

Biosciences and Biotechnology

UNICAM, in its effort to counter gender stereotypes, has undertaken awareness-raising initiatives to give greater linguistic visibility to differences. When the masculine form is used in this text for the sole purpose of simplification, it is intended to be inclusive of all individuals operating within the university community.

Bachelor Degree

First Cycle Degree

Duration 3 years

ECTS credits 180

Campus Location Camerino

School of Biosciences and Veterinary Medicine

Camerino - via Gentile III da Varano

Director prof. Guido Favia
guido.favia@unicam.it

Educational Manager
dr. Alessandra Zampetti
alessandra.zampetti@unicam.it

Course Coordinator
prof. Maria Giovanna Sabbieti
giovanna.sabbieti@unicam.it

Delegates

Educational Guidance
prof. Daniele Tomassoni
daniele.tomassoni@unicam.it

Tutoring
prof. Consuelo Amantini
consuelo.amantini@unicam.it

International Mobility
prof. Cristina Marchini
cristina.marchini@unicam.it

Stage and Placement (Internship)
prof. Stefania Silvi
stefania.silvi@unicam.it
0737 402707

COURSE PRESENTATION

The Bachelor Degree in Biosciences and Biotechnology is an interclass degree: it consists of a common first year, where the student is provided with a solid base in mathematics, physics, chemistry, and cell biology, followed by a second and third year when the student follows either the program leading to the Biology or Biotechnology degree. Upon enrollment in the interclass degree, students must indicate the qualification desired (Biology or Biotechnology); however, the final decision between the two program degrees can be delayed to the third year, provided that the missing credits have been fully covered.

The course benefits from a friendly and skillful teaching staff and reliable supporting structures, such as laboratories, libraries, in addition to dedicated tutorship services.

The Bachelor in Biosciences and Biotechnology is in the geo-biological-scientific group which ranked third in Italy for the quality of education in the ranking of Italian Universities (CENSIS, Ranking 2022/2023).

ADMITTANCE REQUIREMENTS

High-school diploma) that satisfies the requirements for access to university education, i.e. conferred on completion of a minimum of 12 years of education.

Level of language proficiency required: ENGLISH level B1 (Threshold level).

Further information on admission rules, pre-admission deadline and other services at
<http://international.unicam.it>

CAREER OPPORTUNITIES

The curriculum in **Biology** is appropriate for students desiring a focused, in-depth grounding in all the essential elements of the biological sciences, and is particularly suitable for students intending to pursue graduate study in biological and applied sciences.

The curriculum in **Biotechnology** focuses on the study of biological processes of living organisms. Students learn the skills needed to naturally manipulate processes in the development of new medicine, food and organic substances. This course provides students with a basic knowledge for the study of biotechnology with an emphasis on DNA technology, cell and molecular biology, and a wide range of practical skills, supplemented with relevant aspects of ethics law and business. In both programs, the foundation of knowledge, plus laboratory experience, prepares students to function effectively in a variety of technical and laboratory research settings.

The graduates in **Biosciences and Biotechnology** are also qualified for access to Master courses in either biological and biotechnological fields, by which they could achieve higher professionalism and also access to doctoral courses in biology or related fields.

Classes will be held face to face in the University halls but it is possible to attend them also in streaming. Practical activities and laboratories will be organized in different modalities that will be communicated at the due time.



Classes are held in English

COURSE STRUCTURE

There are two Semesters, from October to the end of January, and from March to mid-June. The Winter Exam Session is in February.

The programme of study is structured on a comprehensive core curriculum that is common to both Biology and Biotechnology majors but, upper-division level, coursework is designed to achieve a deeper education in specialized areas of Biology or Biotechnology.

The course programs also offer flexibility through electives.

Completion of the degree program requires an internship carried out by the student under the supervision of an UNICAM tutor. An internship is a practical experience to be carried out in the university laboratories or in the workplace that offers the student an opportunity to apply, connect, and extend academic theory and competencies to build professional skills and network.



