

BULLETTIN

A.Y. 2026/2027

MASTER'S DEGREE PROGRAM IN MEDICAL, VETERINARY, AND FORENSIC BIOTECHNOLOGICAL SCIENCES"

GENERAL INFORMATION

CLASS: **LM-9**

THE DEGREE DOES NOT REPRESENT A QUALIFYING DEGREE

AWARDED TITLE: **MASTER'S DEGREE IN MEDICAL, VETERINARY, AND FORENSIC BIOTECHNOLOGICAL SCIENCES**

ACTIVE CURRICULA: **MEDICAL; VETERINARY; FORENSIC**

UNIVERSITY LOCATION: **PERUGIA**

DURATION OF STUDY PROGRAM: **2 YEARS**

TOTAL CFU TO BE ACQUIRED: **120**

ACCESS: Enrollment in the CDLM-SBMVF requires possession of a bachelor's degree or another recognized equivalent qualification, including those obtained abroad. In particular, following Article 6, paragraph 2 of DM 270/2004, all applicants holding a bachelor's degree in one of the following classes from the university can be admitted to the course: former DM 270/04:

- L-2: Biotechnological degree
- L-13: Degrees in biological sciences
- L-SNT3: Degrees in health professions - specifically for the biomedical laboratory techniques degree program
- LM-41: Master's degrees in medicine and surgery
- LM-42: Master's degrees in veterinary medicine
- L-38: Degrees in zootechnical sciences and technologies of animal production or under the former DM 509/99
- Classe 1: Biotechnology
- Classe 12: Biological sciences
- Classe SNT3: Degrees in health professions - limited to the biomedical laboratory techniques degree program
- Classe 46/S: Medicine and surgery
- Classe 47/S: Veterinary medicine
- Classe 40: Zootechnical sciences and technologies of animal production

Additionally, proficiency in the English language at level B2 is required. The assessment of personal preparation will be conducted in each case, with methods defined by the educational regulations of the study program.

ACTIVE ACADEMIC YEARS: **FROM 1ST TO 2ND**

ACTIVE YEARS NEW SYSTEM:

ACTIVE YEARS OLD SYSTEM:

COURSE CODE: **M1033**

TRAINING COURSE

OVERVIEW OF THE COURSE

At the University of Perugia, the Master's Degree Program in Medical, Veterinary, and Forensic Biotechnologies (hereinafter referred to as CdLM - SBMVF) is established. The program belongs to the LM-9 class, and the conferred academic title is "Master's Degree in Medical, Veterinary, and Forensic Biotechnological Sciences." Starting from the Academic Year 2017-2018, the course is conducted entirely in English, with a strong international focus.

The CdLM – SBMVF aims to provide high levels of competence in the planning and scientific-technical development of biotechnologies applied in human health, veterinary medicine, and forensic medicine.

The course has a duration of two years, with the involvement of the Departments of Veterinary Medicine and Law. It takes place within the Department of Medicine and Surgery, structured with a common path for all students in the 1st year and a differentiated path in the second year.

The common path aims to provide scientific foundations in the morphology of the human organism, as well as the main cellular and molecular pathogenetic mechanisms of diseases. It also aims to ensure the acquisition of advanced knowledge related to major molecular biology techniques and their use in the prevention, diagnosis, and therapy of human diseases. The common educational path includes both lectures and laboratory activities. Subsequently, specialized disciplines are planned to acquire specific knowledge in the medical (advanced molecular diagnostics), veterinary (animal production and reproduction, veterinary pathology and diagnostics, development and use of animal models for biomedical studies), and forensic (toxicological, medico-legal, legal, and criminological skills) fields, depending on the chosen curriculum.

Students will deepen specific aspects and enhance their skills through a wide range of elective courses, predominantly practical. To increase the professional nature of the course and facilitate student contact with the professional world, a period of internship at specialized extra-academic structures is planned for all students. The educational path concludes with an internship and the completion of a thesis for the final examination, which can be carried out in specialized, national, or international public or private institutions.

Educational Objectives: The Master's degree program aims to provide high levels of competence in the planning and scientific-technical development of biotechnologies applied in human health, veterinary medicine, and forensic medicine. The course structure aims to achieve the following objectives:

- Provide scientific and cultural foundations in the morphology of the human organism, especially at the cellular and molecular levels, and of organs and tissues.
- Offer basic knowledge on fundamental pathological processes of human interest, with a particular focus on their cellular and molecular pathogenetic mechanisms.
- Ensure knowledge and use of the main methodologies characterizing molecular and cellular biotechnologies for the prevention, diagnosis, and therapy of human diseases in both experimental and clinical settings.
- Develop the ability to design and apply, in collaboration with graduates in Medicine and Surgery, preventive, diagnostic, and therapeutic strategies based on biotechnology in the field of human pathology.

