to the collegiality of the decisions and guidelines. The person responsible for the course is named on the Annual degree-programme report.
3. In accordance with the freedom of teaching and the rights/obligations of teaching staff and students, the course organization and the carrying out of training activity envisaged for the second cycle degree course in Molecular Biology and Genetics is regulated by the present text, In accordance with the freedom of teaching and the rights/obligations of teaching staff and students, the course organization and the carrying out of training activity envisaged for the second cycle degree course in Molecular Biology and Genetics is regulated by the present text.

Art. 4 – Administrative services

1. As to applications relating to student careers (enrolments, transfers, etc.), responsibility shall lie with the UOC Carriere studenti, the UOC Immatricolazioni e informastudenti and the UOC Admission Office.

Information available at the following links:

[Bachelor's and Master's degree programs | Università di Pavia](#)
[Degree programs | Università di Pavia](#)

The Orientation Centre (C.OR.) manages activities and projects to help students in the choice of their university studies, to support their courses, to facilitate entry into the world of employment. To this end it organizes collective actions, individual counseling services, and orientation meetings. The C.OR. website can be consulted at: [Orienta UniPV](#)

PART TWO – ORGANIZATION OF DIDACTIC ACTIVITIES

Art. 5 – Annual degree-programme report

1. The Annual individual study-plan card is available at the following link:

<https://gestionedidattica.unipv.it/index.php/file/2026SUA08427.pdf>

Art. 6 – Admission requirements

1. For being admitted to the Master's degree program students must possess a Bachelor's degree or an equivalent qualification obtained abroad recognized as suitable by the competent University representatives. Students must also have a B2 English CEFR level (Common European Framework); since the program is taught in English, passing the first exam proves that a student meets the language requirement.

2. In order to enroll to the Master's degree program students must also possess certain academic requirements and an appropriate experience.

Curricular requirements

a) Curricular requirements shall be deemed to be automatically met by students who hold a degree from Class 1 (Biotechnology Degree Class) and Class 12 (Biological Sciences Degree Class) (Ministerial Decree 509), as well as Classes L-2 (Biotechnology) and L-13 (Biological Sciences).

b) Admissions shall also be granted to candidates who have obtained a degree in classes other than those listed above, provided, however, that their educational path has allowed them to obtain:

- At least 9 credits (ECTS) in the following scientific discipline areas (locally known as SSDs):
MATH-03/A, MATH-05/A, PHYS-01/A, IBIO-01/A;

- At least 12 credits in the following SSDs: BIOS-04/A, BIOS-06/A, BIOS-07/A, BIOS-08/A, BIOS-10/A, BIOS-11/A, BIOS-14/A, BIOS-15/A;
 - At least 9 credits in the following SSDs: CHEM-03/A, CHEM-05/A, CHEM-07/A
- c) Students under (b) above who choose the 'Molecular life sciences' curriculum are also required to prove that they have gained appropriate knowledge in the following disciplines:
- Mathematics, physics and computer science: 12 credits;
 - Chemistry: 15 credits;
 - Biomolecular science: 18 credits;
 - Other biological disciplines: 12 credits.
- d) Given the diverse and multifarious organisation of study courses abroad, the curricula of foreign students, including EU and non-EU students, shall be reviewed by an ad-hoc Commission in order to establish whether they meet the applicable requirements.

Evaluating the preparation of the student

- Students shall be automatically admitted to the degree course if they have obtained a degree with a mark of 99/110 or higher in Classes 1 (Biotechnology Degree Class) and 12 (Biological Sciences Degree Class) (Ministerial Decree 509), and in Classes L-2 (Biotechnology) and L-13 (Biological Sciences).
- Students not falling into the category referred to in the previous paragraph (grade below 99/110, other degree classes) shall be subject to a background check.

Such verification takes the form of a pre-assessment of curricular requirements by a special Commission, and an admission test consisting of an interview with members of the Commission. For students who hold an entry qualification obtained abroad, the interview may be carried out online, considering specific prior training. For students holding Italian academic degrees, evaluation interviews are scheduled to take place before classes begin in October. Therefore, for the purposes of admission to the interview, only applications received no later than September 15 will be considered.

