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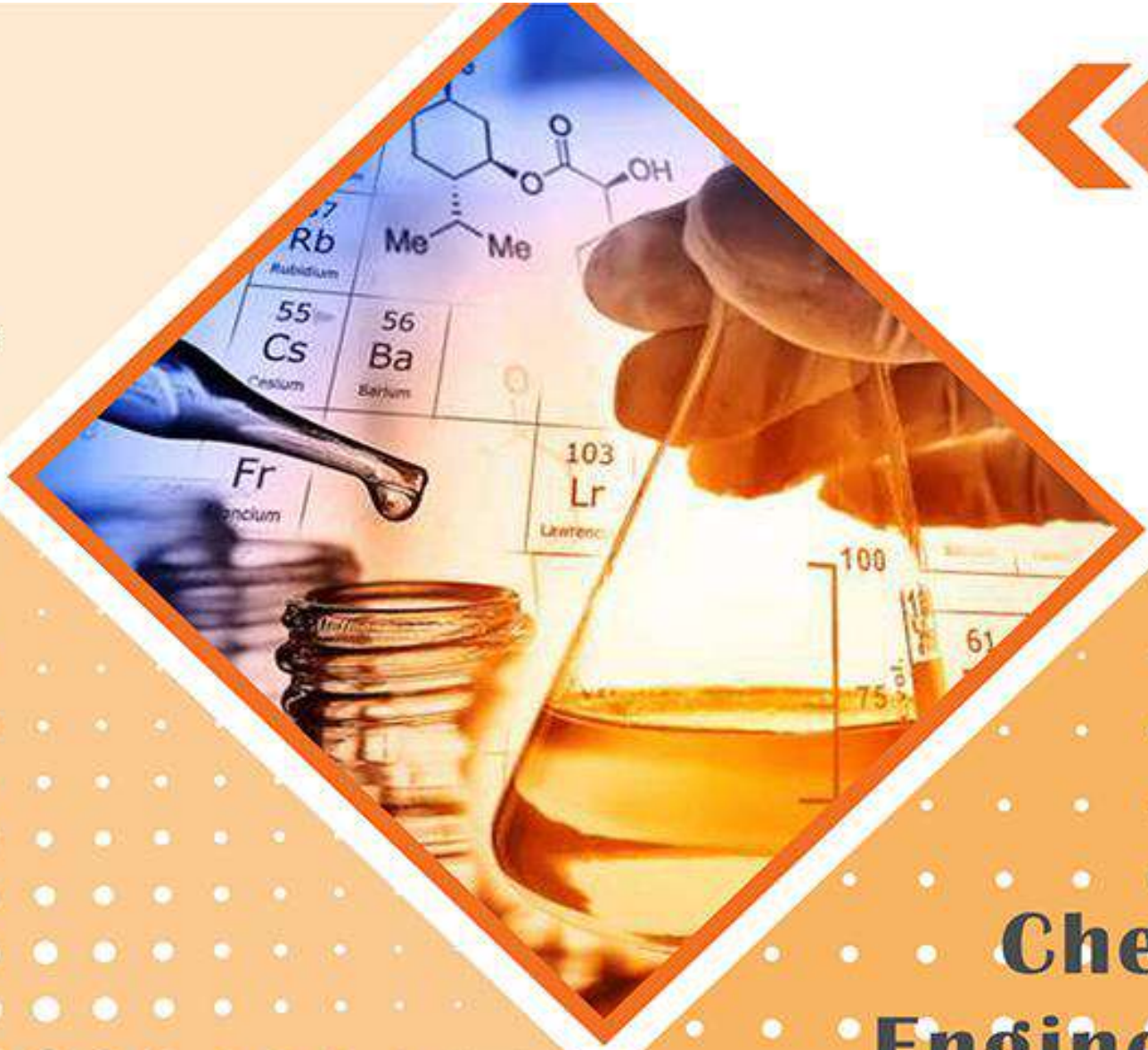
Bouebdelli Education Group