- Provide foundations for the design and analysis of innovative biopharmaceuticals, diagnostic tools, and vaccines.
- Offer the basis to recognize interactions between foreign microorganisms and the human organism, also through specific diagnostic investigations.
- Provide in-depth knowledge of molecular mechanisms of disease and advanced molecular diagnostic systems.
- Familiarize students with legislation and ethical issues related to the use of biotechnologies.
- Prepare graduates with specific expertise in the areas of biotechnologies applied to veterinary medicine, particularly in the areas of animal production and reproduction, food safety, animal pathology, diagnostics, microbiology and veterinary immunology, infectious and parasitic diseases, zoonoses, genetic improvement, and conservation of biodiversity, as well as the development and use of animal models for biomedical studies. This includes knowledge of regulatory aspects related to veterinary biotechnologies.
- Prepare graduates with medical and legal knowledge, capable of combining technological competence with medico-legal and investigative skills to interact with lawyers and magistrates in both investigative and trial phases.

Occupational and Professional Opportunities: Master's graduates, upon passing an enabling exam, can access the professional register of the National Order of Biologists. Potential career opportunities include:

Universities and public/private research institutions (scientific research and technological development activities directed towards pre-clinical activities in the medical and veterinary fields).

National Health Service and private health structures.

Biotechnological industries and services.

Pharmaceutical industry and drug surveillance.

Scientific research, technological development, and laboratory control in the food and food processing industry.

Technical-scientific information.

Quality control management activities.

Environmental prevention organizations.

Medico-legal and forensic structures (consultancy activities).

Diagnostic and Pharmaceutical Industry.

Notified and certification bodies.

National and international regulatory agencies.

Monitoring of clinical trials.

Patent offices.

Biotech and Genomic Companies.

VALUE OF EDUCATIONAL CREDIT (CFU):

The Credit is the unit of measurement used to evaluate the student's performance in each activity prescribed by the Master's degree regulations as necessary for the Master's Degree in Veterinary Medicine or Forensic Biotechnologies.

Each credit represents 25 hours of study, with typically 7 hours allocated to frontal lessons or theoretical and practical teaching sessions. Each credit for enhancing professional skills includes 25 hours of work in small groups under the supervision of a university lecturer. Each credit for the Final Exam corresponds to 25 hours of assisted teaching activities.

The 25 hours of study for each credit are distributed as follows:

- a) frontal lessons
- b) laboratory exercises;
- c) seminars;
- d) time dedicated to other activities included in the teaching regulations;
- e) time that the students dedicate to individual study.

PREREQUISITES AND ATTENDANCE REQUIREMENTS: THERE ARE NO PREREQUISITES FOR EACH YEAR OR SEMESTER, HOWEVER, STUDENTS ARE ENCOURAGED TO FOLLOW THE SEQUENCE OF COURSES PROPOSED IN THE STUDY PLAN. ATTENDANCE IS NOT MANDATORY.

CALENDAR OF TEACHING ACTIVITIES

- **LESSONS**

I semester: Start MSc: 1 October 2026

II semester: Start MSc: 1 March 2027

- **EXAMINATION SESSIONS:**

1st semester: examinations are held in january/february after the end of the semester. Other dates for examination are scheduled for the following june, july and september.

2nd semester: examinations are held in june/july after the end of the semester. Other dates for examination are scheduled for the following September.

[HTTP://WWW.MED.UNIPG.IT/CCL/BIOTECHNOLOGICAL SCIENCES/EXAM_CALENDAR/INDEX_EXAM_CALENDAR.HTML](http://www.med.unipg.it/ccl/biotechnological_sciences/exam_calendar/index_exam_calendar.html)

- **FINAL EXAMINATION:**

The final examinations are held in july (1st session) and in autumn (2nd session october or november). Extra sessions may be held in february and april.

[HTTP://WWW.MED.UNIPG.IT/CCL/BIOTECHNOLOGICAL SCIENCES/GRADUATION SESSIONS/SEDUTE%20DI%20LAUREA%202026_2027.PDF](http://www.med.unipg.it/ccl/biotechnological_sciences/graduation_sessions/sedute%20di%20laurea%202026_2027.pdf)

REGULATIONS

[HTTP://WWW.MED.UNIPG.IT/CCL/BIOTECHNOLOGICAL SCIENCES/REGULATIONS/REGULATIONS_2026_2027.PDF](http://www.med.unipg.it/ccl/biotechnological_sciences/regulations/regulations_2026_2027.pdf)

ACADEMIC OFFER FOR THE ACADEMIC YEAR 2026/2027.

