



**UNIVERSITÀ DEGLI STUDI  
DELL'INSUBRIA**

**DIPARTIMENTO DI  
BIOTECNOLOGIE E SCIENZE  
DELLA VITA**

**TEACHING REGULATIONS OF THE  
BACHELOR'S DEGREE COURSE in BIOTECHNOLOGY**

*a.y. 2026/2027*



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***Art. 1 - General features and organization of the Bachelor's Degree in Biotechnology***

The course of study, belongs to the class of the Bachelor's Degree in Biotechnology L-2 (DM 16 March 2007, reformed according to the DM 19 December 2023) and is activated according to the teaching order of 15/06/2015.

Based on the expertise of the faculty and the research of the reference department (Department of Biotechnology and Life Sciences- DBSV), the CdS is divided into two curricula from the second year: Molecular Biotechnology and Health Biotechnology.

Biotechnology is the most innovative side of applied biology. By studying biotechnology, students will learn how to use biological systems for the production of goods and services, for example to: improve human, animal and plant health through the discovery of new drugs, nutraceuticals, vaccines and diagnostic methods; protect the environment by developing bio-sustainable and environmentally friendly industrial processes; satisfy the demand for energy by using biomasses as a renewable source.

The first cycle programme in Biotechnology offers students the essential knowledge needed to achieve these aims by employing a molecular and applied approach, which will allow them to gain the technical and scientific skills required by the different fields of biotechnology.

The degree programme has two different streams: Molecular biotechnology and Medical biotechnology. The programme's strengths are:

- focus on each student's learning achievements;
- numerous workshops are offered from the first year;
- placements in laboratories in universities/companies (also abroad);
- high employability at the end of the programme.

Graduates will find employment in the following areas: research and management in public or private facilities; commercial activities, quality control, scientific dissemination, consulting for patents and free-lance professional services.

The Degree Program in Biotechnology provides teaching in a “conventional” mode. Lessons are held in Italian.

The program aims to diversify and complete the educational offer of the DBSV, as it places particular emphasis on students with specific needs, who may adapt their course of study and opt for a “part-time” regime. The degree program has a duration of three years (180 ECTS credits), with the possibility for students to choose part-time student status and the consequent extension of the study path to four years.

The teaching structure responsible for the course is the DEPARTMENT OF BIOTECHNOLOGY AND LIFE SCIENCES

The Chair of the course is Professor ELENA BOSSI

<https://uninsubria.unifind.cineca.it/get/person/000134>

The reference teaching secretariat receives by appointment at the pavilion Lanzavecchia in via Dunant, 3 - Varese, and responds to e-mails received through INFOSTUDENTI.

***Art. 2 – Lessons timetable***

The course is organized following a semester-based calendar. Exams sessions are organized during the teaching activities suspension periods students may access the exams provided for in their study plan after having followed the course (attendance acquisition).



**1st SEMESTER:**

- Lessons start date: from 21 September 2026 - lessons end date: 15 January 2027
- Fall exams session: 16 - 20 November 2026 (except for 1st-year students);
- Winter exams session: 18 January - 19 February 2027

**2nd SEMESTER:**

- Lessons start date: 22 February 2027 - lessons end date: 18 June 2027
- Spring exams session: 31 March - 6 April 2027
- Summer exams session: 21 June - 18 September 2027 (except for the month of August)

For the lessons suspension dates and holidays for national, local and other festivities (Christmas break, Easter break, University holidays), students should refer to the University's Academic Calendar approved by the University bodies at the following link:

<https://www.uninsubria.eu/about-us/how-find-us/academic-calendar>

***Art. 3 Admission, assessment of educational background and additional learning requirements (OFA) remedial procedures***

Admission to the Degree Course is restricted and subject to passing the TOLC-B entrance test administered by the CISIA consortium.

The 155 available places are allocated as follows: 150 places reserved for Italian citizens, EU citizens, and non-EU citizens legally residing in Italy, 5 places reserved for non-EU citizens residing abroad, of which 2 places are reserved for citizens of the People's Republic of China residing abroad who participate in the Marco Polo and Turandot Project.

The admission call is available on the University website in the section dedicated to limited-access degree programmes.

