



LICENCE - Chimie

Chemical engineering (UFAZ)

Objectifs du parcours

Ce parcours est proposé exclusivement dans le cadre de l'[Université franco-azerbaïdjanaise \(UFAZ\)](#).

Langue du parcours			Anglais
ECTS			180 ECTS
Volume horaire			
TP : 0h	TD : 0h	CI : 0h	CM : 0h
Formation initiale			Oui
Formation continue			Non
Apprentissage			Non
Contrat de professionnalisation			Non

L0 UFAZ

L0 UFAZ- Semester 01

	ECTS	CM	CI	TD	TP	TE	Stage
Basic Mathematics 1	6 ECTS	1.5 h	42 h	4.5 h		63 h	
Basic Maths 1			42 h			63 h	
Working Methodology - Basic Maths 1		1.5 h		4.5 h			
Basic Physics 1	6 ECTS	3 h	39 h	3 h		63 h	
Basic Physics 1			39 h			63 h	
Working methodology - Basic Physics 1		3 h		3 h			
Basic Chemistry 1	6 ECTS	3 h	42 h	3 h		63 h	
Basic Chemistry 1			42 h			63 h	
Working methodology - Basic Chemistry 1		3 h		3 h			
Introduction to Computer Science 1	6 ECTS		33 h	6 h	21 h	90 h	
System, Algorithms and Programming 1			33 h		21 h	90 h	
Working methodology - Intro to Computer Sciences 1				6 h			
Languages 01	6 ECTS			60 h			
English or French				60 h		168 h	

L0 UFAZ- Semester 02

	ECTS	CM	CI	TD	TP	TE	Stage
Basic Mathematics 2	7 ECTS	20 h		60 h			
Algebra, Probability, Statistics		10 h		30 h			
Analysis		10 h		30 h			
Basic Physics 2	6 ECTS	13.5 h	25.5 h		21 h	94.5 h	
Basic Physics 2		13.5 h	25.5 h		21 h	94.5 h	
Basic Chemistry 2	6 ECTS	13.5 h	27 h		21 h	94.5 h	
Basic Chemistry 2		13.5 h	27 h		21 h	94.5 h	
Introduction to Computer Sciences 2	6 ECTS		15 h	24 h	21 h	90 h	
Systems, algorithms, programming 2			15 h	24 h	21 h	90 h	
Basic Geosciences	2 ECTS	13.5 h		7.5 h	3 h	27 h	
Introduction to Geosciences		12 h		3 h	3 h	27 h	
Working methodology		1.5 h		4.5 h			
Languages 02	3 ECTS			30 h			
English or French				30 h		63 h	

L1 Chemical Engineering

L1 Chemical Engineering - Semester 1

	ECTS	CM	CI	TD	TP	TE	Stage
Mathematics 1	6 ECTS	28 h		28 h			
Mathematics		28 h		28 h			
Chemistry 1	6 ECTS	24 h		24 h	21 h		
Architecture of matter 1		12 h		12 h			
Transformation of matter 1		12 h		12 h			
Chemistry Lab 1					21 h		
Chemical Engineering 1	4 ECTS		21 h		15 h		
Introduction to Chemical Engineering			21 h				
Chem. Eng. Lab 1					15 h		
Computer science 1	3 ECTS	9 h			21 h		
Computer Sciences for Physics and Chemistry		9 h			21 h	36 h	
Languages 1	3 ECTS		72 h				
English or French				30 h			
Physics 1	8 ECTS	42 h		42 h		126 h	
Point mechanics		12 h		12 h			
Fluid mechanics		6 h		6 h		54 h	
Thermodynamics 1		12 h		12 h		36 h	
Electrostatics		12 h		12 h		36 h	

L1 Chemical Engineering - Semester 2

	ECTS	CM	CI	TD	TP	TE	Stage
Mathematics 2	6 ECTS	28 h		28 h			
Mathematics 2		28 h		28 h			
Physics 2	6 ECTS	18 h		18 h	36 h	108 h	
Oscillators, Waves, Optics		18 h		18 h		54 h	
Physics Lab 1					36 h	54 h	
Chemistry 2	9 ECTS	30 h		30 h			
Architecture of matter 2		15 h		15 h			
Transformation of matter 2		15 h		15 h			
Chemistry Lab 2					30 h		
Chemical Engineering 2	6 ECTS		57 h				
Heat transfer			21 h				
Process diagram			15 h				
Material science for Chemical Engineering			21 h				
Languages 2	3 ECTS			30 h			
English or French				30 h			

L2 Chemical Engineering

L2 Chemical Engineering - Semester 3

	ECTS	CM	CI	TD	TP	TE	Stage
Mathematics 3	5 ECTS	20 h		34 h			
Mathematics 3		20 h		34 h			
Physics 3	5 ECTS						
Thermodynamics 2		12 h		12 h			
Electricity for CS and CE		12 h		12 h			
Chemistry 3	9 ECTS	30 h		30 h	36 h		
Reactivity 1 (industrial chem)		15 h		15 h			
Thermodynamics and kinetics		15 h		15 h			
Chemistry Lab 3					36 h		
Chemical Engineering 3	8 ECTS		63 h		20 h		
Distillation			21 h				
Operation on solids			21 h		20 h		
Liquid-Liquid extraction			21 h				
Languages 3	3 ECTS			30 h			
English or French					30 h		

L2 Chemical Engineering - Semester 4

	ECTS	CM	CI	TD	TP	TE	Stage
Mathematics 4	5 ECTS	20 h		32 h			
Mathematics 4		20 h		32 h			
Physics 4	3 ECTS	12 h		18 h			
Fluid mechanics 2		12 h		18 h			
Chemistry 4	9 ECTS						
Reactivity 2 (inorganic)		15 h		15 h			
Spectroscopies and electrochemistry		15 h		15 h			
Experimental chemistry 4					36 h		
Chemical Engineering 4	7 ECTS		42 h		36 h		
Chemical reactors			21 h				
Process and safety			21 h				
Chem. Eng. Lab 2							
Languages 4	3 ECTS			30 h			
English or French				30 h			
Professional preparation 1	3 ECTS			30 h			
Soft skills				30 h			

L3 Chemical Engineering

L3 Chemical Engineering - Semester 5

	ECTS	CM	CI	TD	TP	TE	Stage
Mathematics 5	2 ECTS		30 h				
Linear algebra, Fourier transforms and probability			30 h				
Physics 5	4 ECTS						
Electromagnetism		18 h		18 h			
Chemistry 5	11 ECTS	69 h			30 h		
Materials, polymers and formulation			24 h				
Analytical chemistry			24 h				
Experimental chemistry 5					30 h		
Applied Chemistry			21 h				
Chemical engineering 5	9 ECTS		42 h		30 h		
Systems dynamics and regulation			21 h				
Catalysis and environnement			21 h				
Experimental chemical engineering 5					30 h		
Humanities 4	4 ECTS	25.5 h	1.5 h	12 h			
Preparation of internship		4.5 h	1.5 h	12 h			
Management		21 h					

L3 Chemical Engineering - Semester 6

	ECTS	CM	CI	TD	TP	TE	Stage
Chemistry 6	6 ECTS				39 h		
Chemistry project (student-led project)					39 h		
Chemical Engineering 6	6 ECTS		33 h				
Process engineering			12 h				
Bioreactors			21 h				
Humanities 5	3 ECTS		26 h		12 h		
Marketing for Engineers, Scientists & Technologist			26 h		12 h		
BSc internship	15 ECTS			150 h			
Internship				150 h			