



**MASTER'S DEGREE PROGRAMME IN CHEMICAL AND PROCESS
ENGINEERING**

Study programme for students enrolled in the academic year 2024-2025

1st YEAR

MANDATORY UNITS	CREDITS
CHEMICAL REACTION ENGINEERING	12
INDUSTRIAL CHEMICAL PROCESSES	12
INDUSTRIAL PROCESS SAFETY AND RISK ANALYSIS	6
MULTIPHASE THERMODYNAMICS AND TRANSPORT PHENOMENA	9
PROCESS AND FLUID DYNAMICS SIMULATION	9
SEPARATION UNIT OPERATIONS	9

2nd YEAR

MANDATORY UNITS	CREDITS
PROCESS DESIGN	6
PROCESS DYNAMICS AND CONTROL	9

FREE-CHOICE UNITS AMONG THE FOLLOWING ACTIVITIES (12 credits)

UNITS	CREDITS
FOOD AND BIOPROCESS TECHNOLOGIES	6
FUNDAMENTALS OF 3D BIOPRINTING	6
INDUSTRIAL PROCESSES FOR BIOBASED AND SPECIALTY CHEMICALS	6
MACHINE LEARNING FOR PROCESS ENGINEERING	6
MEMBRANE SEPARATION PROCESSES	6
PARTICLE TECHNOLOGY FOR THE FOOD AND PHARMACEUTICAL INDUSTRIES	6
POLYMER PROCESSING AND RECYCLING	6
PROCESS TECHNOLOGIES FOR CARBON-NEUTRAL FUELS	6
GREEN CHEMISTRY AND ENGINEERING	6
LIFE CYCLE ENGINEERING OF CONTAMINATED SITES	6
STRATEGIC ENVIRONMENTAL MANAGEMENT	6

ADDITIONAL FREE-CHOICE UNITS (12 credits including free-choice units not already selected)	
UNITS	CREDITS
BUSINESS MANAGEMENT	6
ELECTROCHEMICAL ENERGY STORAGE TECHNOLOGIES	6
ELECTROHEAT SCIENCE FOR MATERIALS TECHNOLOGIES AND CHEMICAL PROCESSES	6

ENGLISH LANGUAGE B2 (PRODUCTIVE SKILLS)	3
MASTER'S THESIS	21

Final notes:

There are no propaedeutic units to attend the second-year activities.
Although not mandatory, classroom attendance is strongly recommended.

Students are required to submit their study plan through the UNIWEB platform as early as the first enrolment year.

This document has been prepared in Spring 2024.

It is strongly recommended to check, at the beginning of each academic year, the correct placement of the course units in the semesters and the activation of the free-choice activities.