



**UNIVERSITA' DEGLI STUDI DI MILANO**  
**PROGRAMME DESCRIPTION - ACADEMIC YEAR 2019/20**  
**MASTER DEGREE**  
**Biodiversity and Evolutionary Biology (Classe LM-6)**  
**Enrolled from 2009/2010 academic year**

### HEADING

<b>Degree classification - Denomination and code:</b>	LM-6 Biology
<b>Degree title:</b>	Dottore Magistrale
<b>Length of course:</b>	2 years
<b>Credits required for admission:</b>	180
<b>Total number of credits required to complete programme:</b>	120
<b>Years of course currently available:</b>	1st , 2nd
<b>Access procedures:</b>	Open, subject to entry requirements
<b>Course code:</b>	F91

### PERSONS/ROLES

#### Head of Study Programme

Prof. Mirko Baruscotti

#### Degree Course Coordinator

Prof. Claudio Bandi

#### Tutors - Faculty

Proff. Andrea Binelli, Francesco Bonasoro, Marco Caccianiga, Daniela Candia, Lucia Colombo, Nicola Saino, Claudio Bandi, Sara Epis

#### Degree Course website

<http://www.cdbiol.unimi.it>

via Celoria, 22 Phone 199188128. Per richiedere informazioni e per prenotare un appuntamento:

<http://www.unimi.it/studenti/segreterie/773.htm> Sportello online Infostudenti: [www.unimi.infostudente.it](http://www.unimi.infostudente.it)

via Celoria, 26 - 2° piano, torre A. Orari di apertura dello Sportello Didattica: dal lunedì al venerdì, dalle ore 10:00 alle ore 11:45.

Sito web: <http://www.cdbiol.unimi.it> Email: [cl.biol@unimi.it](mailto:cl.biol@unimi.it)

via Celoria, 26 - 2° piano, torre A. Orari di apertura: dal lunedì al venerdì, dalle ore 10:00 alle ore 11:45. Sito web:

<http://www.cdbiol.unimi.it>

<http://www.unimi.it/studenti/matricole/77648.htm>

### CHARACTERISTICS OF DEGREE PROGRAMME

#### General and specific learning objectives

The Master of Science (M.Sc.) programme in BIODIVERSITY AND EVOLUTIONARY BIOLOGY (BIOEVO, Class LM-6 Biology) is focused on the organismic biology and is addressed to acquire a comprehensive knowledge of the organisms in their integrity, complexity and evolutionary context.

The M.Sc. in BIOEVO proposes a revised version of both the format and contents of the M.Sc. in Biodiversity and Evolutionary Biology successfully activated in previous years, by introducing some variations that allow a better characterization of the specific formation in this field, a better definition of the professional profile and a deeper awareness of the real modern role of the biologist. In terms of formation, the objectives of this Master imply to deepen the basic formation in biology and related applications with particular reference to the knowledge of the organisms at all the organization levels, including their ecological aspects. The central themes of biodiversity and evolution of animals and plants are presented with specific reference to structural and functional adaptations, reproductive and developmental processes, behaviour, interactions between organisms and environment and finally current problems of evolutionary biology. This M.Sc. programme explores a field of central interest in Biology, in which the Coordinating Board for teaching activities of the Milano University has full competence, both in terms of teaching tradition and established research expertise. Its objectives are addressed to offer an advanced preparation in the field of biodiversity and environment, and to develop specific capacities to apply the learning outcomes in biodiversity protection and conservation. In this view the central themes of this field are proposed in a format that integrates traditional and topical aspects according to an innovative approach to modern biology.

## **Professional profile and employment opportunities**

The M.Sc. graduates in BIOEVO possess a specific and modern cultural preparation in the field of organism biology and a deep knowledge of the organism in its integrity, complexity and evolutionary context. The wide differential expertise acquired in biodiversity knowledge and conservation will provide a specific professional preparation in biology for a successful employment in industrial or public sectors whenever it is required: 1) deep understanding of biological phenomena at all levels and dissemination/divulgarization activities related to these competences; 2) deep knowledge of biodiversity; 3) identification and analysis of animal and plant communities and species, and activities addressed to their management and conservation; 4) conscious employment and sustainable development of biotic resources; 5) analysis and control of ecosystems, environmental impact evaluation.

After passing the exam for the profession, M.Sc. graduates in BIOEVO can enroll the Biologist's Professional Register, section A, with the title of Biologist, to perform the activities recognized by the Italian law.

## **EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM**

The University of Milan supports the international mobility of its students, offering them the opportunity to spend periods of study and training abroad, a unique opportunity to enrich their curriculum in an international context.

