



University of Mosul  
جامعة الموصل



*First Cycle – Bachelor's Degree (B.Sc.) - Chemistry*

بكالوريوس – علوم الكيمياء



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### 1. Overview

This catalogue is about the courses (modules) given by the program of Department of Chemistry to gain the Bachelor of Science degree. The program delivers (48) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظره عامه

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج علوم الكيمياء للحصول على درجة بكالوريوس العلوم. يقدم البرنامج (48) مادة دراسية، على سبيل المثال، مع (6000) إجمالي ساعات حمل الطالب و (240) إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على نظام بولونيا.

### 2. Undergraduate Courses 2023-2024

#### Module 1

Code	Course/Module Title	ECTS	Semester
CHE1101	Fundamentals of Analytical Chemistry and Qualitative Analysis	7.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	109	66
Description			
This section includes a description of the module, 100-150 words			

#### Module 2

Code	Course/Module Title	ECTS	Semester
CHE1102	Fundamentals of inorganic chemistry	5.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	61

Description
This section includes a description of the module, 100-150 words

### Module 3

Code	Course/Module Title	ECTS	Semester
CHE1103	Physics	7.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	5	109	66
Description			
This section includes a description of the module, 100-150 words			

### Module 4

Code	Course/Module Title	ECTS	Semester
CHE1104	Chemical Security and Safety	5.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	61
Description			
This section includes a description of the module, 100-150 words			

### Module 5

Code	Course/Module Title	ECTS	Semester
UoM1105	Democracy and Human Rights	3.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	49	26
Description			
This section includes a description of the module, 100-150 words			

**Module 6**

Code	Course/Module Title	ECTS	Semester
UoM1106	Arabic Language	3.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	49	26
Description			
This section includes a description of the module, 100-150 words			

**Model 7**

Code	Course/Module Title	ECTS	Semester
CHE1217	Volumetric Analytical Chemistry	7.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	5	109	66
Description			
This section includes a description of the module, 100-150 words			

**Model 8**

Code	Course/Module Title	ECTS	Semester
CHE1218	Ionic Compounds and Periodic table	6.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	2	79	71
Description			
This section includes a description of the module, 100-150 words			

**Module 9**

Code	Course/Module Title	ECTS	Semester
CoS1209	Mathematics	5.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	61
Description			
This section includes a description of the module, 100-150 words			

**Module 10**

Code	Course/Module Title	ECTS	Semester
CoS12010	Geology	5.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	61
Description			
This section includes a description of the module, 100-150 words			

**Module 11**

Code	Course/Module Title	ECTS	Semester
CoS12011	Cytology	4.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	36
Description			
This section includes a description of the module, 100-150 words			

**Module 12**

Code	Course/Module Title	ECTS	Semester
UoM12012	English Language	3.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	49	26
Description			
This section includes a description of the module, 100-150 words			

**Module 13**

Code	Course/Module Title	ECTS	Semester
CHE23113	Gravimetric Analysis Chemistry	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 14**

Code	Course/Module Title	ECTS	Semester
CHE23114	Chemistry of Representative Elements	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

**Module 15**

Code	Course/Module Title	ECTS	Semester
CHE23015	Thermodynamics	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	3	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 16**

Code	Course/Module Title	ECTS	Semester
CHE23016	Organic Chemistry 1	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	3	94	56
Description			

This section includes a description of the module, 100-150 words

#### Module 17

Code	Course/Module Title	ECTS	Semester
CoS23017	Computer	3.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
0	3	49	26

#### Description

This section includes a description of the module, 100-150 words

#### Module 18

Code	Course/Module Title	ECTS	Semester
CoS23118	Mathematics and Statistics	3.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	0	34	41

#### Description

This section includes a description of the module, 100-150 words

#### Module 19

Code	Course/Module Title	ECTS	Semester
CHE24119	Classical Separation Methods	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	55

#### Description

This section includes a description of the module, 100-150 words

#### Module 20

Code	Course/Module Title	ECTS	Semester
CHE24120	Solid State Chemistry	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56

#### Description

This section includes a description of the module, 100-150 words

#### Module 21

Code	Course/Module Title	ECTS	Semester
CHE24121	Phase equilibrium	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	3	94	56

#### Description

This section includes a description of the module, 100-150 words

#### Module 22

Code	Course/Module Title	ECTS	Semester
CHE24122	Organic Chemistry 2	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	3	94	56

