



INTERNATIONAL MASTER'S DEGREE IN MATERIALS SCIENCE AND NANOTECHNOLOGY

PROGRAM DURATION
2 Years

START DATE
October

CREDITS
120 ECTS

LANGUAGE
English

LOCATION
Milan, Italy
Milan – Leuven (Dual
Degree track)

TUITION
EIT Grants (Dual Degree
only) € 13.500

University of Milano-Bicocca — Department of Materials Science

MATERIALS SCIENCE AND NANOTECHNOLOGY

DESCRIPTION OF THE COURSE

MSc. Degree in Material Science and Nanotechnology offered by the Department of Materials Science at the University of Milano-Bicocca is a 2-year study program aimed at providing advanced knowledge on chemistry and physics of materials and nanotechnological approaches, along with modelling and experimental characterization techniques. The students learn about the interpretation and the design of function vs. structure relationships in a wide class of materials, especially functional materials, materials for nanotechnology, energy, digital and quantum technologies. The course provides a basis for understanding principles, applications and entrepreneurial aspects of nanotechnology. Besides technical knowledge, the programme also points to give competencies in research methods and scientific communication. Finally, the theoretical knowledge is applied and enhanced through an internship and a Master thesis, which are carried out within a network of collaborations involving research groups and industrial partners. Overall, the program endeavors to create graduates with a multi-disciplinary approach in developing new pathways for innovation, with a specific view to integrate scientific and ethical perspective to the sustainability of processes and technologies in materials science.

DUAL DEGREE OPPORTUNITY

The Master degree programme includes student positions within the International programme of Dual MSc Degree in Sustainable Materials (SUMA MSc Degree). The Dual Degree track meets the requirements of the Quality Label of the European Institute of Innovation and Technology (EIT) of the European Commission for the high education target in the field of Raw Materials. The network of international SUMA Master Tracks is funded by EU within the IMAGINE European project. In the Dual Degree track, 60 ECTS are acquired at UNIMIB and 60 ECTS at the Katholieke Universiteit Leuven (Belgium). For admission to the Dual Degree Track, candidates have 1) to submit an application to the SUMA web site (www.master-suma.eu), then 2) to follow the instructions and deadlines for admission to UNIMIB as entry University, as indicated in Admission procedure. Further details are available at <https://elearning.unimib.it/course/view.php?id=22185>.

CAREER PATH

New materials determine the performance, efficiency, quality and sustainability of products and processes in all modern industries and application areas. With a MSc Degree in Materials Science and Nanotechnology, graduates can either directly work in industry or can further specialize by carrying out a PhD.



MAJOR TRACKS

FUNCTIONAL MATERIALS
MATERIALS FOR NANOTECHNOLOGY
MATERIALS FOR ENERGY
MATERIALS FOR DIGITAL & QUANTUM TECHNOLOGY

MANDATORY COURSES - 36 ECTS

- *Fundamentals area*

CONDITIONAL ELECTIVE COURSES - 30 ECTS in the following areas:

- *Functional Materials*
- *Nanosystems*
- *Energy*
- *Theory & Models*
- *Quantum Systems*
- *Applications*



ELECTIVE COURSES - 18 ECTS

Further linguistic knowledge - 3 ECTS

Internship - 3 ECTS

MASTER THESIS - 30 ECTS

FURTHER INFORMATION

didattica.materiali@unimib.it; <https://elearning.unimib.it/course/index.php?categoryid=9489>

DEGREE REQUIREMENTS

Three years Bachelor Degree or equivalent degree from an accredited college/university. **Language Certification:** Certificate of proficiency in English corresponding to at least B2 level, issued by recognized Institutions, or BSc Degree earned by attending a University course fully taught in English.

The applications for admission must be presented online at the web site of the University of Milano-Bicocca. Instructions are available at the link <https://elearning.unimib.it/course/view.php?id=47959>

Please note extra-UE students requiring VISA must apply for pre-enrolment on the **www.universitaly.it** portal, together with the submission of the application, attaching all the required documents. Without this step, it is not possible to get visa and to enroll.

Applications from 3rd April 2023. Remote interviews for students are scheduled in the following dates:

- **13th June 2023** (applications until 31st May)
- **12th September 2023** (applications from 1st June until 3rd September)

ACCOMMODATION AND FEES AT UNIVERSITY OF MILANO-BICOCCA

The University of Milano-Bicocca also offers scholarships ("Diritto allo Studio – DS") to cover accommodation and part of the living costs. Accommodations will be assigned only based of the DS call rankings. Please refer to the DSU call that will be published in July 2023 and apply within the deadline. More information about DSU call and about fees and funding are available at the following web page <https://en.unimib.it/services/offices-and-facilities/fees-and-funding>