

# M.Sc. Biological Sciences

## University of Vigo

The main goal of the Master in Biological Sciences (MBS) is to provide graduate students with **practical knowledge to take on top science-based positions** in Health and Environmental Sciences, Computational Biology and Biotechnology.

The **official language of the MBS is English**. Non-English speaking students must demonstrate a minimum of English proficiency (by holding a B1 certificate or through an oral interview). MBS aims to become an International Master Programme and to attract students of different nationalities.

MBS comprises **120 credits** in total distributed between **two academic years** (60 ECTS each one) and provides direct access to two PhD Programmes of Excellence, covering a wide range of specialised fields.

Year 1	<b>Basic Module</b> 12 ECTS	<b>Elective Module</b> 42 ECTS	<b>External Practicum</b> 6 ECTS
Year 2	<b>Mandatory Major Project:</b> 48 ECTS		<b>Master's Thesis</b> 12 ECTS

During the Elective Module students will have the **opportunity to follow specific tracks** in more specialised areas of biomedicine, bioinformatics, environmental conservation and management as well as in any other R&D related aspect.

Basic Module
1. Scientific Literature and Writing in Biological Sciences
2. Experimental Design and Data Analyses
3. Scientific Methodology for Biological Studies
4. Data cleaning and manipulation

Elective Module
<b>Track 1: Molecular Biology for Health and Life Sciences</b>
Genetic engineering
Genomics and gene expression
Infection and immunity
Molecular pathology and biomarkers
Biomedical applications of nanotechnology
Proteomics: from protein sequence to function
Reproductive and developmental biology
<b>Track 2. Environmental Sciences</b>
Biodiversity
Population ecology and ecosystem complexity
Pollution, bioindication and bioremediation
Global change and adaptation
Conservation and natural resource management
Agriculture and sustainable development
Restoration and environmental policy
<b>Track 3. Bioinformatics and Computational Biology</b>
Programming for bioinformatics
Statistical and mathematical methods in bioinformatics
Knowledge discovery
Computational genomics
Molecular evolution
Structural biology
Systems biology
<b>Track 4. Green-Industries Management</b>
Introduction to bioindustries management and business development in life sciences
Bioindustries marketing and commercial management
Operations and quality in bio-industries
Human resources management and leadership
Financial and global bio-industries business
Innovation and R&D management and intellectual property in bioindustries
Entrepreneurship and professional career development

### MBS OUTCOMES:

- **Academic-Research Profile:** for those students intending to become researchers and R&D agents in Research Centres, laboratories, National Parks and Universities.
- **Professional Profile:** for those students aiming to perform independent industry-orientated tasks in Life Sciences.

### REGISTRATION FOR ACADEMIC YEAR 2013-14

- First pre-registration period: 28 June to 4 July, 2013
- Second pre-registration period: 27 August to 3 September, 2013

### DOCUMENTS THAT MUST ACCOMPANY THE APPLICATION FORM:

- DNI, NIE or Passport
- Bachelor's degree diploma
- A short CV

In addition, the Academic Board might request a personal interview.

### CONTACT

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### FURTHER INFORMATION

<http://biology.uvigo.es>