3. Method of recovering possible educational debts.

If the preparation of the student is judged not entirely adequate, the Commission may require the passing of examinations relative to three-year, first cycle degree programmes. The recovery of educational debts must occur by the deadline for enrollment to the current academic year.

Art. 7 – Didactic organization

1. Training activities that are part of the second cycle degree course lead to the acquisition, by the students who undertake them, of university credits (CFU) in accordance with prevailing regulations.

2. The average workload and study-time for a student engaged in full-time university study activities is conventionally established at 60 credits (CFU) per year.
3. Each credit granted in the course corresponds to an average total of 25 hours work, of which at least 50% is set aside for personal study or other activities involving individual learning. (except in cases where highly experimental or practical educational activities are envisaged). For each credit, the correspondence between the hours of teaching imparted in the degree course and the hours reserved for individual study is as follows:
 - a. in the case of *ex-cathedra* tuition, 8 hours for lectures or equivalent activities and 17 hours dedicated to individual study;
 - b. in the case of laboratory activity, seminars, tutorials etc, 12 hours for lectures and 13 hours dedicated to individual study.
4. The credits corresponding to each educational activity are acquired by the student upon passing an examination or following other forms of verification of preparation or of skills acquired.
5. For some of the teachings offered, such as the courses on soft skills and the Sustainable Development Goals – SDG, as per the 2030 Agenda for Sustainable Development of the United Nations: by passing the exam, in addition to the registration of the related credits (CFU), an open badge can be envisaged, a digital certificate as a proof of knowledge, competencies and abilities gained during the course. The certificate will be issued automatically after the registration of the exam and will be sent to the student's University of Pavia email address.
6. The acquired credits (CFU) are not considered subject to obsolescence during the student's career, regardless of its duration, except in cases of loss of student status or withdrawal. In such cases, in the event of re-enrollment, the validation of the acquired credits is subordinated, among other things, to an assessment of their possible obsolescence by the Teaching Council (see art. 16 below). In well-motivated particular cases, the obsolescence of training credits related to specific educational activities may be deliberated by the Teaching Council. The resolution of obsolescence contains the indication of the modalities for the recovery of obsolete credits, establishing the possible supplementary tests that the student must take for this purpose.
7. Teaching activity is organised in two semesters:
October – January; March - June
8. The examination sessions are scheduled in the following periods:
15 January – end of February; 15 June – end of July; 1 September – end of September
There are six separate exam dates.
9. At least two of these exam dates are set outside the sessions referred to in paragraph 7; they are reserved for students who have already satisfactorily attended the 2nd year of the course.

10. For student athletes involved in disciplines recognized by the Italian National Olympic Committee or by the Italian Paralympic Committee, additional exam dates are set at the request of the interested parties, to replace those on the calendar should these coincide temporally with sporting commitments that are at least of national importance. The President of the Teaching Council, who must be provided with documented evidence of commitments that prevent participation at regularly timetabled exams, shall arrange for the organisation of an additional exam date after consultation with the lecturer involved.
11. The timetable of lessons, examinations and sessions for the defence of the thesis is announced in accordance with ministerial deadlines, as shown on the Annual Individual Card.
12. There are at least eight sessions for the defence of the thesis each calendar year.

Art. 8 – Study plans

1. All students are required to submit their study plans by the deadlines specified annually by the University.
2. Standard study plans, i.e. those that conform to the rules set out in *Appendix no.2* of the present Regulations, are approved automatically, except for the training activities referred to in subparagraph a), paragraph 5 of Article 10, Ministerial Decree n. 270 of 22 October 2004, which are autonomously chosen by the student from among the activities offered by the University; for these activities the Teaching Council assesses their coherency with the program, taking into consideration the adequacy of the motivations that may be put forward by the student.
3. Students who intend to follow an educational program different from that provided for in these Regulations can submit, while respecting the constraints laid down by the declaration of the class of the degree course and by the organisation of the course itself, an individual study plan by the deadlines established annually by the University.