***Additional learning requirements (OFA) remedial procedures***

Students who have not obtained the minimum score in the Basic mathematics module of TOLC -B may attend lessons, but will have an additional learning requirement (OFA). The learning requirement (OFA) will be met after passing a mathematics pre-test which will constitute a test of the acquisition of the contents treated in the remedial course offered by the Degree Course, as a measure to meet the OFA. In order to register for the Mathematics and bases of computer science and statistics exams, students will have to have passed this test.

***Additional preparatory teaching activities for the educational background assessment test***

To prepare for the educational background assessment test students may attend the Mathematics Pre-course offered by the University at the beginning of September. For further information, please visit the page dedicated to pre-courses

[www.uninsubria.it/precorsi](http://www.uninsubria.it/precorsi) (in Italian)

***Art.4 Orientation, enrollment procedure and other administrative aspects***

Incoming orientation:

The Degree Course organizes for the 2nd semester of every year some presentation (Open Day) and incoming orientation meetings for future freshmen. The informational material is presented online and published on the website ([www.uninsubria.it/orientamento](http://www.uninsubria.it/orientamento); in Italian) and is available for interested students. Admission procedures are published every year on the webpages of the Degree Course and of the Students Services Office.



In itinere orientation:

- Study plan

The tutors of the Degree Course organize orientation meetings on how to select the curriculum and optional courses in the related field (Type of Teaching Activity C) and elective course (Type of Teaching Activity D).

- Internship

The Internships Committee organizes orientation meetings on how to choose the curricular internship. Every year some "themed day" are offered where all possible career opportunities and research activities carried out in the Department's laboratories are illustrated.

#### INFOSTUDENTI SERVICE

The INFOSTUDENTI service is a web application that offers a communication channel with the administration.

The service may be accessed by clicking on the following link:

[www.uninsubria.eu/services/all-services/infostudenti-information-service-students](http://www.uninsubria.eu/services/all-services/infostudenti-information-service-students)

#### ***Art. 5 - Prerequisites***

Not applicable.

To access the curricular internship students must have passed all first year courses.

#### ***Art. 6 – European credit transfer and accumulation system (ECTS)***

The courses have different types of assisted teaching: frontal lessons, exercises and workshops. Each ECTS corresponds to 8 hours of classroom teaching, 12 hours of laboratory and 12 hours of exercises.

#### ***Art. 7 – Excellence programme***

The Degree Course offers outstanding students enrolled in their 2nd year an excellence program, which entails the possibility to attend two seminars and a guided school trip at a company or institution in the biotechnological field chosen every year by the Council of the Degree Course, with the opportunity of meeting specialists from the field. The seminars will be on the topics covered by the courses of the Degree Course; one will offer a general scientific analysis while the other will have a technical and practical character (methodological and experimental approaches). Attendance to the Excellence program will be considered as an honors element in the final exam.

#### ***Art. 8 – Validation of linguistic and IT certifications***

The validation of ECTS is automatic for the ENGLISH course, by forwarding to the Student Services office the certificate attesting that one of the following tests, which may have been taken autonomously by the students, has been passed:

- University of Cambridge Examinations (PET, FCE, CAE, CPE, BEC 1-3, CELS) B1 level
- Trinity College London Examinations (ESOL Grade 5 -12, ISE level I – III)
- TOEFL Examinations (Paper Based Test Score > 457, Computer Based Test Score > 137)
- City & Guilds Pitman Qualifications (ESOL Intermediate – Advanced, SESOL Intermediate – Advanced)

The validation of other certificates, including those for IT skills, will be assessed by the Council of the Degree Course, which will decide whether to validate the related ECTS.

#### ***Art. 9 – Validation of professional abilities or exams taken in a previous career***



Pursuant to article 4, paragraph 3 of the Ministerial Decree 1648/23, the Council of the Degree Course may validate:

- Professional knowledge and skills certified pursuant to current regulations;
- Knowledge and skills developed in educational activities at a post-secondary level in whose organization and implementation the university was involved.

The validation may take place if the activity is related to the specific educational objectives of the Degree Course and of the educational activities for which the validation is being requested, also taking into consideration the content and duration in terms of hours of the activity. The maximum number of ECTS that may be validated is 12.

