

# ASTROPHYSICS AND SPACE PHYSICS

INTERNATIONAL MASTER OF SCIENCE

## PROGRAM DESCRIPTION

### PROGRAM DURATION

2 YEARS

### START DATE

OCTOBER 2022

### CREDITS

120 ECTS

### TUITION FEE

[HTTPS://EN.UNIMIB.IT/  
SERVICES/FEES-AND-  
FUNDING](https://en.unimib.it/services/fees-and-funding)

### LOCATION

MILAN, ITALY

### CONTACT

[DIDATTICA.FISICA@UNIMIB.IT](mailto:didattica.fisica@unimib.it)

### COURSE LANGUAGE

ENGLISH

MSc. Degree in Astrophysics and Space Physics offered by the Department of Physics at the University of Milano-Bicocca is a 2-year study program that provides state of the art knowledge and skills in the theoretical, observational and instrumental aspects of astrophysics and cosmology.

The program provides a broad choice of activities including hands-on sessions at the in-house optical telescope, data analysis of observations taken from the best instruments available at top facilities, high-performance numerical simulations of complex astrophysical systems and advanced classes in the new field of gravitational wave astrophysics.

The student formation is completed with a research project at the basis of a Master thesis, which can be carried out within the large international collaborations of the astrophysics group.

## CAREER PATH

The expertise gained through the program will open a range of career paths both in national and international environments. The acquired skills will be instrumental for pursuing a research career either within academia or in the private and public sectors. The program also provides a strong foundation for undertaking doctoral studies

## CURRICULUM

GALAXIES AND DYNAMICS, 8 ECTS  
INTRODUCTION TO COSMOLOGY, 6 ECTS  
LABORATORY OF DATA ANALYSIS, 6 ECTS  
RELATIVISTIC ASTROPHYSICS, 8 ECTS  
STELLAR ASTROPHYSICS, 8 ECTS  
FURTHER LINGUISTIC KNOWLEDGE OR LEARNING ACTIVITIES, 3 ECTS  
MASTER THESIS, 45 ECTS

## REQUIREMENTS

Min. 3 years Bachelor Degree from an accredited college/university or its equivalents, with min. 18 ECTS in mathematics and **18 ECTS in physics**.

Equivalencies will be evaluated by the admission committee.

**Other requirements** proficiency in English at level B2 or higher.

## ELECTIVE COURSES

ASTRONOMICAL INSTRUMENTATION, 6 ECTS  
ASTROPHYSICS OF GRAVITATIONAL WAVES, 6 ECTS  
ASTROSTATISTICS AND MACHINE LEARNING, 6 ECTS  
COSMIC RAYS, 6 ECTS  
COSMIC STRUCTURE FORMATION, 6 ECTS  
EXPERIMENTAL COSMOLOGY, 6 ECTS  
GENERAL RELATIVITY, 6 ECTS  
LABORATORY OF DATA ACQUISITION, 6 ECTS  
NUMERICAL RELATIVITY, 6 ECTS  
RADIATIVE PROCESSES, 6 ECTS



## HOW TO ENROLL

Admission procedures **vary according to the student's nationality and place of residence**.

Please follow this link for full details on the enrolment procedure:

<https://en.unimib.it/education/how-enrol>



Further information and updated full details are available here

<https://en.unimib.it/international/international-programmes/astrophysics-and-space-physics>

## ACCOMMODATION AT BICOCCA

To book accommodation and learn about the costs and terms of your stay you can write to:

[booking.bicocca.fms.it@sodexo.com](mailto:booking.bicocca.fms.it@sodexo.com).

Our University also offers scholarships to cover accommodation and living costs. For terms of application please consult: <https://en.unimib.it/services/fees-and-funding>



## LIFE IN MILAN

Milan is one of Europe's most popular cities to visit. Its ancient history, traditions and industrial vocation make it a pleasant place combining fun, work, culture and sport.

<https://en.unimib.it/about-us/life-milan>

