

| le savoir vivant |

Master of Science (MSc) in Behaviour, Evolution and
Conservation
specialisation in

computational ecology and evolution



Unil

UNIL | Université de Lausanne

Faculté de biologie
et de médecine

www.unil.ch/ecoledebiologie/en

OBJECTIVES / ASSETS

The study of ecology and evolution has long relied on mathematical modelling and computational analysis. As models become more elaborate and data becomes larger (from GPS tracking to genomes), biologists studying biodiversity must be able to harness the theory, concepts and methods necessary to explore these new types of data.

This program trains ecologists and evolutionary biologists to master modelling and computational analysis as essential tools and as a way of thinking about scientific questions. For this, programming and statistics training are combined with advanced courses in the mathematical and computational aspects of spatial analysis and of population biology.

You will pursue with a personal Master project that combines field or experimental work with advanced modelling or analysis, or aim at developing new methods and tools for the study of ecology and evolution.

CONTENT

- Advanced training in Data analysis, Statistics, and Bioinformatics.
- A selection of computational, evolutionary and ecological courses to choose from.
- A First-step research project and a Master project that must be conducted on an approved Computational, Ecology and Evolution topic.

MANDATORY COURSES

- Advanced Data Analysis
- Programming for Bioinformatics
- Spatial Analysis and GIS in Ecology

PROJECTS

- First step research project
- Master research project in the field of specialisation (either purely computational, or combined with field or experiments)

OPTIONAL COURSES

- Large choice of courses in biology and computational biology or modelling

GENERAL INFORMATION

The Master of Science (MSc) in Behaviour, Evolution and Conservation (BEC) amounts to 120 ECTS and is taught entirely in English. BEC students may obtain the Master without specialisation, or with a specialisation in Computational Ecology and Evolution (CEE), Behaviour, Economics and Evolution (BEE), or Geoscience, Ecology and Environment (GEE).

ADMISSION REQUIREMENTS

Candidates must hold a Bachelor of Science (BSc) in Biology, or in a field considered to be equivalent, awarded by a Swiss university. Another degree awarded by a foreign university may be judged equivalent and give access to the Master's degree programme, with or without further conditions.

CONDITIONS FOR OBTAINING THE QUALIFICATIONS OF MASTER'S DEGREE WITH SPECIALISATION

www.unil.ch/eb-bec > Study programme > Regulations and directives

Director of the programme

Prof. Tadeusz Kawecki

Responsible for the specialisation

Prof. Tadeusz Kawecki

Further information

www.unil.ch/eb-bec > Specialisations > Computational Ecology and Evolution