***Art. 10 – Attendance obligations***

Attendance is mandatory for educational workshops; an attendance of at least 75% of the workshop hours provided for by the courses is required. Mandatory attendance courses must be taken in the correct year. Attendance is mandatory also for the ECTS for "Further skills for entering the workforce". Exceptions to the present norm may be allowed, for example, in cases of transfers from another course or University.

***Art. 11 – Enrolling in subsequent years***

There are no restrictions to enroll in the 2nd and 3rd year.

***Art. 12 – Transfer procedures from other degrees courses***

Transfer applications during subsequent years by students enrolled in the same course at another Italian university, following an authorization application, are accepted in relation to the vacant positions in the individual course years. Please see the specific Rectoral Decree published on the University's website. For all incoming transfers, the students' educational curriculum will be examined and the validation of passed exams will be subject, in terms of ECTS and mark, to the approval of the Council of the Degree Course, on the basis of the following criteria:

- analysis of the curriculum
- assessment of the adequacy of the academic fields and of the contents of the activities undertaken by the student in their previous career, with regard to the specific educational objectives of the degree course and of the individual educational activities provided for in the curriculum
- obsolescence of the contents of the exams.

The abovementioned validation is carried out as provided for in article no. 3, paragraphs 8 and 9 of the ministerial decree of Class redefinition (16 March 2007). The validation is carried out until the ECTS provided for by the curriculum are reached.

- Students who have been validated at least 21 ECTS will be admitted to the 2nd year, subject to availability.
- Students who have been validated at least 60 ECTS will be admitted to the 3rd year, subject to availability.

***Art. 13 – Rules for the submission of study plans and individual study plans***

Students will have to submit their Study Plan in their second year, with the possibility to modify it in the following year (within the limits of elective courses, referred to as Type of Teaching Activity D), following the University's administrative fulfillments calendar. Information on how to submit and fill in the study plan are available on the Students Services webpage (study plan submission [www.uninsubria.it/servizi/presentazione-piano-di-studio](http://www.uninsubria.it/servizi/presentazione-piano-di-studio); in Italian) Elective educational activities may be chosen among all courses activated by the University with the exception of some integrated courses offered by the limited access healthcare degree courses. To check selection restrictions, please contact the relevant Student Services office.



The Committee appointed by the Council of the Degree Course will assess the coherence of the abovementioned activities with the students' educational curriculum. Study Plans that conform to the Regulations will be automatically approved, following the procedure provided by the Students Services for the submission of study plans. Students can submit an individual study plan, provided that this is coherent with the cultural project and suitable for the educational objectives and specific contents of the Degree Course. Individual study plans, which will have to adhere to the minimum ECTS provided for in the teaching Regulations, will be assessed and approved by The Committee appointed by the Council of the Degree Course.

***Art. 14 – Curricular traineeship***

The educational curriculum is completed by an experimental traineeship of 225 hours, carried out in the laboratories of the university or at an external company.

***Art. 15 Graduation procedure***

To access the final exam students must have undertaken a 9 ECTS internship for a period of at least two months. The final exam consists in the defense of a thesis, which normally consists in a report of the activity undertaken during the internship.

**For further information please refer to the degree course webpage:**

[www.uninsubria.eu/bachelor-biotech](http://www.uninsubria.eu/bachelor-biotech)

**For students with disabilities and/or specific learning disorders, please visit:**

[www.uninsubria.it/studentidisabilidsa](http://www.uninsubria.it/studentidisabilidsa) (in Italian)