### **Study and internships abroad**

BIOEVO students are given the opportunity to spend part of their curriculum abroad, at a University within the European Union (EU) in the frame of the Erasmus+ program of the European Commission. BIOEVO students can attend courses and take exams that can be included in the core curriculum and/or perform the experimental thesis work in several European Universities localized in Norway, Netherlands – where courses taught in English are active - France, Poland, Spain and Portugal (see <http://www.dbs.unimi.it/extfiles/unimidire/59401/attachment/elenco-degli-accordi-attivi.pdf>). The admitted student will present a study plan including all the activities he/she intends to perform abroad, detailing the corresponding CFU: the number of proposed CFU should roughly correspond to those the student would achieve in the same time lapse remaining in his/her university. The study plan proposed by the student within the Erasmus+ program should be coherent with the BIOEVO Master course and must be evaluated and approved by the Teaching Board. The Teaching Board, if necessary, will require the student to integrate the program of exams taken abroad. At the end of the Erasmus + program, according to the rules established by the Academic Senate, the approved exams will be recorded, possibly with the original denomination, as part of the student's curriculum upon conversion of the European Credit Transfer and Accumulation System (ECTS) into CFU. If the student performs the experimental thesis work abroad, he/she must follow the rules outlined below (see Caratteristiche tirocinio).

### **How to participate in Erasmus mobility programs**

To gain access to mobility programs for study purposes, lasting 3-12 months, the enrolled students of the University of Milan must attend a public selection that starts usually around the month of February each year through the presentation of specific competition announcements, which contain information on available destinations, respective duration of the mobility, requirements and deadlines for submitting the online application.

The selection, aimed at evaluating the proposed study abroad program of the candidate, knowledge of a foreign language, especially when this is a preferential requirement, and the motivations behind the request, is performed by specially constituted commissions.

Each year, before the expiry of the competition announcements, the University organises information sessions for the specific study course or groups of study courses, in order to illustrate to students the opportunities and participation rules.

To finance stays abroad under the Erasmus + program, the European Union assigns to the selected students a scholarship that - while not covering the full cost of living abroad - is a useful contribution for additional costs as travel costs or greater cost of living in the country of destination.

The monthly amount of the communitarian scholarship is established annually at national level; additional contributions may be provided to students with disabilities.

In order to enable students in economic disadvantaged conditions to participate in Erasmus+ program, the University of Milan assigns further additional contributions; amount of these contributions and criteria for assigning them are established from year to year.

The University of Milan promotes the linguistic preparation of students selected for mobility programs, organising every year intensive courses in the following languages: English, French, German and Spanish.

The University in order to facilitate the organisation of the stay abroad and to guide students in choosing their destination offers a specific support service.

More information in Italian are available on [www.unimi.it](http://www.unimi.it) > Studenti > Studiare all'estero > Erasmus+

For assistance please contact:  
 International Mobility Office  
 Via Festa del Perdono, 7 (first floor)  
 Phone: (+39) 02.503 13501-13502-13495-12589  
 e-mail: mobility.out@unimi.it  
 international.education@unimi.it

<b>1st COURSE YEAR Core/compulsory courses/activities common</b>			
<b>Learning activity</b>		<b>Ects</b>	<b>Sector</b>
DEONTOLOGY AND BIOETHICS		6	(3) MED/02, (3) IUS/14
English proficiency B2 (3 ECTS)		3	L-LIN/12
Total compulsory credits		9	
<b>Elective courses</b>			
BIODIVERSITY AND EVOLUTION		6	BIO/05, BIO/02
BIOGEOGRAPHY		6	BIO/05, BIO/02, BIO/03
BIOLOGY OF ANIMAL DEVELOPMENT		6	BIO/06
BIOMECHANICS		6	BIO/05
COMMUNITIES AND ECOSYSTEMS		6	BIO/07
ECOTOXICOLOGY		6	BIO/07
ENVIRONMENTAL AND APPLIED BOTANY		6	BIO/02, BIO/03
ETHOLOGY		6	BIO/05, BIO/07
INTEGRATED SYSTEMS OF PLANTS <i>Not active in the 2019/2020 academic year</i>		6	BIO/18, BIO/04
MARINE BIOLOGY AND ECOLOGY		6	BIO/05, BIO/07
PHOTOBIOLOGY AND BIOENERGETICS		6	BIO/04
PLANT DEVELOPMENTAL BIOLOGY		6	BIO/01
POPULATION BIOLOGY AND GENETICS		6	BIO/07
REPRODUCTIVE STRATEGIES		6	BIO/06, BIO/05, BIO/01
SYMBIOSIS AND PARASITISM		6	BIO/05, BIO/02
HISTORY AND PHILOSOPHY OF SCIENCES		6	M-FIL/02, M-STO/05, FIS/08
HUMAN FUNCTIONAL BIOLOGY		6	BIO/17, BIO/16
MATHEMATICAL MODELING IN EVOLUTIONARY AND ENVIRONMENTAL BIOLOGY		6	INF/01, MAT/07
COMPLEMENTS OF BIOLOGICAL CHEMISTRY		6	BIO/10
COMPLEMENTS OF MOLECULAR BIOLOGY		6	BIO/11
COMPLEMENTS OF PLANT PHYSIOLOGY		6	BIO/04
BIOMECHANICS		6	BIO/05
SYMBIOSIS AND PARASITISM		6	BIO/05, BIO/02
BIODIVERSITY AND EVOLUTION		6	BIO/05, BIO/02
BIOGEOGRAPHY		6	BIO/05, BIO/02, BIO/03
ENVIRONMENTAL AND APPLIED BOTANY		6	BIO/02, BIO/03
ETHOLOGY		6	BIO/05, BIO/07
<b>End of course requirements</b>			
FINAL EXAM		45	NA
Total compulsory credits		45	