I ANNO COMUNE

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A001761 - GENETICS AND EPIGENETICS	6	BIOS-14/A	Caratterizzante / Discipline biotecnologiche e comuni		LAB:36, LEZ:21	Primo Semestre	Obbligatorio (Required)	Orale
A001597 - MOLECULAR BASIS OF HUMAN DISEASE AND IMMUNOLOGY	12				LEZ:84	Primo Semestre	Obbligatorio (Required)	Orale
Unità Didattiche								
A001762 - MOLECULAR IMMUNOLOGY	6	MEDS-02/A	Caratterizzante / Discipline biotecnologiche e comuni		LEZ:42	Primo Semestre	Obbligatorio (Required)	
A001763 - MOLECULAR BASIS OF HUMAN DISEASES	6	MEDS-02/A	Caratterizzante / Discipline biotecnologiche e comuni		LEZ:42	Primo Semestre	Obbligatorio (Required)	
A001760 - MOLECULAR DIAGNOSTICS IN MICROBIOLOGY	6	MEDS-03/A	Caratterizzante / Discipline biotecnologiche e comuni		LAB:24, LEZ:28	Primo Semestre	Obbligatorio (Required)	Orale
A003412 - QUANTITATIVE BIOLOGY	6	BIOS-07/A	Caratterizzante / Discipline fondamentali applicate alle biotecnologie		LAB:24, LEZ:28	Primo Semestre	Obbligatorio (Required)	Orale
A001768 - BIOTECHNOLOGICAL DRUGS	6	BIOS-11/A	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:24, LEZ:28	Secondo Semestre	Obbligatorio (Required)	Orale
A001758 - HISTOLOGICAL AND ANATOMICAL BASIS OF HUMAN DISEASES	6	MEDS-04/A	Caratterizzante / Medicina di laboratorio e diagnostica		LAB:24, LEZ:28	Secondo Semestre	Obbligatorio (Required)	Orale
A001765 - MOLECULAR DIAGNOSTICS IN NEUROPATHOLOGY	12				LAB:48, LEZ:56	Secondo Semestre	Obbligatorio (Required)	Orale
Unità Didattiche								
A001766 - NEUROLOGY	6	MEDS-12/A	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:24, LEZ:28	Secondo Semestre	Obbligatorio (Required)	
A001767 - PHYSIOLOGY	6	BIOS-06/A	Caratterizzante / Discipline biotecnologiche e comuni		LAB:24, LEZ:28	Secondo Semestre	Obbligatorio (Required)	
A001769 - TRAINING	6	NN	Altro / Tirocini formativi e di orientamento		TIR:150	Secondo Semestre	Obbligatorio (Required)	Orale

II ANNO CURRICULUM MEDICO

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A001771 - CARDIO VASCULAR DISEASES	6	MEDS-07/B	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:24, LEZ:28	Primo Semestre	Opzionale (Optional)	Orale
A005385 - ENDOCRINE SYSTEM DISEASES	6	MEDS-08/A	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:24, LEZ:28	Primo Semestre	Opzionale (Optional)	Orale

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A001772 - BIOTECHNOLOGICAL APPROACHES TO ONCOLOGICAL DISEASES	6	MEDS-26/D	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:36, LEZ:21	Secondo Semestre	Opzionale (Optional)	Orale
A001764 - BIOTECHNOLOGY IN HEMOSTASIS AND THROMBOSIS	6	MEDS-26/D	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:24, LEZ:28	Secondo Semestre	Opzionale (Optional)	Orale
A001773 - BLOOD DISEASES	6	MEDS-09/B	Affine/Integrativa / Attività formative affini o integrative		LAB:24, LEZ:28	Primo Semestre	Obbligatorio (Required)	Orale
A001774 - DIGESTIVE SYSTEM DISEASES	6	MEDS-10/A	Affine/Integrativa / Attività formative affini o integrative		LAB:24, LEZ:28	Primo Semestre	Obbligatorio (Required)	Orale
A001775 - FINAL TEST	12	PROFIN_S	Lingua/Prova Finale / Per la prova finale		PRF:120		Obbligatorio (Required)	Orale
A001776 - TRAINING	6	NN	Altro / Tirocini formativi e di orientamento		TIR:60	Secondo Semestre	Obbligatorio (Required)	Orale
A001777 - STAGE	6	NN	Per stages e tirocini / Per stages e tirocini presso imprese, enti pubblici o privati, ordini professionali		STA:150	Primo Semestre	Obbligatorio (Required)	Orale