**ANNEXES**

Annex 1 - Study Plan



**STUDY PLAN**

**MANDATORY TEACHING ACTIVITIES - 2026/2027 COHORT**

**\*\*:** The course can be chosen for the 2nd or 3rd year

**Assessment method:** M = exam with mark / Q = qualification / A = attendance

**MOLECULAR BIOTECHNOLOGY CURRICULUM**

**MANDATORY COURSES:**

1st YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	GENERAL AND INORGANIC CHEMISTRY		CHEM-03/A (CHIM/03)	A	6	52 (24+32 EXE)	M
I	CYTOLOGY AND HISTOLOGY		BIOS-04/A (BIO/06)	B	9	76 (64+12 WRK)	M
I	MATHEMATICS AND BASES OF COMPUTER SCIENCE AND STATISTICS		MATH-03/A (MAT/05)	A	8	72 (48+24 EXE)	M
I	ENGLISH		ANGL-01/C (L-LIN/12)	E	2	16	Q
II	ANIMAL AND PLANT BIOLOGY	Animal Biology Mod.	BIOS-03/A (BIO/05)	B	6	48	M
		Plant Biology Mod.	BIOS-02/A (BIO/04)	B	6	52 (40+12 WRK)	M
II	ORGANIC CHEMISTRY		CHEM-05/A (CHIM/06)	A	8	72 (48+12 EXE+12 WRK)	M
II	PHYSICS		PHYS-06/A (FIS/07)	A	6	56 (32+24 EXE)	M
II	GENETICS		BIOS-14/A (BIO/18)	A	8	68 (56+12 EXE)	M



2nd YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	ETHICS AND LEGISLATION OF BIOTECHNOLOGICAL DRUGS	Ethics	MEDS-02/C (MED/02)	B	2	16	M
		Legislation of biotechnological drugs	GIUR-10/A (IUS/14)	B	2	16	M
	ANIMAL BIOTECHNOLOGY	Legislation of biotechnological drugs	GIUR-10/A (IUS/14)	B	2	16	M
I, II	BIOCHEMISTRY AND BIOINFORMATICS		AGRI-09/D (AGR/20)	B	12	100 (88+12 EXE)	M
II	MOLECULAR BIOLOGY		BIOS-07/A (BIO/10)	B	8	68 (56+12 WRK)	M
II	GENERAL MICROBIOLOGY		BIOS-08/A (BIO/11)	A	6	52 (40+12 WRK)	M
II	BIOTECHNOLOGY AND MOLECULAR AND PLANT BIOLOGY	Plant Biotechnology Module	BIOS-15/A (BIO/19)	B	6	52 (40+12 WRK)	M
II	MICROBIAL AND CELLULAR BIOTECHNOLOGY	Cellular Biotechnology Module	BIOS-02/A (BIO/04)	B	6	52 (40+12 WRK)	M
	ELECTIVE			D	6		
3rd YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	BIOTECHNOLOGY AND MOLECULAR AND PLANT BIOLOGY	Molecular and Plant Biology Module	BIOS-02/A (BIO/04)	B	6	48	M
I	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Microbial Biotechnology Module	CHEM-07/C (CHIM/11)	B	6	52 (40+12 WRK)	M



I	APPLIED BIOCHEMISTRY		BIOS-07/A (BIO/10)	B	6	54 (36+18 WRK)	M
	ELECTIVE			D	12		M
	CURRICULAR CHOICE FROM LIST			C	18		M
	EDUCATIONAL INTERNSHIP		FINEX_S	F	9		Q
	FURTHER SKILLS FOR ENTERING THE WORK FORCE		NN	F	1	SEM 10	Q
	FINAL EXAM		FINEX_S	E	3		

**3 CURRICULAR COURSES AMONG (18 ECTS):**

3rd YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	FOOD BIOTECHNOLOGY	Food Biochemistry Module	BIOS-07/A (BIO/10)	C	3	26 (20+6 WRK)	M
		Food Biotechnology Module	AGRI-09/D (AGR/20)	C	3	24	M
I	ANALITICAL CHEMISTRY AND QUALITY CONTROL	Chromatography Module	CHEM-01/A (CHIM/01)	C	2	16	M
		Spectroscopy Module	CHEM-01/A (CHIM/01)	C	2	16	M
		Quality Control Module	CHEM-01/A (CHIM/01)	C	2	16	M
II	RECOMBINANT TECHNOLOGIES		BIOS-14/A (BIO/18)	C	6	52 (40+12 WRK)	M
II	BIOTECHNOLOGICAL PROCESSES		CHEM-07/C (CHIM/11)	C	6	52 (40+12 WRK)	M
II	VEGETAL PHARMACEUTICAL SUBSTANCES **		BIOS-01/C (BIO/03)	C	6	50 (44+6 WRK)	M



