

UNDERGRADUATE COURSES

Curriculum for the Degree of Bachelor of Science in Chemistry *Concentration: Pure Chemistry*

Semester I (Fall)

Code	Course	Cr. Hrs.
1914103	Mathematics I	4
2010117	Basic Physics I	4
2110101	General Chemistry	3
2110104	General Chemistry Lab. I	1
2010116	Physics Lab. I	1
2510112	English for Specific Purposes	3
-	General Courses	3

Semester II (Spring)

1914104	Mathematics II	4
2010127	Basic Physics II	4
2110105	General Chemistry II	3
2110106	General Chemistry Lab. II	1
2010126	Physics Lab. II	1
2112125	Organic Chemistry I	3
2110307	English for Chemists	2
-	General Courses	2

Semester III (Fall)

2114251	Physical Chemistry I	3
2118281	Analytical Chemistry I	3
2116271	Inorganic chemistry I	3
2112230	Organic Chemistry Lab. I	1
2114252	Physical Chemistry Lab. I	1
2112231	Organic Chemistry II	3
2118282	Analytical Chemistry Lab. I	1
2116272	Inorganic chemistry Lab. I	1

Semester IV (Spring)

2114253	Physical Chemistry II	3
2118283	Analytical Chemistry II	2
2116373	Inorganic Chemistry II	4
2112232	Organic Chemistry Lab. II	1
2114254	Physical Chemistry Lab. II	1
2112233	Organic Chemistry III	3
2114357	Principles of Quantum Chemistry	3
1410359	Calculation Principles in Industrial Chemistry	3
-	General Courses	3

Semester VI (Fall)

2116374	Inorganic chemistry Lab. II	1
2118385	Instrumental Analysis	3
2118384	Analytical Chemistry Lab. II	2
1730150	Basic Computer Programming	2
1914251	Differential Equations	3
-	Elective Courses	3

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Semester VII (Spring)

2110417	Organometallic Chemistry	3
2112337	Identification of Organic Compounds	1
2112338	Identification of Organic Compounds Lab.	2
2118386	Instrumental Analysis Lab.	2
2112235	Spectroscopy in Organic Chemistry	2
1510160	Graphics	1
2110411	Chemical literature	1
-	Elective Courses	3
-	General Courses	5

Semester IX (Fall)

2112443	Physical Organic Chemistry	3
2114359	Molecular Spectroscopy	3
2410101	Workshop	1
-	Elective Courses	9
-	General Courses	4

Elective Courses

3616502	Biochemistry	3
2112339	Principles of Polymer Chemistry	4
2110423	Undergraduate Research Project	3
2112441	Synthesis of Organic Compounds	3

Curriculum for the Degree of BS in Chemistry *Concentration: Applied Chemistry*

Semester I (Fall)

1914103	Mathematics I	4
2010117	Basic Physics I	4
2110101	General Chemistry	3
2110104	General Chemistry Lab. I	1
2010116	Physics Lab. I	1
2510112	English for Specific Purposes	3
-	General Courses	3

Semester II (Spring)

1914104	Mathematics II	4
2010127	Basic Physics II	4
2110105	General Chemistry II	3
2110106	General Chemistry Lab. II	1
2010126	Physics Lab. II	1
2112125	Organic Chemistry I	3
2110307	English for Chemists	2
-	General Courses	2

Semester III (Summer)

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Semester III (Fall)

2114251	Physical Chemistry I	3
2118281	Analytical Chemistry I	3
2116271	Inorganic Chemistry I	3
2112230	Organic Chemistry Lab. I	1
2114252	Physical Chemistry Lab. I	1
2112231	Organic Chemistry II	3
2118282	Analytical Chemistry Lab. I	1
2116272	Inorganic chemistry Lab. I	1

Semester IV (Spring)

2114253	Physical Chemistry II	3
2118283	Analytical Chemistry II	2
2116373	Inorganic Chemistry II	4
2112232	Organic Chemistry Lab. II	1
2114254	Physical Chemistry Lab. II	1
2112233	Organic Chemistry III	3
2114357	Principles of Quantum Chemistry	3
1410359	Calculation Principles in Industrial Chemistry	3
-	General Courses	3

Semester VI (Fall)

2116374	Inorganic chemistry Lab. II	1
2118385	Instrumental Analysis	3
2118384	Analytical Chemistry Lab. II	2
1730150	Basic computer programming	2
1914251	Differential Equations	3
-	Elective Courses	3

Semester VI (Summer)

2110425	Industrial Training	2
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Semester VII (Fall)

1410327	Industrial Chemistry I	3
2118385	Instrumental Analysis	3
1410424	Corrosion	2
2118386	Analytical Chemistry Lab. II	1
1730150	Basic computer programming	2
1914251	Differential Equations	3
-	Elective Courses	3
-	General Courses	3

Semester VIII (Spring)

1410417	Industrial Chemistry II	3
2112337	Separation and Identification of Organic Compounds	1
2112338	Separation and Identification of Organic Compounds Lab.	2
2118386	Instrumental Analysis Lab.	2
2112235	Spectroscopy in Organic Chemistry	2
1510160	Graphics	1
2110411	Chemical literature	1
-	Elective Courses	3
-	General Courses	5

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Semester IX (Fall)

2118387	Analytical Chemistry III	2
1410427	Industrial Chemistry Lab.	2
1410414	Industrial Water and Wastewater Treatment	3
2410101	Workshop	1
-	Elective Courses	9
2110307	English for Chemists	2

Elective Courses

2114357	Principles of Quantum Chemistry	3
2112339	Principles of Polymer Chemistry	4
2110423	Undergraduate Research Project	3
2112441	Synthesis of Organic Compounds	3
2112443	Physical Organic Chemistry	3
2114359	Molecular Spectroscopy	3