

BSc. of Chemistry

Year One

Fall Semester

Basic Mathematics 1

ECTS 6

Basic Maths 1

Working Methodology - Basic Maths 1

Basic Physics 1

ECTS 6

Basic Physics 1

Working methodology - Basic Physics 1

Basic Chemistry 1

ECTS 6

Basic Chemistry 1

Working methodology - Basic Chemistry 1

Introduction to Computer Science 1

ECTS 6

System, Algorithms and Programming 1

Working methodology - Intro to Computer Sciences 1

Languages 01

ECTS 6

English or French

Year One

Spring Semester

Basic Mathematics 2

ECTS 7

Algebra, Probability, Statistics

Analysis

Basic Physics 2

ECTS 6

Basic Physics 2

BSc. of Chemistry

Basic Chemistry 2

ECTS 6

Basic Chemistry 2

Introduction to Computer Sciences 2

ECTS 6

Systems, algorithms, programming 2

Basic Geosciences

ECTS 2

Introduction to Geosciences

Working methodology

Languages 02

ECTS 3

English or French

Year Two

Fall Semester

Mathematics 1

ECTS 6

Physics 1

ECTS 8

Point mechanics

Fluid mechanics

Thermodynamics 1

Electrostatics

Chemistry 1

ECTS 6

Architecture of matter 1

Transformation of matter 1

Chemistry Lab 1

BSc. of Chemistry

Chemical Engineering 1 **ECTS 4**

Intro to Chemical Engineering

Chem. Eng. Lab 1 (Physics)

Computer sciences 1 **ECTS 3**

Computer Science for Physics and Chemistry

Languages 1 **ECTS 3**

English or French

Year Two Spring Semester

Mathematics 2 **ECTS 6**

Physics 2 **ECTS 6**

Oscillators / waves / optics

Physics Lab 1

Chemistry 2 **ECTS 9**

Architecture of matter 2

Transformation of matter 2

Chemistry Lab 2

Chemical Engineering 2 **ECTS 6**

Heat transfer

Process diagram

Material science for Chemical Engineering

BSc. of Chemistry

Languages 2

ECTS 3

English or French

Year Three

Fall Semester

Mathematics 3

ECTS 5

Physics 3

ECTS 5

Thermodynamics 2

Electricity for CS and CE and LISIEE

Chemistry 3

ECTS 9

Reactivity 1 (industrial chem.)

Thermodynamics and kinetics

Chemistry Lab 3

Physical Chemistry 1

ECTS 8

Molecular Chemistry 1

Scientific Instrumentation signal and data processing

Molecular Dynamics/ Cheminfo

Languages 3

ECTS 3

BSc. of Chemistry

Year Three

Spring Semester

Mathematics 4

ECTS 5

Physics 4

ECTS 3

Fluid mechanics 2

Chemistry 4

ECTS 9

Reactivity 2 (inorganic)

Spectroscopies and electrochemistry

Chemistry Lab 4

Physical Chemistry 2

ECTS 7

Quantum Chemistry

Chemical Bond and Spectroscopy symmetry

Chemistry Lab 5

Languages 4

ECTS 3

English or French

Professional preparation 1

ECTS 3

Soft skills

Year Four

Fall Semester

Mathematics 5

ECTS 3

BSc. of Chemistry

Chemistry 5 **ECTS 10**

Polymers and fomulation

Analytical chemistry

Applied chemistry

Experimental chemistry 5

Physical Chemistry 3 **ECTS 11**

Spectroscopy

Catalysis and environment

Molecular chemistry 2

Chem Project

Phys Chem Lab

Languages 5 **ECTS 3**

English or French

Professional preparation 2 **ECTS 3**

Scientific writing

Year Four Spring Semester

Chemistry 6 **ECTS 3**

Chemistry project

Physical Chemistry 4 **ECTS 9**

Analytical Chemistry 2

Electrochemistry 2

BSc. of Chemistry

Professional preparation 3

ECTS 3

Management and entrepreneurship

Internship

ECTS 15

Internship (8 weeks)