BACHELOR PROGRAM IN CHEMICAL ENGINEERING

Number of credits required: 130

Semester	Subject code	Subject	Number of Credits
Semester 1 (18 credits)	**Core subjects**		**14**
		Communication Skills	2
		Analysis B	3
		General Physics B	3
		General Chemistry	3
		Foreign language 1	3
	Elective subjects		**4**
		Fundamentals of Legislation	2
		Writing Scientific Documents in Vietnamese	2
		Management Theory	2
		History of Economic Theories	2
Semester 2 (18 credits)	**Core subjects**		**16**
		Fundamental principles of Marxism-Leninism 1	2
		Introduction to Chemical Engineering	3
		Physical Chemistry	4
		Foreign language 2	4
		General Informatics	3
		Physical Education 1	(2)
	Elective subjects		**2**
		Linear Algebra B	2
		Mathematical Methods	2
Semester 3 (17 credits)	**Core subjects**		**14**
		Fundamental principles of Marxism-Leninism 2	3
		Inorganic Chemistry	3
		Organic Chemistry	3
		Engineering Drawing	2
		Probability and Statistics	3
		Physical Education 2 and 3 (Elective)	(4)
	Elective subjects		**3**
		Ecology	3
		Electric and Electronic Engineering	3
Semester 4 (16 credits)	**Core subjects**		**13**
		Fundamental Economics	3
		Research Methodology	2
		Analytical Chemistry	3
		Mechanical Processes	2
		Heat Transfer	3

	Elective subjects		**3**
		Experiment Analysis and Design	3
		Colloid Chemistry	3
		AutoCAD	3
Semester 5 (15 credits)	**Core subjects**		**12**
		Ho Chi Minh's Ideology	2
		Modern Methods in Analytical Chemistry	3
		Mass Transfer	3
		Chemical Reaction Engineering	2
		Fundamentals of Chemical Equipment Design	2
	Elective subjects		**3**
		Informatics Applied in Chemical Engineering	3
		English for Special Purposes	3
Semester 6 (17 credits)	**Core subjects**		**14**
		Unit Operation Experiments	2
		Unit Operation Project	1
		Chemistry and Physical Chemistry of Polymers	4
		Petroleum Processing Technology	4
		Chemistry of Natural Products	3
	Elective subjects		**3**
		Plastic Engineering	3
		Polymer Processing	3
		Organic Synthesis in Petrochemistry	3
		Technology of Natural Colorant, Flavor and Fragrance	3
Semester 7 (19 credits)	**Core subjects**		**16**
		Revolutionary Strategies of Vietnamese Communist Party	3
		Composite Material Technology	3
		Gas Processing Technology	2
		Techniques for Isolation and Purification of Natural Products	3
		Specialized Project	1
		Professional Practicum (6 weeks)	4
	Elective subjects		**3**
		Storage and transport of petroleum products	3
		Natural Antioxidants	3
Semester 8 (10 credits)	**Final project/Alternative subjects**		
	A. Final project (*4 months*)		**10**
	B. Alternative subjects		**10**
		Core subjects	**4**
		Production Practicum (6 weeks)	4
		Elective subjects	**6**
		Green Chemistry	2
		Nanotechnology	2

		Fundamentals of Chemical Plant Design	2
		Occupational Safety and Industrial Environmental Sanitation	2
		Chemical Environmental Engineering	4
Supplementary subjects *(organized upon students' request)*			
		Dyeing and Printing Techniques	3
		Binder and Coating Technology	3
		Biodegradable Polymer	3
		Polymer Recycling	3
		Mineral Technology	3
		Ceramic and Glass Technology	3
		Electrochemical Technology	3
		Corrosion and Material Protection Engineering	3
		Principles of Marketing	2
		Human Resource Management	2