MSc. of Physical Chemistry / Chemical Engineering
Chemical Engineering specialisation

Year One
Fall Semester

Phys Chem 1 — ECTS 12

Kinetics and Thermodynamics
Analytical and physical chemistry, Pratical courses
Optical spectroscopies
Separation methods and mass spectometry

Chem Eng 1 — ECTS 9

Polymer chemistry
Petrochemistry
Membrane separation

Info 1 — ECTS 9

Project-mode applied programming in Python
Introduction to Data Science

Year One
Spring Semester

Phys Chem 2 — ECTS 9

Inorganic analysis and speciation
Electrochemistry
NMR Spectroscopy

Chem Eng 2 — ECTS 6

Advanced transfers
Polymer Reaction Engineering

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Info 2	ECTS 6

Chemical databases and Chemoinformatics

Molecular Modeling + Quantum Chemistry

5 week Internship	ECTS 9

Internship 5 weeks

Year Two
Fall Semester

Chem Eng 3	ECTS 12

Energy / Biomass

Chemical engineering Practical Work

Process intensification

Environmental waste water treatment

Chem Eng 4	ECTS 9

Process systems engineering

Catalytic reactor engineering

Engineering rheology

Chem Eng 5	ECTS 9

Chemical process control

Process simulation

Industrial lectures

Year Two
Spring Semester

1-6 month Research Internship	ECTS 30

Industrial lectures