

# KHAZAR UNIVERSITY

## Chemical Engineering B.S. Program

### 1st Year

CODE	Fall Semester	KU	ECTS
AZLL 101	Azerbaijan language	3	6
AZC 202	Azerbaijan Culture	2	4
ENGL 101	English Foundations I	4	8
PHSC 111	Physics I	3	6
MATH 101	Calculus I	3	6
CHEM 111	General Chemistry I	3	6
	<b>Credit</b>	<b>18</b>	<b>36</b>

CODE	Spring Semester	KU	ECTS
AZH 150	Azerbaijan History	3	6
ENGL 102	English Foundations II	4	8
PHSC 112	Physics II	3	6
MATH 105	Calculus II	3	6
CHEM 112	General Chemistry II	3	6
	<b>Credit</b>	<b>16</b>	<b>32</b>

### 2nd Year

CODE	Fall Semester	KU	ECTS
CHEM 212	Analytical Chemistry and Instrumental Analysis	3	6
MATH 235	Linear Algebra and Analytical Geometry	3	6
ENGL216	English for Special Purpose	3	6
CHE 215	Introduction to Chemical Engineering	3	6
CHEM226	Organic Chemistry	2	4
	* Humanity	3	6
	<b>Credit</b>	<b>17</b>	<b>34</b>

CODE	Spring Semester	KU	ECTS
ME 351	Material Science	3	6
EENG 211	Applied Differential Equations	3	6
CMS115	Computer Application in Engineering	3	6
CHE 350	Material and Energy Balance	3	6
CHE 240	Physical Chemistry	2	4
	*Humanity	3	6
	<b>Credit</b>	<b>17</b>	<b>34</b>

### 3rd Year

CODE	Fall Semester	KU	ECTS
ENGR 311	Engineering Thermodynamics	3	6
CHE 313	Heat and Mass Transfer	3	6
MED 315	Life Science	3	6
ENGR210	Fluid Mechaanics I	3	6
CHE 310	Separation Processes	3	6
	<b>Credit</b>	<b>15</b>	<b>30</b>

CODE	Spring Semester	KU	ECTS
CHE 322	Unit Operation Technology in Chemical Eng.	3	6
CHE 321	Chemical Reaction Engineering	3	6
CHE 323	Mathinatical Modeling in Chemical Eng.	3	6
	**Social Sciences	3	6
	***Major Electives	3	6
	<b>Credit</b>	<b>15</b>	<b>30</b>

CODE	Fall Semester	KU	ECTS

CODE	Summer Semester	KU	ECTS
CHE 395	Summer Practice	6	12
	<b>Credit</b>	<b>6</b>	<b>12</b>

### 4th Year

CODE	Fall Semester	KU	ECTS
CHE 411	Chemical Process Design and Simulation	3	6
CHE 412	Chemical Process Design and Optimization	3	6
	***Major Electives	2	4
	** Social Sciences	3	6
CHE 414	§ Research Project	1	2
	<b>Credit</b>	<b>12</b>	<b>24</b>

CODE	Spring Semester	KU	ECTS
CHE 421	Process Dynamics and Control	3	6
CHE 425	Computational Fluid Dynamics	3	6
	***Major Electives	3	6
	***Major Electives	2	4
CHE 424	§§ Research Project	1	2
	<b>Credit</b>	<b>12</b>	<b>24</b>

Total credit for Graduations                      128                      256

Code	<b>* Humanity</b>	<b>6</b>		Code	<b>***Major Electives</b>	<b>KU</b>	<b>ECTS</b>
FNLG 201	Foreign language 1	3			Renewable Energy	3	6
HIST 110	History of World Civilizations	3			Environmental Engineering	2	4
FNLG 202	Foreign language 2	3			Biomedical Engineering	2	4
PHIL 110	Introduction to philosophy	3			Alternative Fuel Technology	3	6
LAW 220	Family Law	3			Bio-process Engineering	3	6
LAW 102	Law Enforcement Systems	3			Nano-Engineering	2	4
					Polymer Science and Composites	3	6
	<b>** Social Sciences</b>	<b>6</b>			Computational Chemistry	3	6
MGT 310	Management and Organization	3			Neural Networks	3	6
LAW 220	Family Law	3			Computer Graphics	3	6
ECON 101	Introduction to Economics	3				<b>KU</b>	<b>ECTS</b>
LAW 102	Law Enforcement Systems	3			University Requirement English	11	22
	<b>Research Project</b>	<b>2</b>			University Requirement Azeri	8	16
	§ Proposal+Literature Review	1			<b>Humanity</b>	<b>6</b>	<b>12</b>
	§§ Conducting Research + Final Report	1			<b>Science and Technology</b>	<b>9</b>	<b>18</b>
	<b>Science and Technology</b>	<b>9</b>			<b>Social Sciences</b>	<b>6</b>	<b>12</b>
MATH 101	Calculus 1	3			<b>Major Courses</b>	<b>88</b>	<b>176</b>
CMS 115	Computer Application in Engineering	3					
MED 315	Life Sciences	3			<b>Total</b>	<b>128</b>	<b>256</b>