INTRODUCING THE MASTER

The second level degree in Biological Sciences (LM-6 class Biology) aims to train graduates with advanced knowledge and expertise in update biomolecular and biotechnological methodologies for application in diagnostic, nutritional, and environmental fields. Indeed, students can choose among three parallel curricula:

- molecular diagnostics and biotechnology
- nutrition and functional food
- biodiversity and ecosystems management.

These curricula, in combination with core courses, give students flexibility to tailor their degree to their background, interests, and career goals.

In order to support the mobility and the successful integration of students and graduates in an international context, all the courses will be presented in English.

ADMITTANCE CONDITIONS

The enrollment in the Master Degree Course in Biological Sciences requires:

- an Italian first level 3 years degree, or an equivalent undergraduate degree earned out of Italy
- at least 15 ETCS in basic courses, such as Mathematics, Physics, Chemistry
- at least 60 ETCS in courses in biological areas
- knowledge of English language (indicatively higher than level B1)

CAREER OPPORTUNITIES

The goal of the Master course in Biological Sciences is to prepare its graduates to start a career in different areas of Biological Sciences with particular regard to scientific research and diagnostics on biomedical, nutritional, and environmental fields.

Graduates will be able to deal with the application of biology and biotechnology, at functional and molecular level, in industry, in service sector and in various areas of public administration.

The degree in Biological Sciences, through the specific curricula, properly prepares professional figures, such as the nutritional biologist, who are allowed to formulate personal diets and oversee education programs and nutritional and environmental surveillance programs. All curricula will prepare students to engage in research, lead lab teams, make development and planning decisions, create and apply research modalities to large projects.

Graduates in Biological Sciences will be adequately prepared for access to third education level (PhD programs or specialization school) in molecular biology and biotechnology all over the world.
COURSE STRUCTURE

Nutrition and Functional Food
I year ECTS II year ECTS
Genomics and Proteomics 12 Functional Food 6
High Performance Bio-Analytical Methods 6 Endocrinology and Metabolism 6
Epigenetics 6 Applied Nutrition II 8
Food Pathology 6 Epidemiology of Nutrition-Related Pathologies 6
Applied Nutrition I 10 Blood Parameters and Nutritional Conditions 6
Rotation Laboratory 6 Experimental Thesis 30
Student’s choice 8 Final Dissertation 4

Molecular Diagnostics and Biotechnology
I year ECTS II year ECTS
Genomics and Proteomics 12 Stem Cell Technologies and Animal Models 12
High Performance Bio-Analytical Methods 6 Molecular Parasitology 6
Epigenetics 6 Molecular Ecology 6
Biological Diagnostics and Biomolecular Therapeutic Agents 6 Molecular Archeological and Forensic Anthropology 6
Clinical and Molecular Diagnostics 6 Microbial Pathogenesis and Biofilms 6
Rotation Laboratory 6 Experimental Thesis 30
Student’s choice 8 Final Dissertation 4

Biodiversity and Ecosystems Management
I year ECTS II year ECTS
Animal Digestive Adaptation to Environmental Conditions 5 Soil Microbiology and biodiversity 7
Principles of Landscape Ecology and Plant Sociology 5 Plant Population Genetics and Ecology 7
Biodiversity Assessment and Monitoring Schemes 12 Blood Parameters and Nutritional Conditions 6
Population Genetics and Animal Ecology 6 Ecosystem services 5
Food Pathology 6 Experimental Thesis 30
Applied Nutrition 8 Final Dissertation 4
Applied Landscape Ecology and Ecosystems Management 5
Rotation Laboratory 6
Student choice 8

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