Test for background knowledge

The test, that usually is held before the beginning of classes, is mandatory for the freshmen of all Bachelor Degrees, but it does not affect in any way the enrollment. It is in fact possible to finalize the enrollment before taking the test.

Major in Biology (L-13)

I year

General Biology and Histology
General and Inorganic Chemistry
Mathematics
Physics
Statistics and Computer Sciences
Organic Chemistry
English language - Level B2
Laboratory I

ECTS

12
8
8
7
8
7
6
6

II year

Molecular Biology, General Genetics
Biochemistry
Anatomy
General Microbiology
Zoology and Botany
Cell and Developmental Biology
Laboratory II

14
8
6
6
14
8
6

III year

Hygiene and Clinical Microbiology
Physiology and Fundamentals of Pathology
Ecology and Parasitology
Molecular Genetics
Clinical Biochemistry
Student's choice
Stage
Bachelor Thesis

6
12
6
6
6
12
5
3

Major in Biotechnology (L-2)

I year

General Biology and Histology
General and Inorganic Chemistry
Mathematics
Physics
Statistics and Computer Sciences
Organic Chemistry
English language - Level B2
Laboratory I

ECTS

12
8
8
7
8
7
6
6

II year

Molecular Biology and General Genetics
Biochemistry
General and Industrial Microbiology
Intellectual Property, Regulatory and Bioethical Concerns
Cell Biology and Biotechnology
Food Chemistry and Processing
Laboratory II

14
8
12
6
8
6
6

III year

Molecular Genetics, Genetics of Microorganism and Microbial Biotechnology
Physiology and Fundamentals of Pathology
Clinical Biochemistry
Molecular Applications in Biomedicine
Student's choice
Stage
Bachelor Thesis

12
12
6
8
12
5
3

QUALITY ASSURANCE SYSTEM

UNICAM Quality Management System Certificate ISO 9001:2015 (from AFAQ-France, a French leader and one of the first certification bodies at the global level) guarantees students the quality of services provided. The guarantee is via a rigorous analysis of internal organizational procedures and the prompt addressing of any weaknesses or shortcomings whether detected or reported by the students themselves.

The Quality Management System includes the following support services for students: orientation and guidance, mentoring, International mobility, Internships and communication. These integrate with and support the educational activities, so as to contribute to the complete training of the student.

Student Services

Guidance

<https://www.unicam.it/futuro-studente/vuoi-iscriverti/orientamento>

Scholarships

- *WelcomeinUnicam*
scholarships for master's degrees
- *TalentinUnicam*
merit scholarships
- *StudioperSport*
- *"Carlo Urbani" School of Higher Studies*
<http://scuolastudisuperiori.unicam.it>

<https://www.unicam.it/studente/servizi-studenti/borse-di-studio>

Internships and Placements

Internships, Career service, Career day
<https://www.unicam.it/impresa-e-territorio/stage-e-placement>

Welcome and International mobility

welcoming international students, mobility programmes
<https://international.unicam.it/>

Information

Open

Monday-Wednesday-Friday 10.30-13.00
Tuesday-Thursday 15.00-17.00

Address

Polo degli Studenti - via Gentile III da Varano - 62032 Camerino

Contributions and registrations

Procedure available at <https://miiscrivo.unicam.it> from 1 July 2023.
Personalized fees on the basis of the ISEE-U.
Total or partial tuition fees exemptions.

More information

<https://www.unicam.it/didattica/guida-dello-studente>
<https://international.unicam.it/>

International students

Pre-enrolment procedures and requirements
welcome@unicam.it

Student Registry

segreteriastudenti.scienze@unicam.it

Bachelor's Degree and Master's Degree Programmes

<https://www.unicam.it/offerta-formativa>
<https://www.unicam.it/offerta-formativa-en>

<https://www.unicam.it/>



a.y. 2023/2024