The individual study plan must be approved by the Teaching Council, which will take account of the requirements of the student in terms of cultural development and professional training and may suggest appropriate changes in order to make the training more consistent with the specific objectives of the course.

4. Study plans for part-time students are not envisaged.
5. For the general rules governing the presentation of the study plan, see Art. 20 of the Student career Regulations.
6. Students holding a qualification obtained outside of Italy (EU students and non-EU students residing in Italy or abroad) are required to include in their study plan the Italian language course “Italian Language for Foreign Students” (3 ECTS), unless they can demonstrate adequate proficiency in Italian by submitting one of the following documents:

- a lower or upper secondary school diploma, or a bachelor's degree obtained in the Italian language from Italian institutions;
- a diploma issued by an Italian school abroad;
- an Italian language certification of at least B1 level, recognized as valid by the relevant University offices.

Any additional requests for exemption from the Italian language course shall be assessed by the Degree Program and submitted for approval to the relevant Department Board.

Students who submit one of the above documents and are therefore exempt from the Italian language course must include the activity "Other activities" (3 ECTS) in their study plan, as students holding a qualification obtained in Italy.

7. In addition to the courses necessary for the graduation, it is possible to include a maximum of 24 credits (CFU) of extra learning activities to the study plan per academic year, except for the medical area courses of nationally restricted access and the psychology area courses, as long as the course propaedeutic rules are followed.

Art. 9 – Joint-degree programmes

1. There are no agreements or programmes directed towards obtaining a double degree.

Art. 10 – Attendance and curricular prerequisites

1. Attendance at lectures is not mandatory but is strongly recommended.

For teachings that mainly involve practical activities and teachings that include laboratories as an integral part of the curriculum (titled "Laboratory of..."), attendance at a minimum of 75% of the scheduled hours is mandatory. Specific procedures for verifying attendance may be established by the Teaching Council at the request of the relevant professor.

2. There are no curricular prerequisites.

Art. 11 – Student elective activities

1. Students enrolled in the second cycle degree course are allowed the inclusion of 12 credits of their own choice (under Article 10, paragraph 5.a, Decree 270/2004 - called "TAF D") in their study plans. Students can choose from among the subjects offered on the University syllabus, and the Teaching Council may reserve the right to evaluate the compatibility of these subjects with the objectives of the second cycle degree. If the choice involves subjects on the special list in Attachment 2, which are consistent with the degree program, then it is automatically approved.

2. It is allowed to include, among the freely chosen activities, courses belonging to the educational offer of the three-year and master's degree courses, with the exception of those pertaining to the

educational offer of the medical and health area with national planning and the psychology area. The student will not be able to choose courses already taken during previous university attendance, unless they have obtained specific validations of the same.

3. Students are permitted to include in their study plans, as elective activities, subjects offered at University Colleges if these are accredited by the University under art. 27 of its Teaching Regulations.

4. According to recent ministerial decrees, among elective activities, students are allowed to choose at least 3 courses in Italian. These courses can be selected in the frame of the didactic teaching of the university or specifically set up courses.

Art. 12 – Internships and placements

1. There is no curricular internship.

2. "Elective" or "extra" university credits (CFU) that are attainable through extracurricular internships within the CFU of the syllabus may be recognised. Such recognition is subject to the evaluation of the Teaching Council, which will also determine the number of CFUs attributable to the activity.

Art. 13 – Examinations and end-of-course assessments

1. No more than a total of 12 examinations or final assessments can be considered.

2. Examinations are conducted in English.

3. Core subjects, similar and integrative subjects, and subjects chosen by the student should be taken into consideration in the calculation of final examinations or assessments. Examinations or final assessments related to these activities are considered in the count as corresponding to one unit (even if the credits give rise to more examinations or final evaluations).

