

Master's degree year 1 - semester 1

Electrochemistry (3 ECTS)

Synthesis strategies in fine chemistry 1 (3 ECTS)

Spectroscopic and analytical methods (3 ECTS)

Techniques of chromatography (3 ECTS)

Options (12 ECTS), choose between:

* From macromolecules to polymer materials (3 ECTS)

* Biotechnology and fine chemistry (3 ECTS)

* Biotechnology of recombining proteins (3 ECTS)

* Nanochemistry (3 ECTS)

* Quantum physics and chemistry 1 (3 ECTS)

* Modelling in chemical sciences (3 ECTS)

* Environmental chemistry (3 ECTS)

* Programming 1 (3 ECTS)

Company knowledge base (3 ECTS)

English (3 ECTS)

Master's degree year 1 - semester 2

NMR Analytical methods and introduction to MRI (3 ECTS)

Bio-sourced polymers (3 ECTS)

Micelles, emulsions, foams and dispersions (3 ECTS)

Projects (3 ECTS)

English (3 ECTS)

Surface analysis methods (3 ECTS)

Options (12 ECTS), choose between:

* Cellular basis of pharmacology and toxicology (6 ECTS)

* Chromatography methods in microsystems for chemical and biological analysis (3 ECTS)

* Chemistry of surfaces and bio-arrays (3 ECTS)

* Programming 2 (3 ECTS)

* Applications of spectroscopy (3 ECTS)

* Modelling of complex media (3 ECTS)

* Quantum physics and chemistry 2 (3 ECTS)

* Synthesis strategies in fine chemistry 2 (3 ECTS)

* Polymer solutions and gels (3 ECTS)

Master's degree year 2 - semester 1

General organic chemistry (9 ECTS), including:

** Radical chemistry (2.25 ECTS)

** Specific activation methods (2.25 ECTS)

** Heterocyclic chemistry (2.25 ECTS)

** Enzyme chemistry (2.25 ECTS)

Chemistry of bioactive molecules (9 credits), including:

** Medicinal chemistry (2.25 ECTS)

** Chemistry of natural substances (2.25 ECTS)

** Molecular toxicology (2.25 ECTS)

** Peptides and glycochemistry (2.25 ECTS)

English (3 ECTS)

Options (6 ECTS), choose between:

* Organic synthesis and eco-friendly chemistry (6 ECTS), including:

*** Biomass valorisation (2 ECTS)

*** Multi-steps organic synthesis (2 ECTS)

*** Organometallic chemistry and catalysis (2 ECTS)

* Biological and environmental chemistry (6 ECTS), including:

*** Contaminant analysis (2 ECTS)

*** Hygiene, health, and prevention (2 ECTS)

*** Biomass valorisation (2 ECTS)

Options (3 ECTS), choose between:

* Industry of fine chemistry and bio-industry (3 ECTS)

* Bibliographic work (3 ECTS)

Master's degree year 2 - semester 2

Internship (30 ECTS)