#### Description

This section includes a description of the module, 100-150 words

#### Module 23

Code	Course/Module Title	ECTS	Semester
CHE24023	Nanochemistry	3	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	49	26

#### Description

This section includes a description of the module, 100-150 words



**Module 24**

Code	Course/Module Title	ECTS	Semester
CHE24024	Chemistry Software	3.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
0	3	49	26
Description			
This section includes a description of the module, 100-150 words			

**Module 25**

Code	Course/Module Title	ECTS	Semester
CHE35125	Coordination Chemistry 1	6.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 26**

Code	Course/Module Title	ECTS	Semester
CHE35126	Chemical Kinetics	6.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	3	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 27**

Code	Course/Module Title	ECTS	Semester
CHE35127	Organic Chemistry 3	6.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56

Description
This section includes a description of the module, 100-150 words

### Module 28

Code	Course/Module Title	ECTS	Semester
CHE35128	Principles of Biochemistry	6.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

### Module 29

Code	Course/Module Title	ECTS	Semester
CHE35029	Industrial Chemistry and Pollution	4.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	0	49	51
Description			
This section includes a description of the module, 100-150 words			

### Module 30

Code	Course/Module Title	ECTS	Semester
CHE35030	Elective 1	2.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	0	19	31
Description			
This section includes a description of the module, 100-150 words			

**Module 31**

Code	Course/Module Title	ECTS	Semester
CHE36131	Coordination Chemistry 2	6.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 32**

Code	Course/Module Title	ECTS	Semester
CHE36132	Electrochemistry and Surface chemistry	6.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	4	109	41
Description			
This section includes a description of the module, 100-150 words			

**Module 33**

Code	Course/Module Title	ECTS	Semester
CHE36133	Organic Chemistry 4	6.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 34**

Code	Course/Module Title	ECTS	Semester
CHE36134	Biomolecules	6.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 35**

Code	Course/Module Title	ECTS	Semester
CHE36135	Application of Industrial Chemistry	4.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	49	51
Description			
This section includes a description of the module, 100-150 words			

**Module 36**

Code	Course/Module Title	ECTS	Semester
CHE36036	Scientific Research Methodology	2.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	0	19	31
Description			
This section includes a description of the module, 100-150 words			

**Module 37**

Code	Course/Module Title	ECTS	Semester
CHE47137	Instrumental Analysis	6.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 38**

Code	Course/Module Title	ECTS	Semester
CHE47138	Identification of Organic Compounds	6.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			

This section includes a description of the module, 100-150 words

#### Module 39

Code	Course/Module Title	ECTS	Semester
CHE47139	Metabolism of Carbohydrates	6.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

#### Module 40

Code	Course/Module Title	ECTS	Semester
CHE47140	Petroleum Chemistry and Petrochemicals	6.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	4	109	41
Description			
This section includes a description of the module, 100-150 words			

#### Module 41

Code	Course/Module Title	ECTS	Semester
CHE47041	Quantum Chemistry	4.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	1	64	36
Description			
This section includes a description of the module, 100-150 words			

#### Module 42

Code	Course/Module Title	ECTS	Semester
CHE47042	Elective 2	2.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
1	0	19	31

Description
This section includes a description of the module, 100-150 words

#### Module 43

Code	Course/Module Title	ECTS	Semester
CHE48143	Chromatographic Methods	6.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

#### Module 44

Code	Course/Module Title	ECTS	Semester
CHE48144	Application of Organic Spectrum	6.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

#### Module 45

Code	Course/Module Title	ECTS	Semester
CHE48145	Metabolism of Lipids and proteins	6.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	56
Description			
This section includes a description of the module, 100-150 words			

**Module 46**

Code	Course/Module Title	ECTS	Semester
CHE48146	Polymers: Fundamentals and applications	6.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	5	109	41
Description			
This section includes a description of the module, 100-150 words			

**Module 47**

Code	Course/Module Title	ECTS	Semester
CHE48147	Spectroscopy	4.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	1	64	36
Description			
This section includes a description of the module, 100-150 words			

**Module 48**

Code	Course/Module Title	ECTS	Semester
CHE48148	Research Project	2.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
0	2	33	17
Description			
This section includes a description of the module, 100-150 words			

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