



University of Oum El Bouaghi

Master's degree in Engineering - Chemical

1. Program Description:

The Master of Science in Chemical Engineering is a graduation engineering program offered at the University of Oum El Bouaghi, Faculty of Science and Applied Science, Department of Process Engineering. The master's degree is a 2-year program designed for students who have completed a bachelor degree in Process Engineering, who want to get a thorough technical foundation in chemical industry.

The program provides training in hardware and software, through which students develop fundamental knowledge in various fields of engineering technology, including an in-depth study of various reactors, unit operations, thermal transfers, reaction kinetics, techniques analysis and separation..., and their relationship with oil and gas refining, petrochemical industry, detergent industry, environmental protection... and others. This is reinforced by training the student in the field of programming and simulation by learning different programming languages (Fortran...) for use in simulation programs such as Hisys...

By balancing theory and practice through laboratories and a final-semester capstone project, students establish solid engineering principles that qualify them to be chemical engineers, capable of advancing endless chemical and industrial technologies with endless opportunities, as well as preparing them to pursue graduate studies. Or exceptional jobs in the development and management of factories, institutions, laboratories, offices of expertise and much more.

2. PROGRAM ACADEMIC MASTER

Teaching unit	Title of the Subject
Fundamental teaching unit	Unit operations I (Absorption-Strippage_ Extraction-mixing)
	Reaction engineering I: non-ideal reactors and bioreactors
	Applied thermodynamics
	Heat Transfer and Heat Exchangers
Methodologyteaching unit	Unit operations I
	Reaction Engineering I
	P" W: Heat Transfer and Heat Exchangers
	Process Engineering Simulators
Discoveryteaching unit	Chosen course
	Chosen course
Transversal teaching unit	Technical English and Terminology

Semester 2

Teaching unit	Title of the Subject
Fundamentalteaching unit	Opérations unitaires 2 (Humidification-Séchage-Evaporation-Cristallisation)
	Adsorption Processes and Membrane Separation
	Reaction engineering II: polyphase reactors
	Furnaces and Boilers
Methodologyteaching unit	ractical work Unit operations 2, Membrane adsorption and separation processes
	Process regulation and control
	Numerical analysis
Discoveryteaching unit	Chosen course
	Chosen course
Transversal teaching unit	Ethics, deontology and intellectual property

Semester 3

Teaching unit	Title of the Subject
Fundamentalteaching unit	Distillation
	Refining and petrochemicals
	Porous and dispersed media
	Process optimization and modeling
	Process intensification
Methodologyteaching unit	PW: Distillation
	PW: Refining and petrochemicals
	Practical work Porous and dispersed media
	Plan of experiments
Discoveryteaching unit	Chosen course
	Chosen course
Transversal teaching unit	Literature search and brief design