4. The set of training activities referred to in subparagraphs c), and d) of paragraph 5, Article. 10 of Ministerial Decree no. 270 / 2004, are not included when calculating the maximum number of final examinations or assessments; the tests provided for such activities must not exceed 5 in number, including the final defence of the degree.

5. Examinations involve an evaluation that must be expressed in a mark out of thirty and then entered in the appropriate register. Credits are considered acquired if the mark is equal to or greater than 18/30. In the case of a maximum score of 30/30, the examination commission may unanimously concede the awarding of a 'commendation'.

6. In the case of written examinations, students are permitted to withdraw at any moment while the exam is in progress.

7. In the case of oral examinations, students are permitted to withdraw, as specified in the University Regulations, at least up until the moment just before the registration of the final mark. If students have withdrawn or have failed the exam, any annotations in the register, which can be utilised for

statistical purposes, are not transcribed in the students' record books, nor do they appear in their academic transcripts. Based on the art. 30, comma 1 of the Students' Careers Regulation, it is necessary to register the evaluation of the exam even when it is negative.

8. The repetition of an exam that has already been passed, with the possible modification of the relative evaluation, is not permitted.

9. The decision, on the part of the student, not to accept a vote of 18/30 or higher, is irrevocable.

10. Students cannot sit the same exam more than twice in the same examination session.

11. Examinations or assessments related to the activities chosen by students are considered as corresponding to one unit (even if the credits may give rise to further tests or evaluations).

12. The verification of the activities referred to in the following points is expressed as follows:

a) Laboratory activities included amongst "Free activities": declaration by the teacher in charge, evaluation "suitable" or "Not suitable".

b) Other activities - Soft skills: Thesis advisor's statement, 'Approved' or 'Not approved' rating

c) Internship for thesis: statement by the thesis supervisor, evaluation "Approved" or "Not approved".

Art. 14 – Final examination and awarding of degree

1. The degree is awarded after passing a final examination, which will tend to verify the attainment of the learning objectives of the course.

2. It is obligatory to carry out experimental work under the tutelage of a teacher from the University of Pavia in preparation for the thesis. Depending on the curriculum chosen by the student, this activity may concern the study of a biological system through genetic, biomolecular, biochemical or cellular methods (Molecular life sciences curriculum, 36 credits) or computational investigations on data from omics disciplines and analysis of large datasets from biological investigations (Molecular and digital biology curriculum 30 credits).

3. The average considered, for the purpose of the final average of grades on exams and activities in the student's transcript, is the weighted average; rounding is mathematical. Excluded from the calculation of the final average are: extra activities, activities with no final grade and educational debts. A grade of 30/30 cum laude counts as 30 for the purpose of the average. The final examination consists of the preparation, presentation and discussion, on the part of the student, of a thesis elaborated in an original way under the guidance of a supervisor. The final thesis must be written and discussed in English. It is therefore necessary to meet the following conditions:

a) an "abstract" written in Italian and summarizing the content of the thesis must be attached

b) the title must be written both in English and Italian.

4. The thesis must be presented by a supervisor and possibly also a co-supervisor, even from outside the university.

5. The final mark of the second cycle degree (from a minimum of 66 points to a maximum of 110, with possible *cum laude*) is assigned by a special commission, appointed by the Head of the Department, in a session that is open to the public; it takes into account the student's entire course of studies.

To determine the overall mark of the final exam, the grade assigned by the Commission, amounting to a maximum score of 8, is added to the weighted average of the curricular marks. If the final mark is one hundred and ten, *cum laude* may be granted, but it must be conceded unanimously.