**HEALTHCARE BIOTECHNOLOGY CURRICULUM**

**\*\*:** The course can be chosen for the 2nd or 3rd year

**MANDATORY COURSES:**

1st YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	GENERAL AND INORGANIC CHEMISTRY		CHEM-03/A (CHIM/03)	A	6	52 (24+32 EXE)	M
I	CYTOLOGY AND HISTOLOGY		BIOS-04/A (BIO/06)	B	9	76 (64+12 WRK)	M
I	MATHEMATICS AND BASES OF COMPUTER SCIENCE AND STATISTICS		MATH-03/A (MAT/05)	A	8	72 (48+24 EXE)	M
I	ENGLISH		ANGL-01/C (L-LIN/12)	E	2	16	Q
II	ANIMAL AND PLANT BIOLOGY	Animal Biology Mod.	BIOS-03/A (BIO/05)	B	6	48	M
		Plant Biology Mod. §	BIOS-02/A (BIO/04)	B	6	52 (40+12 WRK)	M
II	ORGANIC CHEMISTRY		CHEM-05/A (CHIM/06)	A	8	72 (48+12 EXE+12 WRK)	M
II	PHYSICS		PHYS-06/A (FIS/07)	A	6	56 (32+24 EXE)	M
II	GENETICS		BIOS-14/A (BIO/18)	A	8	68 (56+12 EXE)	M



2nd YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	ETHICS AND LEGISLATION OF BIOTECHNOLOGICAL DRUGS	Ethics	MEDS-02/C (MED/02)	B	2	16	M
		Legislation of biotechnological drugs	GIUR-10/A (IUS/14)	B	2	16	M
I	PHYSIOLOGY		BIOS-06/A (BIO/09)	B	6	48	M
I	MOLECULAR BASIS OF IMMUNOLOGY AND PATHOLOGIES	Immunology Module	MEDS-02/A (MED/04)	B	6	48	M
I, II	BIOCHEMISTRY AND BIOINFORMATICS		BIOS-07/A (BIO/10)	B	12	100 (88+12 EXE)	M
II	MOLECULAR BIOLOGY		BIOS-08/A (BIO/11)	B	8	68 (56+12 WRK)	M
II	GENERAL MICROBIOLOGY		BIOS-15/A (BIO/19)	A	6	52 (40+12 WRK)	M
II	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Cellular Biotechnology Module	BIOS-04/A (BIO/06)	B	6	52 (40+12 WRK)	M
II	GENERAL AND MOLECULAR PHARMACOLOGY		BIOS-11/A (BIO/14)	B	6	48	M
	ELECTIVE			D	6		



3rd YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	MOLECULAR BASIS OF IMMUNOLOGY AND PATHOLOGIES	Molecular basics of pathologies module	MEDS-02/A (MED/04)	B	6	48	M
I	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Microbial Biotechnology Module	CHEM-07/C (CHIM/11)	B	6	52 (40+12 WRK)	M
I	NEUROPHYSIOLOGY AND SYSTEMS PHYSIOLOGY		BIOS-06/A (BIO/09)	B	6	48	M
	ELECTIVE			D	12		M
	CURRICULAR CHOICE FROM LIST			C	18		
	EDUCATIONAL INTERNSHIP		FINEX _S	F	9		Q
	FURTHER SKILLS FOR ENTERING THE WORK FORCE		NN	F	1	SEM 10	Q
	FINAL EXAM		FINEX _S	E	3		

