



UNIVERSITÀ
DI TRENTO

A wide-angle photograph of a modern university campus. The foreground shows a paved plaza with several people walking and sitting on wooden benches. In the background, there is a large, multi-story building with extensive glass facades and a metal frame. Beyond the building, there are green trees and a range of snow-capped mountains under a clear sky.

MSc in Cellular and Molecular Biotechnology - CMB





Master of Science in Cellular and Molecular Biotechnology - CMB

CMB is a two-year full-time Master of Science that aims at shaping **competitive biotechnologists** for the medical, environmental and industrial fields. Together with high quality and **dynamic teaching**, CMB provides **practical experience** in state-of-the-art biotech **laboratories**. In the last semester, student develop a **research project** either at CIBIO, or in one of the collaborating labs in other European universities, or in companies operating in the biotechnology or pharmaceutical sector.

CMB students will be equipped with:

- detailed knowledge of the functioning and regulation of **prokaryotic and eukaryotic cells**;
- methods for the structural and functional characterization of **biological macromolecules** and the cellular processes in which they are involved;
- detailed understanding of the **pathological processes** at the molecular, cellular and systemic levels;
- concepts in **designing and manufacturing biotechnology products**, such as biopharmaceuticals, diagnostics and vaccines.



Programme overview

Degree awarded

Master of Science - "Laurea Magistrale" - in Cellular and Molecular Biotechnology

Language

English

Class size

Up to 60 students

Workload

The total workload for each student is 120 ECTS (European Credit Transfer System)

Intake

September each year

Duration

2 years full-time

Fees and funding (approximate range)

- EU: 340€ - 3.400€ (based on income/merit)
- Non-EU: 1.000€ - 6.500€ (based on merit)
- Income/merit based scholarships and tuition waivers available



Admission

Application deadlines (check online for updates)

- March for non-EU citizens living outside Italy
- June for EU citizens and non-EU citizens regularly living in Italy

Requirements

- Bachelor's degree (or equivalent) in Biotechnology or in any Biotechnology-related field
- English at B2 level of the Common European Framework of Reference for Languages

Selection criteria

- Assessment of previous studies and their coherence with the MSc
- Academic curriculum
- Statement of purpose

How to apply

- Access the online application form
- Upload the required documents
- Submit your online application by the deadline
- Check online for more information and updates:
www.unitn.it/cmb

Study Plan

Teaching activities include lectures, laboratory activities, and seminars. The programme includes common core courses to be attended during the first year and three specialization tracks in cancer biology, neurobiology, and microbes & infection during the first half of the second year.

First year

- Molecular basis of disease
- Statistical methods for experimental sciences
- Gene therapy
- Cell therapy
- Molecular pharmacology
- Genomics and drug discovery
- English language

Second year

Cancer biology track

- Cancer Biology
- Cancer Therapy
- Epigenetics of Cancer

Neurobiology track

- Cellular and Molecular Neurobiology
- Neurogenesis and Brain Regeneration
- Functions of the Peripheral Nervous System

Microbes & Infection track

- Virus-Cell Interaction
- Bacterial Pathogenesis
- Applied Immunology

A photograph of a laboratory setting with several students in white lab coats. In the foreground, two male students are looking down at a piece of equipment. In the background, two female students are working at a bench. Laboratory equipment like pipettes and a rack are visible on the bench.

For all tracks

- Elective courses
- Internship
- Research Seminars/Journal Club
- Final thesis

Cosa è la Biotecnologia?



Università degli Studi
di Milano



Career opportunities

MCMB graduates are highly attractive to companies in a wide range of sectors, including:

- research and development in the biotechnology industry
- technical-scientific information and communication
- management of public and private institutions in biomedicine, diagnostics, cosmetics

Students interested in an academic or research career can pursue their studies at the PhD level in Molecular Biology or Biotechnology after graduating from CMB.





CONTACT DETAILS

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Science and Technology Area

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