Chemical Engineering Study Plan

CHEMICAL ENGINEERING Year 1 Semester 1									
Code	UNIT	Modules	Semester Credit Hours			PW		ECTS CREDITS	
			IC	PW	SSH	Module	Unit	Module	Unit
U1.1	*Fundamental Sciences*	Inorganic Chemistry	21	0	21	2	7	2	7
		Thermodynamics	42	3	35	2,5		2,5	
		Experimental Chemistry	42	6	35	2,5		2,5	
U1.2	*Process & Control*	Heat Transfer	42	0	35	4	6	4	6
		Measurement & Instrument	21	0	21	2		2	
U1.3	*Engineering Tools*	Applied Computing : Excel Programming	0	21	21	1,5	6	1,5	6
		Applied Statistics	21	0	21	1,5		1,5	
		Applied Mathematics	42	0	35	3		3	
U1.4	*Organic Synthesis: Structure & Analysis*	Organic Chemistry	42	3	35	3,5	7	3,5	7
		Polymers Synthesis 1	42	3	35	3,5		3,5	
U1.5	*Languages & Communication*	English I	21	0	21	2	4	2	4
		Communication Techniques	21	0	21	2		2	
		Total	336	36	315	28	30	28	30
		Total Semester Workload	687						

One semester of study length is 14 weeks and 1 week for exams

The Student Self Study Hours SSH are estimated as follows: Module with weekly hours ≥3 SSH=2.5Hrs; : Module with weekly hours <3 SSH=1.5Hr;

The average Workload/ week = 729H/14= 50 Hours

The Total Semester ECTS Credits = 30

IC: Integrated Course (Classroom course & guided work) PW: Practical Workshop (in Lab) SSH: Self Study Hours

CHEMICAL ENGINEERING Year 1 Semester 2									
Code	UNIT	Modules	Semester Credit Hours			PW		ECTS CREDITS	
			IC	PW	SSH	Module	Unit	Module	Unit
U2.1	*Fundamental Sciences*	Structural Biochemistry	21	0	21	2,5	6	2,5	6
		Kinetics Reaction	42	3	35	3,5		3,5	
U2.2	*Process & Control*	Applied Thermodynamics	21	9	21	2	7	2	7
		Matter Transfer	42	0	35	2,5		2,5	
		Fluid Mechanics	42	9	35	2,5		2,5	
U2.3	*Engineering Tools*	Numerical Modeling : VB Excel II	0	21	21	2	4	2	4
		Control & Regulation	21	0	21	2		2	
U2.4	*Organic Synthesis: Structure & Analysis*	Organic Chemistry II	42	6	35	2	7	2	7
		Polymers Synthesis II	21	3	21	1,5		1,5	
		Spectroscopic techniques of analysis	42	3	35	2		2	
		Workshop : Synthesis I & Analysis	21	0	21	1,5		1,5	
U2.5	*Languages & Communication*	English II	21	0	21	2	4	2	4
		Personnel Professional Project (PPP)	21	0	21	2		2	
U2.6	*PROJECTS*	Mini project	0	21	21	2	2	2	2
Total			357	75	364	30	30	30	30
Total Semester Workload			796						

One semester of study length is 14 weeks and 1 week for exams

The Student Self Study Hours SSH are estimated as follows: Module with weekly hours ≥3 SSH=2.5Hrs; : Module with weekly hours <3 SSH=1.5Hr;

The average Workload/ week = 796H/14= 57 Hours

The Total Semester ECTS Credits = 30

IC: Integrated Course (Classroom course & guided work) PW: Practical Workshop (in Lab) SSH: Self Study Hours

CHEMICAL ENGINEERING Year 2 Semester 1									
Code	UNIT	Modules	Semester Credit Hours			PW		ECTS CREDITS	
			IC	PW	SSH	Module	Unit	Module	Unit
U3.1	*Energy Transfer*	Matter& Energy Balance	42	0	35	3	5	3	5
		Heat Exchanger & Pumps	21	0	21	2		2	
U3.2	*Process & Control*	Unit Operation I : Mechanics	42	9	35	3,5	7	3,5	7
		Chemical Reactors	42	3	35	3,5		3,5	
U3.3	*Engineering Tools*	Separation & Validation Method	42	6	35	3	6	3	6
		Methodology of Experimental design (NEMROD-W)	21	0	21	1,5		1,5	
		Simulation : Aspen I	0	21	21	1,5		1,5	
U3.4	*Material & Organic Synthesis*	Analytical Electrochemistry	42	3	35	3	7	3	7
		Solid Chemistry	21	0	21	2		2	
		Organometallic Chemistry	21	6	21	2		2	
U3.5	*Languages & Management*	English (TOEIC) I	42	0	35	2	5	2	5
		Marketing	21	0	21	1,5		1,5	
		Project Management	21	0	21	1,5		1,5	
Total			378	48	357	30	30	30	30
Total Semester Workload			783						