**3 CURRICULAR COURSES AMONG (18 ECTS):**

3rd YEAR							
SEM.	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD



I	APPLIED BIOCHEMISTRY		BIOS-07/A (BIO/10)	B	6	54 (36+18 LAB)	M
I	ARCHAEOBIOLOGY AND FORENSIC BIOTECHNOLOGY	Forensic biotechnology module	MEDS-25/A (MED/43)	C	3	24	M
		Archaeobiology Module	BIOS-03/B (BIO/08)	C	3	24	M
I	MEDICAL SURGICAL BIOTECHNOLOGY AND TECHNOLOGIES	The new technologies of head and neck surgery	MEDS-18/A (MED/31)	C	2	16	M
		The new technologies of reconstructive and regenerative surgery	MEDS-14/A (MED/19)	C	2	16	M
		Biotechnology applied to the locomotor system	MEDS-19/A (MED/33)	C	2	16	M
II	ANATOMY FOR BIOTECHNOLOGY **	Human anatomy	BIOS-04/A (BIO/16)	C	3	24	M
		Comparative anatomy	BIOS-04/A (BIO/06)	C	3	24	M
II	BIOTECHNOLOGY IN CLINICAL NEUROSCIENCES	Neurosurgery integrated with neuroimaging module	MEDS-15/A (MED/27)	C	3	24	M
		Neurology module	MEDS-12/A (MED/26)	C	3	24	M
II	RECOMBINANT TECHNOLOGIES		BIOS-14/A (BIO/18)	C	6	52 (40+12 WRK)	M
II	MICROBIAL PATHOGENS AND ELEMENTS OF VIROLOGY		MEDS-03/A (MED/07) BIOS-15/A (BIO/19)	C	6	48	V



**HEALTH BIOTECHNOLOGY CURRICULUM Part Time**

**MANDATORY COURSES:**

1 <sup>ST</sup> YEAR							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECT S	HOURS	ASSESSMENT METHOD
I	GENERAL AND INORGANIC CHEMISTRY		CHEM-03/A (CHIM/03)	A	6	52 (32 + 24 ESE)	V
I	CYTOLOGY AND HISTOLOGY		BIOS-04/A (BIO/06)	B	9	76 (64 + 12 LAB)	V
I	MATHEMATICS AND BASICS OF COMPUTER SCIENCE AND STATISTICS		MATH-03/A (MAT/05)	A	8	72 (48 + 24 ESE)	V
I	ENGLISH LANGUAGE		ANGL-01/C (L-LIN/12)	E	2	16	I
II	ANIMAL AND PLANT BIOLOGY	Animal Biology Mod.	BIOS-03/A (BIO/05)	B	6	48	V
II	ORGANIC CHEMISTRY		CHEM-05/A (CHIM/06)	A	8	72 (48 + 12 ESE + 12 LAB)	V
II	PHYSICS		PHYS-06/A (FIS/07)	A	6	56 (32 + 24 ESE)	V
					45		
2 <sup>ND</sup> YEAR							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECT S	HOURS	ASSESSMENT METHOD
II	GENETICS		BIOS-14/A (BIO/18)	A	8	68 (56 + 12 ESE)	V
II	ANIMAL AND PLANT BIOLOGY	Plant Biology Mod	BIOS-02/A (BIO/04)	B	6	52 (40 + 12 LAB)	V
I, II	BIOCHEMISTRY AND		BIOS-07/A (BIO/10)	B	12	100 (88 + 12 ESE)	V



	BIOINFORMATICS						
II	MOLECULAR BIOLOGY		BIOS-08/A (BIO/11)	B	8	68 (56 + 12 LAB)	V
I	GENERAL MICROBIOLOGY		BIOS-15/A (BIO/19)	A	6	52 (40 + 12 LAB)	V
I	MOLECULAR BASIS OF IMMUNOLOGY AND PATHOLOGIES	Immunology Module	MEDS-02/A (MED/04)	B	6	48	V
					46		
<b>3<sup>RD</sup> YEAR</b>							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECT S	HOURS	ASSESSMENT METHOD
I	ETHICS AND LEGISLATION OF BIOTECHNOLOGICAL DRUGS	Ethics	MEDS-02/C (MED/02)	B	2	16	V
		Biotechnology Drug Legislation	GIUR-10/A IUS/14	B	2	16	V
II	PHYSIOLOGY		BIOS-06/A (BIO/09)	B	6	48	V
II	GENERAL AND MOLECULAR PHARMACOLOGY		BIOS-11/A (BIO/14)	B	6	48	V
II	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Cellular Biotechnology Mod	BIOS-04/A (BIO/06)	B	6	52 (40 + 12 LAB)	V
	FREE CHOICE			D	6		
	A SCELTA CURRICULARE DA ELENCO			C	6		V
					46		
<b>4<sup>TH</sup> YEAR</b>							