PART THREE – PROVISIONS REGARDING STUDENTS' COURSE OF STUDY

Art. 15 – Criteria for recognition of duly-certified, extra-university knowledge and skills

1. The eventual recognition of credits obtained by the student in the ways prescribed by the D.I. 931, 4 July 2024, for the types set forth in paragraphs 2) and 3), shall be decided by the Teaching Council.
2. The Teaching Council, taking into account the requirements of the student in terms of academic and personal preparation, can validate duly-certified knowledge and skills with up to 24 CFU, of which:
 - a. no more than 6 credits for knowledge and skills that have been individually certified under existing legislation;
 - b. no more than 12 credits for knowledge and skills acquired through educational activities at a post-secondary level that have been organised in part by a university.
3. At the request of the student, and on the basis of the criteria and procedures established by the Academic Senate, the following activities may also be recognized as university credits inasmuch as they constitute free choice curriculum activities (TAF D) the following activities up to a total of 12 credits :
 - a) sports practiced at the Olympic, world and European level, up to a maximum of 6 credits;
 - b) sport played at the Italian level, and in intermediate categories, up to a maximum of 3 credits;
 - c) qualification for "zone medals" at university championships, as well as the taking part in competitive sports for sections of the Pavia CUS, including participation in regional and national competitions, up to a maximum of 6 credits.

Art. 16 – Criteria for recognition of credits earned

1. In accordance with art. 46 of the Course Regulations of the University, in the event of students passing / transferring from other courses in the same class or from different classes, the Teaching Council shall decide as regards the recognition of studies already undertaken as well as the possible validation of credits that can be regarded as recognisable.
2. The validation of credits is decided by the Teaching Council, case by case, on the basis of an inquiry conducted by one or more teachers delegated by the Council. The type and number of recognisable

credits is established on the basis of relevance to the subject and taking into account the contribution of the training activity to be recognized at the completion of the didactic objectives of the Master's degree, its specific contents and their obsolescence, but also the dedicated time required. To this end, the application for recognition must be accompanied by official documentation; the teachers delegated to validate credits may carry out any further checks that they deem appropriate.

3. In accordance with art. 48 of the Academic Regulations, the recognition of educational activities carried out at a foreign university is deliberated by the Teaching Council.

The recognition of credits acquired in connection with activities of study and examinations taken at foreign universities of proven qualification is evaluated case by case, based on an inquiry conducted by one or more members of the teaching staff who have been delegated by the Council itself.

4. Academic qualifications obtained at foreign universities can be considered equivalent to the correspondent qualifications issued by the University of Pavia, on the basis of specific provisions contained in international conventions. In the absence of agreements, the Department may deliberate, on a proposal from the Teaching Council in relation to the coherence of the studies carried out, the full equivalence of qualification attained.

Art. 17 – Criteria for recognition of educational activities undertaken at foreign universities

1. Students enrolled in this Master's Degree may carry out part of their studies at universities in Italy or abroad with which conventions or agreements (Erasmus programs, or other exchange programs) have been stipulated.

2. Study periods abroad normally have a duration of between 3 and 10 months extendable, where necessary, up to a maximum of 12 months. Study periods at other affiliated Italian universities have a minimum duration of 3 months up to a maximum of 6 months. The study plan to be carried out at the host university, valid for university career purposes, and the number of credits that can be acquired must be appropriate to the duration.

3. Study opportunities abroad or at Italian universities are made known to students through specific calls for application containing, among other things, the participation requirements and selection criteria. Selected students may be granted financial contributions or other benefits as provided by the mobility programs and exchange agreements.

4. During the mobility period, students may carry out the following activities, in accordance with the provisions of the relevant calls for application:

- a) attend courses and take the corresponding exams;
- b) carry out research activities in preparation for the thesis.

5. In defining the training project, in agreement with the teachers of the disciplines involved, the students must indicate the activities they intend to undertake abroad (or at the affiliated Italian university in the case of Italian Erasmus) and which correspond to those included in their study plan. Before departure, students must present the Learning Agreement (document containing the list of learning activities to be taken during the mobility period with the corresponding credits) which must be agreed and signed between the student, the delegate for International Mobility and the host university.
6. At the end of the study period, on the basis of the certification of the learning activities carried out - "Transcript of records" - (issued by the foreign or Italian host university), the Teaching Council/Department will decide on the recognition of the exams taken abroad or at the Italian host university (if relevant to the educational pathway), awarding the related CFUs.
7. The University of Pavia ensures full recognition of learning activities carried out during the mobility period if they meet the latest approved Learning Agreement.
8. If the recognized learning activities are not included in the students' last approved study plan, the students must revise the study plan according to the indications provided by the Teaching Council/Department.
9. Students who have completed a period of mobility and who request validation of the activities incurred abroad or at another affiliated university will not be admitted to the degree final exam if in default of the validation resolution.