One semester of study length is 14 weeks and 1 week for exams

The Student Self Study Hours SSH are estimated as follows: Module with weekly hours ≥3 SSH=2.5Hrs; : Module with weekly hours <3 SSH=1.5Hr;

The average Workload/ week = 783H/14= 56Hours

The Total Semester ECTS Credits = 30

IC: Integrated Course (Classroom course & guided work) PW: Practical Workshop (in Lab) SSH: Self Study Hours

CHEMICAL ENGINEERING Year 2 Semester 2									
Code	UNIT	Modules	Semester Credit Hours			PW		ECTS CREDITS	
			IC	PW	SSH	Module	Unit	Module	Unit
U4.1	*Process & Control*	Unit Operation II : Physical I (Distillation-absorption-Extraction)	42	9	35	3,5	7	3,5	7
		Unit Operation III : Physical II (Adsorption-Drying-crystallization)	42	6	35	3,5		3,5	
U4.2	*Industrial Manufacturing*	Furnaces & Boilers	42	0	35	3	5	3	5
		Simulation : HYSIS	0	21	21	2		2	
U4.3	*Inorganic Material & Characterization*	Molecular Technique &Characterization	21	0	21	2	5	2	5
		Physical Chemistry of Polymers	42	6	35	3		3	
U4.4	*Organic Synthesis: Structure & Analysis*	Fine Chemistry	21	6	21	2	6	2	6
		Industrial Electrochemistry	42	3	35	2		2	
		Workshop : Synthesis II	0	21	35	2		2	
U4.5	*Languages & Corporate Culture 1*	English (TOEIC) II	42	0	21	2	5	2	5
		Business Management	21	0	21	1,5		1,5	
		Industrial Production Management	21	0	21	1,5		1,5	
U4.6	*PROJECTS*	Annual Project	0	21	21	2	2	2	2
		Total	336	93	357	30	30	30	30
		Total Semester Workload	786						

One semester of study length is 14 weeks and 1 week for exams

The Student Self Study Hours SSH are estimated as follows: Module with weekly hours ≥3 SSH=2.5Hrs; : Module with weekly hours <3 SSH=1.5Hr

The average Workload/ week = 786H/14= 56 Hours

The Total Semester ECTS Credits = 30

IC: Integrated Course (Classroom course & guided work) PW: Practical Workshop (in Lab) SSH: Self Study Hours

CHEMICAL ENGINEERING Year 3 Semester 1									
Code	UNIT	Modules	Semester Credit Hours			PW		ECTS CREDITS	
			IC	PW	SSH	Module	Unit	Module	Unit
U5.1	*Process & Control*	Risk Analysis & Process Security	42	0	35	3,5	5	3,5	5
		Environment &Renewable Energy	21	0	21	1,5		1,5	
U5.2	*Process & Treatments*	Treatment of Gaseous effluents & Solid Waste	21	0	21	1,5	7	1,5	7
		Water Treatment	42	15	35	3		3	
		High Pressure Extraction Techniques	21	0	21	2,5		2,5	
U5.3	*Industrial Manufacturing*	Simulation : Aspen II	0	21	21	2,5	6	2,5	6
		Processing of Polymers & Composites	42	3	35	3,5		3,5	
U5.4	*Synthesis & Materials*	Materials Science	42	0	35	3,5	7	3,5	7
		Formulation	42	9	35	3,5		3,5	
U5.5	*Languages & Corporate Culture 2*	Quality Control & Regulation	21	0	21	1,5	5	1,5	5
		Start Up	21	0	21	1,5		1,5	
		Lean Management	42	0	35	2		2	
Total			357	48	336	30	30	30	30
Total Semester Workload			741						

One semester of study length is 14 weeks and 1 week for exams

The Student Self Study Hours SSH are estimated as follows: Module with weekly hours ≥3 SSH=2.5Hrs;: Module with weekly hours <3 SSH=1.5Hr

The average Workload/ week = 741H/14= 53 Hours

The Total Semester ECTS Credits = 30

IC: Integrated Course (Classroom course & guided work) PW: Practical Workshop (in Lab) SSH: Self Study Hours

CHEMICAL ENGINEERING Year 3 Semester 2						
Code	UNIT	Credit Hours	IC	Project	COEF	ECTS Credit
U6.1	*Graduation Research Project (4-6 months)*	450	-	450	-	30
U6.2	*Internship 1 (1-2 months)*	-	-	-	-	-
U6.3	*Internship 2 (1-2 months)*	-	-	-	-	-
	Total Semester Workload	450	0	450	0	30

The Total Semester ECTS Credits = 30