I	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Microbial Biotechnology Mod	CHEM-07/C (CHIM/11)	B	6	52 (40 + 12 LAB)	V
I	MOLECULAR BASIS OF IMMUNOLOGY AND PATHOLOGIES	Molecular Basis of Pathologies Mod	MEDS-02/A (MED/04)	B	6	48	V
I	NEUROPHYSIOLOGY AND SYSTEMS PHYSIOLOGY		BIOS-06/A (BIO/09)	B	6	48	V
	FREE CHOICE			D	6		V
	CURRICULAR CHOICE FROM THE LIST.			C	12		V
	FURTHER SKILLS FOR ENTERING THE WORK FORCE		NN	F	1	SEM 10	I
	EDUCATIONAL INTERNSHIP		PROFIN_S	F	9		I
	FINAL EXAM		PROFIN_S	E	3		
					43		

### 3 CURRICULAR COURSES TO CHOOSE FROM (18 CFU):

3 <sup>RD</sup> AND 4 <sup>TH</sup> YEAR							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	APPLIED BIOCHEMISTRY		BIOS-07/A (BIO/10)	C	6	54 (36 + 18 LAB)	V
I	ARCHAEOBIOLOGY AND FORENSIC BIOTECHNOLOGY	Forensic Biotechnology Mod.	MEDS-25/A (MED/43)	C	3	24	V
		Archaeobiology Mod.	BIOS-03/B (BIO/08)	C	3	24	V



I	BIOTECHNOLOGY AND MEDICAL- SURGICAL TECHNOLOGIES	New technologies in head and neck surgery	MEDS-18/A (MED/31)	C	2	16	V
		New technologies in reconstructive and regenerative surgery	MEDS-14/A (MED/19)	C	2	16	V
		Biotechnology applied to the musculoskeletal system	MEDS-19/A (MED/33)	C	2	16	V
II	ANATOMY FOR BIOTECHNOLOGY **	Human anatomy	BIOS-04/A (BIO/16)	C	3	24	V
		Comparative anatomy	BIOS-04/A (BIO/06)	C	3	24	V
II	BIOTECHNOLOGY IN CLINICAL NEUROSCIENCE	Neurosurgery Module Integrated with Neuroimaging	MEDS-15/A (MED/27)	C	3	24	V
		Neurology mod.	MEDS-12/A (MED/26)	C	3	24	V
II				C	3	24	V
II				C	3	24	V
II	RECOMBINANT TECHNOLOGIES		BIOS-14/A (BIO/18)	C	6	52 (40 + 12 LAB)	V
II	MICROBIAL PATHOGENS AND ELEMENTS OF VIROLOGY		MEDS-03/A (MED/07) BIOS-15/A (BIO/19)	C	6	48	V



**MOLECULAR BIOTECHNOLOGY CURRICULUM**

**MANDATORY COURSES:**

1 <sup>ST</sup> YEAR							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECT S	HOURS	ASSESSMENT METHOD
I	GENERAL AND INORGANIC CHEMISTRY		CHEM-03/A (CHIM/03)	A	6	52 (32 + 24 ESE)	V
I	CYTOLOGY AND HISTOLOGY		BIOS-04/A (BIO/06)	B	9	76 (64 + 12 LAB)	V
I	MATHEMATICS AND BASICS OF COMPUTER SCIENCE AND STATISTICS		MATH-03/A (MAT/05)	A	8	72 (48 + 24 ESE)	V
I	ENGLISH		ANGL-01/C (L-LIN/12)	E	2	16	I
II	ANIMAL AND PLANT BIOLOGY	Animal Biology Mod.	BIOS-03/A (BIO/05)	B	6	48	V
II	ORGANIC CHEMISTRY		CHEM-05/A (CHIM/06)	A	8	72 (48 + 12 ESE + 12 LAB)	V
II	PHYSICS		PHYS-06/A (FIS/07)	A	6	56 (32 + 24 ESE)	V
					45		
2 <sup>ND</sup> YEAR							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECT S	HOURS	ASSESSMENT METHOD
II	GENETICS		BIOS-14/A (BIO/18)	A	8	68 (56 + 12 ESE)	V
II	ANIMAL AND PLANT BIOLOGY	Plant Biology Mod.	BIOS-02/A (BIO/04)	B	6	52 (40 + 12 LAB)	V



