

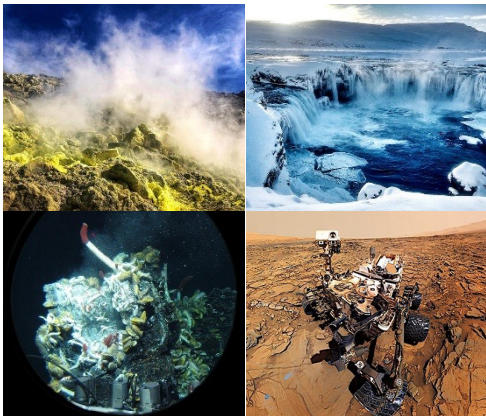
WHY
ENROLL



Because the master degree in Biology of Extreme Environments will allow you to understand how these ecosystems contribute to biogeochemical cycles and planet habitability, provide new biotechnological resources and contribute to space exploration.

Because you will be trained by researchers actively involved in studies at the frontiers of the subjects and ready to provide cutting-the-edge insights to the students.

Because you are fascinated by fundamental questions as the origin and distribution of life in the universe and you are eager to get hand-on training and research experience through interplaying of various disciplines.



Course Coordinator

Prof. Donato Giovannelli
donato.giovannelli@unina.it



Useful links:

Polytechnic and Basic Sciences School

<http://www.scuolapsb.unina.it>

Department of Biology

<http://www.dipartimentodibiologia.unina.it>

Master's Degree

<http://www.dipartimentodibiologia.unina.it/en/courses/biology-extreme-environments/>

FOLLOW US!

<https://www.instagram.com/lmbexe/>

<https://twitter.com/LMBExE>

Student secretariat

<http://www.unina.it/-/769598-segreteria-studenti-area-didattica-scienze-mm-ff-nn->

Opening time:

From Monday to Friday from 9:00 to 12:00
Tuesday and Thursday also from 2.30 pm to 4.30 pm
Phone: 081 2531111 - 081 2537508 - 081 676550

Orientation contact persons:

Prof. Patrizia Contursi
contursi@unina.it

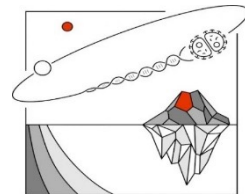
neapōlis



UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
SCUOLA POLITECNICA E DELLE SCIENZE DI BASE

COLLEGIO
DEGLI STUDI DI
SCIENZE

MASTER DEGREE
BIOLOGY OF EXTREME
ENVIRONMENTS
(BIOEXTREME)



2023|24

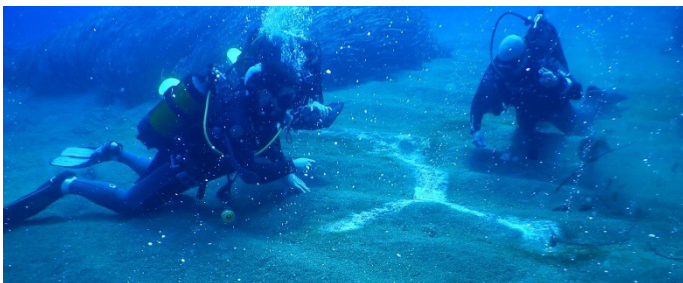
EDUCATIONAL OBJECTIVES

The educational objectives of the Master degree in Bioextreme are to train biologists in genetic, biochemical and biological processes of extreme environments, including Space, integrating theoretical aspects with fieldwork, laboratory activities and (meta)data analysis.

The Master Degree program has a total duration of 2 years and requires the acquisition of 120 university educational credits (CFU). The course offers two distinct curricula:

• **BIOLOGICAL RESOURCES** focused on the sustainable use of the resources present in extreme environments

• **ASTROBIOLOGY** focused on the biological aspects of the search for life in the universe and space exploration.



ADMISSION REQUIREMENTS

- Basic knowledge in biology and microbiology, ecology, general, organic and inorganic chemistry, biochemistry
- Bachelor (min 3 years) in Biology, Biotechnology or Natural Sciences or equivalent degree or a minimum of 30 CFU in biological related subjects
- Certificate of proficiency in English internationally recognized (minimum score equal to B2)

The **ENROLLMENT** procedure is different depending on if you are an Italian, EU or Extra-EU prospective student. Please see below the appropriate section.

For admission and enrollment procedure see the link:

<http://www.dipartimentodibiologia.unina.it/en/courses/biology-extreme-environments/>

STUDY PLAN

BIOLOGICAL RESOURCES

I YEAR

Introduction to earth system sciences	6
Microbiology of extreme environments	8
Biodiversity and primary productivity in extreme environments	6
Chemistry of biopolymers and metabolites from extreme environments	6
Biochemistry and molecular adaptation to extreme environments	8
Ecology of extreme environments	6
Applied microbiology of extremophiles	6
Optional course	6

II YEAR

Discovery and applications of extremophilic enzymes	6
Extreme environments and public health	6
Omics data analysis	6
Optional course	6
Other activity	6
Thesis	38

ASTROBIOLOGY

I YEAR

Introduction to earth system sciences	6
Microbiology of extreme environments	8
Extreme environments: earth and space	6
Astrochemistry and prebiotic process	6
Astrobotany	6
Biochemistry and molecular adaptation to extreme environments	8
Physiology and nutrition in space conditions	6
Optional course	6

II YEAR

Microbial metabolism and planet habitability	6
Emergence of life and microbiology	6
Omics data analysis	6
Optional course	6
Other activity	6
Thesis	38

CAREER AND JOB OPPORTUNITIES

The Master's Degree in "Biology of Extreme Environments" aims to train Biologists with a solid advanced and innovative preparation in issues related to genetic, biochemical and biological processes of extreme environments, including space. Graduates will be able to carry out professional and managerial activities within public and private research centres, national and international space agencies, and companies specialized in the exploration of the extreme environments of our planet and/or outer space, exploiting their potential in a sustainable way.

WHERE WE ARE

The didactic and scientific activity is at Monte S. Angelo (MSA) University Campus, in via Cinthia, Naples

FUTHER STUDIES

Studies can be perfected through first and second level masters, PhD programs, and specialization courses

HOW YOU CAN REACH US

By car: exit of the Fuorigrotta ring road

Rail lines: Metro Line 2 (Campi Flegrei station); Circumflegrea (Mostra station)

Bus lines: Piazzale Tecchio (Fuorigrotta) - MSA: 615 -180 - R6; Piazza Leonardo (Vomero) – MSA: C33. There are also private bus companies providing connections (from and to) the main cities of Campania region

SERVICES

ADISU point, Sinapsi Center, Canteens, Bar, Copy service, ATM