

Courses contributing to the Chemistry/ Zoology program

Level One (Biology)

Level 1 Code	Semester1 Preq.	Course Title Obligatory:	Hours		
			Lec.	Prac.	Cred.
BO1101	-----	General Botany 1	2	3	3
ZO1101	-----	General Zoology 1	2	3	3
CH1101	-----	General Chemistry 1	2	3	3
MA1121	-----	Mathematics 1	1	2(tu)	2
PH1123		General Physics 1	1	2	2
UN1101		Scientific English	2	-	2
Options: Select Two courses (6 credit hours) from the following					
GE1121	-----	General Geology 1	1	2	2
EN1101	-----	Introduction to Entomology 1	1	3	2
PH1103	-----	Biophysics 1	1	3	2
Options: Select one Credit hour from the following modules					
UN1107	-----	الثقافة البيئية	1	-	1
UN1109		ثقافة الجودة	1		1
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Level 1 Code	Semester2 Preq.	Course Title Obligatory:	Hours		
			Lec.	Prac.	Cred.
BO1202	BO1101	General Botany 2	2	3	3
ZO1202	ZO1101	General Zoology 2	2	3	3
CH1202	CH1101	General Chemistry 2	2	3	3
MA1222	MA1121	Mathematics 2	1	2(tu)	2
PH1224	PH1123	General Physics 2	1	2	2
UN1202	-----	اللغة العربية	2	-	2
Options: Select Two courses (6Credit hours)from the following modules:					
GE1222	CH1101	General Geology 2	1	2	2
EN1204	-----	Introduction to Entomology 2	1	3	2
PH1204	-----	Biophysics 2	1	3	2
Options: Select one (1) Credit from the following modules:					
UN1208	-----	التعليم الذاتي	1	-	1
UN 1204	-----	التفكير النقدي	1	-	1
UN 1206	-----	الثقافة الاسلامية	1	-	1
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Level Two (Chemistry/Zoology)

Level 2 Code	Semester 1 Preq.	Course Title Obligatory:	Hours		
			Lect.	Pract.	Cred.
CH2141	CH1202	Chemical Thermodynamics	2	-	2
CH2107	CH1101	Chemistry of main elements	2	-	2
CH2105	CH1202	Principle of analytical chemistry	1	3	2
CH2143	CH1202	Principle of organic chemistry 1	1	3	2
CH2111	CH1202	Principle of organic chemistry 2	2	-	2
ZO2101	ZO1101	Cell Biology and Genetics	2	3	3
BO2105	BO1202	General Genetics	2	3	3
ST2105	-----	Introduction to statistics	1	-	1
TS2109	-----	Transferable skills	-	2	1
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Level 2	Semester 2	Course Title	Hours		
Code	Preq.	Obligatory	Lect.	Pract.	Cred.
CH2240	CH2141	Chemical Kinetics	1	3	2
CH2242	CH1101	Kinetic theory of gases	1	-	1
CH2244	CH2105	Instrumental Analysis 1	1	3	2
CH2214	CH2143	Organic chemistry 3	2	3	3
CH2246	CH2143	Stereochemistry	1	-	1
ZO 2240	ZO 1202	Chordates	2	3	3
ZO 2242	ZO 1202	Invertebrate Biology	2	3	3
ZO 2244	ZO 1202	Entomology	2	3	3
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Level Three (Chemistry/Zoology)

