Universidad de La Sabana

FACULTAD DE INGENIERÍA

Curriculum

Chemical Engineering

Semester 1

	Credits	Prerequisites
• Introduction to engineering	2	
• Chemical engineering workshop	2	
• Differential calculus	3	
• General chemistry I	3	
• Basic idiomatic skills	2	
• Basic digital skills	3	
• Introduction to CAD	2	
• Elective I	2	

Total credits per semester: **19**

Semester 2

	Credits	Prerequisites
• General chemistry II *	4	General chemistry I
• Mechanical physics *	4	Differential calculus
• Integral calculus	3	Differential calculus
• Linear algebra	3	
• Core curriculum. Person and culture, I	2	
• English 3	3	
• Elective II	2	

Total credits per semester: **21**

Semester 3

• Organic chemistry *	4	General chemistry II *
• Thermodynamics	3	Differential calculus
• Multivariable calculus	3	Integral calculus - Linear algebra
• Physics, electricity and magnetism*	4	Mechanical physics *
• Core curriculum. Person and culture II	2	Core curriculum. Person and culture, I
• English 4	3	English 3

Total credits per semester: **19**

Semester 4

• Biochemistry *	4	Organic chemistry *
• Equilibrium thermodynamics	3	Thermodynamics
• Differential equations	3	Multivariable calculus
• Mass and energy balance	3	
• Core curriculum. Person and culture III	2	Core curriculum. Person and culture II
• English 5	3	English 4
• Elective III	2	

Total credits per semester: **20**

Semester 5

• Material and nanomaterial science**	3	Physics, electricity and magnetism
• Introduction to administration	2	
• Chemical instrumental analysis*	3	Organic chemistry *
• Transport phenomena	3	Differential equations
• Optimization in chemical engineering	2	Differential equations
• Probability and statistics I	2	Integral calculus
• Core curriculum. Person and culture IV	2	Core curriculum. Person and culture iii
• English 6	3	English 5

Total credits per semester: **20**

Semester 6

• Transport phenomena engineering*	4	Transport Phenomena y Mass and Energy Balance
• Chemical reaction engineering	3	Equilibrium Thermodynamics, Mass and Energy Balance y Differential Calculus
• Chemical engineering seminar***	2	Mass and energy balance
• Particle technology and engineering**	2	Transport phenomena
• Economic engineering	2	
• Core curriculum. Person and culture V	3	Core curriculum. Person and culture iv
• English 7	3	English 6

Total credits per semester: **19**

Semester 7

• Separation operations and NT*	4	Transport Phenomena, Equilibrium Thermodynamics and Mass and Energy Balance
• Product and process design I	3	Transport phenomena
• Biotechnology*	3	Biochemistry *
• Grade project seminar	1	To have approved 60% of the credits of the study plan
• Entrepreneurship and business creation	2	
• Project engineering	2	Economic engineering
• Introduction to programming	3	
• Elective IV	2	

Total credits per semester: **20**

Semester 8

• Product and process design II	3	Product and Process Design I, Material and Nanomaterial Science and Chemical Reaction Engineering
• Dynamics and process control*	4	Chemical reaction engineering
• Modelling and simulation in chemical engineering	3	Chemical reaction engineering
		Chemical engineering seminar ***
• Health, safety and environment	2	English 7
• Internship seminar	1	
• Elective V	2	
• Elective VI	2	
• Elective VII	2	

Total credits per semester: **19**

Semester 9

• Profesional Internship	16	Internship seminar
• Elective VIII	2	

Total credits per semester: **18**

* Course with Laboratory component
** Course in English
*** Course with Visits to Industrial Process Plants

Total créditos: 175

VIGILADA MINEDUCACIÓN