Art. 18 – Admission to subsequent years

There are no conditions that could prejudice enrollment in subsequent years.

Art. 19 – Certifications

Certification is not recognised.

**UNIVERSITY OF PAVIA – 'LAZZARO SPALLANZANI' DEPARTMENT OF BIOLOGY
AND BIOTECHNOLOGY**

Study Plan, Master's Degree in Molecular biology and genetics – Cohort 2026-27
LM-6 – Category of Master's Degree in Biology

CURRICULUM MOLECULAR LIFE SCIENCES (MLS)

I YEAR (62 CFU)

COURSE	CREDITS	SEMESTER	OLD SSD	NEW SSD	TAF
Methods in Biochemistry	9	I	BIO/10	BIOS-07/A	Core Biomolecular
One of the following courses: • Basic Molecular Biology • Structural Biology	6	I	BIO/11 BIO/11	BIOS-08/A BIOS-08/A	Core Biomolecular
Microbial Genetics	6	I	BIO/18	BIOS-14/A	Core Biomolecular
Advanced Molecular Biology	6	II	BIO/11	BIOS-08/A	Core Biomolecular
Bioinformatics	6	II	ING-INF/06	IBIO-01/A	Non-core
Human Molecular Genetics	6	II	BIO/18	BIOS-14/A	Core Biomolecular
Molecular Pharmacology	6	II	BIO/14	BIOS-11/A	Core Biomed
Other activities or Italian language for foreign students Students with a non-Italian qualification must choose "Italian Language for Foreign Students"; Students with an Italian qualification must choose "Other activities".	3	II			Other
Internship for experimental thesis a	14	II			Language/Final exam

II YEAR (58 CFU)

COURSE	CREDITS	SEMESTER	OLD SSD	NEW SSD	TAF
Cellular Biochemistry	6	I	BIO/10	BIOS-07/A	Core Biomolecular
Developmental Biology	6	I	BIO/06	BIOS-04/A	Core Biodiversity and environment
Plant Molecular Biology and Biotechnology	6	II	BIO/04	BIOS-02/A	Non-core
Molecular Microbiology	6	II	BIO/19	BIOS-15/A	Core Biomolecular
Elective activities*	12	II			Elective
Internship for experimental thesis b	22	II			Language/Final exam

CURRICULUM MOLECULAR AND DIGITAL BIOLOGY (MDB)

I YEAR (54 CFU)

COURSE	CREDITS	SEMESTER	OLD SSD	NEW SSD	TAF
<u>One of the following courses:</u> - Basic Molecular Biology - Structural Biology	6	I	BIO/11 BIO/11	BIOS-08/A BIOS-08/A	Core Biomolecular
<u>One of the following courses:</u> - Basic Biochemistry - Cellular Biochemistry	6	I	BIO/10 BIO/10	BIOS-07/A BIOS-07/A	Core Biomolecular
<u>One of the following courses:</u> - Basic Microbiology - Microbial Genetics	6	I	BIO/19 BIO/18	BIOS-15/A BIOS-14/A	Core Biomolecular
<u>One of the following courses:</u> - Basic Genetics and Cell Biology - Human Molecular Genetics	6	II	BIO/18 BIO/18	BIOS-14/A BIOS-14/A	Core Biomolecular
Bioinformatics	6	II	ING-INF/06	IBIO-01/A	Non-core
Advanced Molecular Biology	6	II	BIO/11	BIOS-08/A	Core Biomolecular
Molecular Pharmacology	6	II	BIO/14	BIOS-11/A	Core Biomed
Statistics and Big Data Analysis	9	II	BIO/11	BIOS-08/A	Core Biomolecular
Other Activities or Italian language for foreign students					
Students with a non-Italian qualification must choose "Italian Language for Foreign Students"; Students with an Italian qualification must choose "Other activities".	3	II			Other