II ANNO CURRICULUM VETERINARIO

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A001778 - BIOTECHNOLOGY APPLIED TO ANIMAL DERIVED PRODUCTS	6	MVET-02/B	Caratterizzante / Discipline veterinarie e della riproduzione animale		LAB:24, LEZ:28	Primo Semestre	Opzionale (Optional)	Orale
A001779 - MOLECULAR DIAGNOSTICS IN VETERINARY INFECTIOUS DISEASES	6	MVET-03/A	Caratterizzante / Discipline veterinarie e della riproduzione animale		LAB:24, LEZ:28	Primo Semestre	Opzionale (Optional)	Orale

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A003041 - ANIMAL GENOMICS	6	AGRI-09/A	Caratterizzante / Discipline veterinarie e della riproduzione animale		LAB:24, LEZ:28	Secondo Semestre	Opzionale (Optional)	Orale
A001780 - ANIMAL REPRODUCTION BIOTECHNOLOGY	6	MVET-05/B	Caratterizzante / Discipline veterinarie e della riproduzione animale		LAB:24, LEZ:28	Secondo Semestre	Opzionale (Optional)	Orale
A006565 - VETERINARY CLINICAL PATHOLOGY: LABORATORY DIAGNOSTICS AND TECHNIQUES	6	MVET-04/B	Affine/Integrativa / Attività formative affini o integrative		LAB:24, LEZ:28	Primo Semestre	Obbligatorio (Required)	Orale
A001784 - BIOTECHNOLOGY APPLIED TO ANIMAL BREEDING	6	AGRI-09/C	Affine/Integrativa / Attività formative affini o integrative		LAB:24, LEZ:28	Secondo Semestre	Obbligatorio (Required)	Orale
A001775 - FINAL TEST	12	PROFIN_S	Lingua/Prova Finale / Per la prova finale		PRF:120		Obbligatorio (Required)	Orale
A001776 - TRAINING	6	NN	Altro / Tirocini formativi e di orientamento		TIR:60	Secondo Semestre	Obbligatorio (Required)	Orale
A001777 - STAGE	6	NN	Per stages e tirocini / Per stages e tirocini presso imprese, enti pubblici o privati, ordini professionali		STA:150	Primo Semestre	Obbligatorio (Required)	Orale

II ANNO CURRICULUM FORENSE

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A001785 - BIOLAW	6	GIUR-01/A	Caratterizzante/Scienze umane, economiche, giuridiche e politiche pubbliche		LEZ:42	Primo Semestre	Obbligatorio (Required)	Orale
A002521 - DATA LAW IN SCIENCE AND FORENSICS	6	GIUR-01/A	Caratterizzante/Scienze umane, economiche, giuridiche e politiche pubbliche		LEZ:42	Primo Semestre	Opzionale (Optional)	Orale

Attività Formativa	CFU	Settore	TAF/Ambito	TAF/Ambito Interclasse	Ore Att. Front.	Periodo	Tipo insegnamento	Tipo esame
A001759 - FORENSIC GENETICS	6	MEDS-25/A	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LAB:24, LEZ:28	Secondo Semestre	Opzionale (Optional)	Orale
A002594 - HEALTH LAW	6	GIUR-01/A	Caratterizzante / Scienze umane, economiche, giuridiche e politiche pubbliche		LEZ:42	Secondo Semestre	Opzionale (Optional)	Orale
A004659 - MEDICAL AND FORENSIC TOXICOLOGY	6	BIOS-11/A	Caratterizzante / Discipline medico-chirurgiche e della riproduzione umana		LEZ:42	Secondo Semestre	Opzionale (Optional)	Orale
A001790 - FORENSIC INVESTIGATION TECHNIQUES	6	GIUR-13/A	Affine/Integrativa / Attività formative affini o integrative		LEZ:42	Primo Semestre	Opzionale (Optional)	Orale
A001788 - CRIMINAL PROCEDURAL LAW AND FORENSIC TECHNIQUES	6	GIUR-01/A	Affine/Integrativa / Attività formative affini o integrative		LEZ:42	Secondo Semestre	Opzionale (Optional)	Orale
A001789 - LEGAL MEDICINE	6	MEDS-25/A	Affine/Integrativa / Attività formative affini o integrative		LAB:12, LEZ:30	Secondo Semestre	Obbligatorio (Required)	Orale
A001775 - FINAL TEST	12	PROFIN_S	Lingua/Prova Finale / Per la prova finale		PRF:120		Obbligatorio (Required)	Orale
A001776 - TRAINING	6	NN	Altro / Tirocini formativi e di orientamento		TIR:60	Secondo Semestre	Obbligatorio (Required)	Orale
A001777 - STAGE	6	NN	Per stages e tirocini / Per stages e tirocini presso imprese, enti pubblici o privati, ordini professionali		STA:150	Primo Semestre	Obbligatorio (Required)	Orale