# **Master Biology**

## at Wageningen University

More info:





Learn about current biological advances and data science Specialise in: • Cell Biology and Molecular Interactions

- Development and Adaptation
- Health and Disease
- Ecology

Follow your own interests, inside or outside of biology

Develop you academic skills. Work as a consultant or write a PhD proposal



Year 1

Common courses 12 ECTS Specialisation courses 12 ECTS

Electives 24 ECTS

40.00

Academic Master Cluster 12 ECTS



Year 2

Thesis
36 ECTS

Conduct a research project at Wageningen University

Internship 24 ECTS

Gain work experience outside of WUR, in the Netherlands or abroad





What kind of jobs can you do after the master Biology?





## **Specialisation Cell Biology** and Molecular Interactions



In this specialisation you will study processes at a molecular and cellular level. You will work with state of the art research techniques in order to understand complex biological processes and phenomena such as evolution, aging, symbiosis, physiology and immunology.

## Choose at least one literature & scientific analysis course:

- Control of Cell Processes & Differentiation
- Comparative Biology and Systematics
- Advanced Cellular Imaging Techniques

### Choose at least one research skills course:

- Immunotechnology
- Genetic Analysis Trends and Concepts
- Molecular Aspects of Bio-interactions
- Genomics

## Thesis and internship chair groups:

- Animal Breeding and Genomics
- Biochemistry
- **Biosystematics**
- Cell Biology
- Entomology
- Genetics
- Human and Animal Physiology
- Marine Animal Ecology
- Microbiology
- Molecular Biology
- Nematology
- Phytopathology
- Plant Physiology
- Systems and Synthetic Biology

## **Specialisation Development and Adaptation**



In the specialisation Development and Adaptation you will study how individual organisms, particularly plants and animals, adapt to their biotic and abiotic environment, both during development and in adult life. To study this, you will use biomechanics, behavioural observations, genetic principles, biochemical analysis, molecular and physiological techniques.

## Choose at least one literature & scientific analysis course:

- Comparative Biology and Systematics
- Biomimetics
- Regulation of Plant Development
- Plant-Microbe Interactions
- Marine Animal Ecology
- Plant Plasticity and Adaptation
- · Perennial Plant Health

#### Choose at least one research skills course:

- Genetic Analysis Trends and Concepts
- Vertebrate Structure and Function
- Molecular Aspects of Bio-interactions
- Functional Zoology
- Behavioural Ecology
- Developmental Biology of Animals

#### Thesis and internship chair groups:

- Aquaculture and Fisheries
- Behavioural Ecology
- Biochemistry
- Biosystematics
- Cell Biology
- Entomology
- Experimental Zoology
- Genetics
- Marine Animal Ecology
- Molecular Biology
- Nematology
- Phytopathology
- Plant Physiology
- Wildlife Ecology and Conservation

## **Specialisation Health and Disease**



The specialisation Health and Disease focuses on the prevention of health problems and the functioning of healthy animals. Therefore, you will learn about molecular, immunological, virological, physiological and disease ecological approaches.

## Choose at least one literature & scientific analysis course:

- Molecular Regulation of Health & Disease
- Human and Veterinary Immunology
- Human Microbiome
- Fundamental and Applied Virology
- Intestine Microbiota Interactions

#### Choose at least one research skills course:

- Host-Parasite Interactions
- Immunotechnology
- Brain, Hormones and Metabolism
- Disease Ecology

#### Thesis and internship chair groups:

- Aquaculture and Fisheries
- Cell Biology and Immunology
- Environmental Systems Analysis
- Human and Animal Physiology
- Host-Microbe Interactomics
- Nutritional Metabolism and Genomics
- Microbiology
- Nematology
- Wildlife Ecology and Conservation
- Systems and Synthetic Biology
- Toxicology
- Virology

## **Specialisation Ecology**



In the specialisation Ecology you will learn about the conservation of biodiversity and ecosystem functioning in changing environments. Field research, molecular techniques, modelling and quantitative analysis of large datasets form an integral part of this specialisation.

## Choose at least one literature & scientific analysis course:

- Marine Systems
- Microbial Ecology
- · Complexity in Ecological Systems
- Comparative Biology and Systematics
- Ecological Modelling and Analysis
- Fisheries Ecology
- Forest Ecology and Forest Management
- Population and Quantitative Genetics
- Marine Animal Ecology

#### Choose at least one research skills course:

- Ecological Aspects of Bio-interactions
- Molecular Aspects of Bio-interactions
- Biological Interactions in Soils
- Environmental Toxicology
- Behavioural Ecology
- Disease Ecology
- Plant, Vegetation and Systems Ecology
- Animal Ecology

## Thesis and internship chair groups:

- Animal Breeding and Genomics
- Aquatic Ecology and Water Quality
- Aguaculture and Fisheries
- Behavioural Ecology Biosystematics
- Crop and Weed Ecology
- Entomology
- Environmental Systems Analysis
- Forest Ecology and Forest Management
- Genetics
- Marine Animal Ecology
- Microbiology
- Nematology
- Plant Ecology and Nature Conservation
- Phytopathology
- Plant Physiology
- Plant Production Systems
- Wildlife Ecology and Conservation Soil Biology
- Toxicology