II YEAR (66 CFU)

COURSE	CREDITS	SEMESTER	OLD SSD	NEW SSD	TAF
Laboratory of Advanced bioinformatics for omics sciences	6	I	BIO/11	BIOS-08/A	Core Biomolecular
Genomics and Evolution in Emerging Infectious Diseases	12	I,II			
- Comparative genomics and metagenomics in vectors and pathogens			BIO/05	BIOS-03/A	Core Biodiversity and environment
- Genomics and epidemiology of infectious diseases			VET/06	MVET-03/A	Non-core
Pharmacogenomics, cancer genomics and epigenomics	6	I	BIO/18	BIOS-14/A	Core Biomolecular
Elective activities*	12	II			Elective
Internship for experimental thesis	30	II			Language/Final exam

***Two courses to be chosen from the following ones or from the ones offered by the University of Pavia with the exception of *numerus clausus* courses in the medical field on a national level or of the psychological area
(or one course + **6 laboratory credits):**

***Courses suggested as elective activities**

COURSE	CREDITS	SEMESTER	OLD SSD	NEW SSD	TAF
Advanced Microscopy	6	I	BIO/06	BIOS-04/A	Elective
Immunology	6	II	MED/04	MEDS-02/A	Elective
Molecular Entomology	6	II	BIO/05	BIOS-03/A	Elective
Molecular Genetics	6	I	BIO/18	BIOS-14/A	Elective
Advanced Therapy Medicinal Products	6	I		BIOS-11/A	Elective
Global Health – One Health (1)	3	II	VET/06	MVET-03/B	Elective
Radiation Biophysics and Radiobiology (2)	6	II	MED/36	MEDS-22/A	Elective

(1) Should students include this course, they should consider adding another 3 CFU course from those offered by the university of Pavia (with the exception of *numerus clausus* courses in the medical field on a national level or of the psychological area) + 6 Laboratory credits, or a 9 CFU course from those offered by the university of Pavia (with the exception of *numerus clausus* courses in the medical field on a national level or of the psychological area).

(2) Available only for the MLS curriculum.

****Laboratories suggested as elective activities**

COURSE	CREDITS	SEMESTER	OLD SSD	NEW SSD	TAF
Laboratory of Plant Pathology	6	II	AGR/12	AGRI-05/B	Elective
Laboratory of Botany	6	II	BIO/02	BIOS-01/B	Elective
Laboratory of Plant Physiology	6	II	BIO/04	BIOS-02/A	Elective
Laboratory of Zoology	6	II	BIO/05	BIOS-03/A	Elective
Laboratory of Comparative Anatomy and Cytology	6	II	BIO/06	BIOS-04/A	Elective
Laboratory of Ecology	6	II	BIO/07	BIOS-05/A	Elective
Laboratory of Physiology	6	II	BIO/09	BIOS-06/A	Elective
Laboratory of Biochemistry	6	II	BIO/10	BIOS-07/A	Elective
Laboratory of Molecular Biology	6	II	BIO/11	BIOS-08/A	Elective
Laboratory of Pharmacology	6	II	BIO/14	BIOS-11/A	Elective
Laboratory of Genetics	6	II	BIO/18	BIOS-14/A	Elective
Laboratory of Microbiology	6	II	BIO/19	BIOS-15/A	Elective
Laboratory of General Pathology	6	II	MED/04	MEDS-02/A	Elective
Laboratory of Immunology	6	II	MED/04	MEDS-02/A	Elective
Laboratory of Parasitology	6	II	VET/06	MVET-03/B	Elective
Laboratory of Bioinformatics	6	II	BIO/11	BIOS-08/A	Elective