Level 3	Semester 1	Course Title	Hours		
Code	Preq.	Obligatory	Lect.	Pract.	Cred.
CH3141	CH1202	Quantum chemistry	1	-	1
CH3143	CH2240	Surface chemistry and catalysis	1	-	1
CH3145	CH1202	Electrochemistry 1	1	-	1
CH3147	CH2107	Chemistry of transition elements	1	-	1
CH3149	CH2244	Instrumental analysis 2	1	3	2
CH3151	CH2143	Physical organic chemistry	1	-	1
CH3153	CH2143	Heterocyclic Chemistry	1	3	2
ZO 3141	ZO 2240	Embryology and Experimental Embryology	2	3	3
ZO 3143	ZO 2242	Invertebrates of Egypt	2	3	3
ZO 3145	ZO 2101	Functional Histology	1	3	2
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Level 3	Semester 2	Course Title	Hours		
Code	Preq.	Obligatory	Lect.	Pract.	Cred.
CH3240	CH3141	Molecular spectroscopy	1	-	1
CH3242	CH3145	Electrochemistry 2	1	3	2
CH3244	CH2240	Photochemistry	1	-	1
CH3246	CH3147	Coordination chemistry	1	-	1
CH3248	CH3149	Organic spectroscopy	2	-	2
CH3250	CH2246	Natural products	1	3	2
ZO3202	ZO 1202	Parasitology	2	2	3
ZO3242	ZO 1101	Physiology (1)	2	2	3
ZO3244	ZO 1101	Animal Ecology and Behavior	2	2	3
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Level Four (Chemistry/Zoology)

Level 4	Semester 1	Course Title	Hours		
Code	Preq	Obligatory:	Lect.	Pract.	Cred.
CH4141	CH2143	Practical organic chemistry	-	6	2
CH4143	CH1101	Solid state chemistry	1	-	1
CH4159	CH3246	Bioinorganic chemistry	1	-	1
ZO4141	ZO3145	Histochemistry	1	3	2
ZO4143	ZO3242	Physiology (2)	1	3	2
ST4107	-----	Biostatistics	1	-	1
CH4167	-----	Essay&research (Chemistry)	1	-	1
Options: Select 3 Credits CH and 4 Credits ZO from the following modules					
CH4111	CH2141	Statistical thermodynamics	1	-	1
CH4149	CH3149	Analytical biochemistry	1	-	1
CH4113	CH3244	Laser chemistry	1	-	1
CH4119	CH2143	Chemistry of pesticides	1	-	1
CH4155	CH3147	Industrial chemistry	1	-	1
CH4121	CH3250	Textile chemistry	1	-	1
CH4145	CH2143	Petroleum chemistry and petrochemicals	1	-	1
CH4161	CH3149	Forensic and criminal chemistry	1	-	1
ZO4147	ZO3240	Epidemiology & Clinical Parasitology	1	3	2
ZO4149	ZO3143	Field trips	1	2	2
ZO4151	ZO3143	Biodiversity and conservation	1	-	1
ZO4153	ZO3145	Animal techniques	1	3	2
ZO4155	ZO3244	Ecological Pollution	1	-	1
ZO4157	ZO3244	Fauna of Egypt	1	3	2
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Level 4	Semester 2	Course Title	Hours		
Code	Preq.	Obligatory:	Lect.	Pract.	Cred.
CH4240	CH2240, CH3149	Practical physical chemistry	-	6	2
CH4208	CH2111	Dyes chemistry	1	-	1
CH4244	CH2143	Polymer chemistry	1	-	1
ZO 4240	ZO 3101	Comparative Anatomy of Vertebrates	1	3	2
ZO 4242	ZO 4143	Physiology(3)	1	3	2
ZO 4244	-----	Essay&research	1	-	1
Options: Select (9) Credit hours from the following modules					
CH4246	CH4143	Selected applications of polymers	1	-	1
CH4224	-----	Environmental chemistry	1	-	1
CH4250	CH3149	Advanced analytical chemistry	1	-	1
CH4252	CH214	Physical chemistry of polymers	1	-	1
CH4218	CH3246, CH4143	Supramolecular chemistry	1	-	1
ZO 4246	ZO 4143	Biological Assays	1	-	1
ZO 4248	ZO 4143	Toxicology	2	-	2
ZO 4250	ZO 4143	Animal biotechnology	1	-	1
ZO 4252	ZO 3145	Histopathology	2	-	2
ZO 4254	ZO 3143	Aquatic biology	1	-	1
ZO 4256	ZO 3240	Immunology	1	-	1
ZO 4258	ZO 3240	Biology Association	1	-	1
ZO 4260	ZO 3240	Fish Biology and fisheries	1	-	1

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