I	ANIMAL BIOTECHNOLOGY		AGRI-09/D (AGR/20)	B	6	52 (40 + 12 LAB)	V
I, II	BIOCHEMISTRY AND BIOINFORMATICS		BIOS-07/A (BIO/10)	B	12	100 (88 + 12 ESE)	V
II	MOLECULAR BIOLOGY		BIOS-08/A (BIO/11)	B	8	68 (56 + 12 LAB)	V
I	GENERAL MICROBIOLOGY		BIOS-15/A (BIO/19)	A	6	52 (40 + 12 LAB)	V
					46		
<b>3<sup>RD</sup> YEAR</b>							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECTS	HOURS	ASSESSMENT METHOD
I	ETHICS AND LEGISLATION OF BIOTECHNOLOGICAL DRUGS	Etica	MEDS-02/C (MED/02)	B	2	16	V
		Legislazione dei farmaci biotecnologici	GIUR-10/A IUS/14	B	2	16	V
II	PHYSIOLOGY		BIOS-06/A (BIO/09)	B	6	48	V
II	BIOTECHNOLOGY AND MOLECULAR AND PLANT BIOLOGY	Modulo di Biotecnologie Vegetali	BIOS-02/A (BIO/04)	B	6	52 (40 + 12 LAB)	V
II	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Modulo di Biotecnologie Cellulari	BIOS-04/A (BIO/06)	B	6	52 (40 + 12 LAB)	V
	FREE CHOICE			D	6		
I	APPLIED BIOCHEMISTRY		BIOS-07/A (BIO/10)	B	6	54 (36 + 18 LAB)	V
	CURRICULAR CHOICE FROM			C	6		V



	THE LIST						
	FURTHER SKILLS FOR ENTERING THE WORK FORCE		NN	F	1	SEM 10	I
					47		
<b>4<sup>TH</sup> YEAR</b>							
I	CELLULAR AND MICROBIAL BIOTECHNOLOGY	Microbial Biotechnology Mod.	CHEM-07/C (CHIM/11)	B	6	52 (40 + 12 LAB)	V
I	BIOTECHNOLOGY AND MOLECULAR AND PLANT BIOLOGY	Molecular and Plant Biology Mod.	BIOS-02/A (BIO/04)	B	6	48	V
	FREE CHOICE			D	6		V
	CURRICULAR CHOICE FROM THE LIST			C	12		V
	EDUCATIONAL INTERNSHIP		PROFIN_S	F	9		I
	FINAL EXAM		PROFIN_S	E	3		
					48		

**3 CURRICULAR COURSES TO CHOOSE FROM (18 CFU):**

<b>4<sup>TH</sup> YEAR</b>							
SEM	COURSE Title	MODULES Title	Academic field	DISCIPLINARY FIELD / Type of Teaching Activity	ECT S	HOURS	ASSESSMENT METHOD
I	FOOD BIOTECHNOLOGY	Food Biochemistry Mod.	BIOS-07/A (BIO/10)	C	3	26 (20 + 6 LAB)	V
		Food Biotechnology Mod.	AGRI-09/D (AGR/20)	C	3	24	V
I	ANALYTICAL CHEMISTRY AND	Chromatography Mod.	CHEM-01/A	C	2	16	V



	QUALITY CONTROL		(CHIM/01)				
		Spectroscopy Mod.	CHEM-01/A (CHIM/01)	C	2	16	V
		Quality Control Mod.	CHEM-01/A (CHIM/01)	C	2	16	V
II	RECOMBINANT TECHNOLOGIES		BIOS-14/A (BIO/18)	C	6	52 (40 + 12 LAB)	V
II	BIOTECHNOLOGICAL PROCESSES		CHEM-07/C (CHIM/11)	C	6	52 (40 + 12 LAB)	V
II	PHARMACEUTICAL PLANT SUBSTANCES **		BIOS-01/C (BIO/03)	C	6	50 (44 + 6 LAB)	V