

# Bachelor's degree in Earth and life science Biology and environment

## Bachelor's degree year 1 - semester 1

Tools for mathematics and physics 1 (6 ECTS), including: \*\* Tools for mathematics (2 ECTS) \*\* Tools for physics (4 ECTS) Atoms and molecules (6 ECTS) Animal and plant biology (6 ECTS), including: \*\* Animal biology (3 ECTS) \*\* Plant biology (3 ECTS) Origin, structure and funtion of Earth systems (3 ECTS), including: \*\* Origin of the Universe, solar system, and Earth (1.5 ECTS) \*\* Structure and funtion of Earth systems (1.5 ECTS) Algorithm and computer software: initiation (3 ECTS) Language techniques (3 ECTS) English (3 ECTS)

## Bachelor's degree year 1 - semester 2

Chemical reactivity (6 ECTS) Tools for mathematics and physics 2 (6 ECTS), including: \*\* Tools for mathematics (3 ECTS) \*\* Tools for physics (3 ECTS) Cellular biology 1 (3 ECTS) Structural biology (6 ECTS) Language techniques and professional project (3 ECTS) Transdisciplinary option (3 ECTS) English (3 ECTS) Preparation to veterinary and agronomy schools entrance exams

## Bachelor's degree year 2 - semester 1

Plant physiology and histology (6 ECTS) Statistical tools (3 ECTS) Animal development biology (3 ECTS) Molecular biology and applications (6 ECTS), including: \*\* Molecular biology (4 ECTS) \*\* Applications in biology (2 ECTS) Energetic metabolism (3 ECTS) Mineralogy and petrology (3 ECTS) Resources and natural hazards (3 ECTS) English (3 ECTS) Preparation to veterinary and agronomy schools entrance exams

#### Bachelor's degree year 2 - semester 2

Eukaryotic genetics (3 ECTS) Ecology and evolution 1 (3 ECTS) Option (3 ECTS), choose between: \*\* Ecology and evolution 2 (3 ECTS) \*\* Animal biology 2 (3 ECTS) Cell biology 2 (3 ECTS) Option (3 ECTS), choose between: \* Cell and gene technologies (3 ECTS) \* Tissue biology (3 ECTS) Sedimentary process (3 ECTS) Homeostasis and membrane physiology (6 ECTS) Microbiology 1 (3 ECTS) English (3 ECTS) Preparation to veterinary and agronomy schools entrance exams

#### Bachelor's degree year 3 - semester 1

Molecular biology (6 ECTS) Animal biology 3 (6 ECTS) Plant physiology and metabolism regulation (9 ECTS) \*\* Plant physiology (5 ECTS) \*\* Plant metabolism (4 ECTS) Option (3 ECTS), choose between: \* On-site training in biology (3 ECTS) \* Tectonics and metamorphism (3 ECTS) Professional culture and integration (3 ECTS) English (3 ECTS) Preparation to veterinary and agronomy schools entrance exams

### Bachelor's degree year 3 - semester 2

Plant biotechnology (3 ECTS) Spectral analysis and seperation techniques (3 ECTS) Enzymology (4 ECTS) Internship (5 ECTS) Plant biology and development (4 ECTS) Option (5 ECTS), choose between: \* Microbiology 2 (3 ECTS)

\* Biomolecule analysis (2 ECTS)

\* Genetics and environment (5 ECTS) Professional culture (3 ECTS) English (3 ECTS)