

University of Baghdad

جامعة بغداد



First Cycle – Bachelor's degree (B.Sc.) – Biology

بكالوريوس علوم - علم الأحياء



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1. **Mission & Vision Statement**

Vision Statement

The Department of Biology vision is to be a leading center of excellence in biological sciences, dedicated to advancing knowledge and understanding of the natural world. We strive to inspire curiosity and critical thinking, and to foster a deep appreciation for the complexity and diversity of life. Our department is committed to innovative research, education, and outreach, and to preparing the next generation of scientists, educators, and leaders in the field. We seek to promote interdisciplinary collaboration and to make meaningful contributions to society through our work in areas such as Botany, Zoology, Ecology, and Microbiology.

Mission Statement

The Department of Biology mission is to provide a rigorous and comprehensive education in biological sciences, grounded in scientific inquiry and critical thinking. The academic staff are committed to advancing knowledge and solving real-world problems through innovative research that spans from molecules to ecosystems. The department seeks to inspire and engage students at all levels, and to prepare them for a wide range of careers in academia, industry, government, and beyond. Our department values diversity, inclusivity, and equity, and we are dedicated to creating an environment that fosters intellectual curiosity, creativity, and collaboration. The Department of biology aims to be a

resource for our community, and to promote scientific literacy and informed decision-making on issues related to biology.

2. Program Specification

Programme code:	BSc-BIO	ECTS	240
Duration:	4 levels, 8 Semesters	Method of Attendance:	Full Time

Biology is a very broad topic, and the College of Science at the University of Baghdad, as the hub of Iraq's most diversified biology teaching organization, is well positioned to fulfill its mission. The focus of the Biology program is on the entire organism, and how everything is connected, whether it's macromolecules that make organism's bodies or communities distributed in a particular environment.

All students will have a broad knowledge in basic sciences such as General Biology, Chemistry, Biophysics, Mathematics, and Computer skills at the end of the first level. At Levels 2, 3 and 4 students will span over a variety of specialized modules enable them to gain a comprehensive; yet, detailed knowledge located in four different disciplines; Microbiology, Botany, Ecology, and Zoology. This empowers our students with breadth of interests and skill offering an opportunity to enter labour market. Moreover, at Level 4 all students conduct a research project, which might be field- or laboratory-based project.

3. Program Goals

- a. Develop a deep understanding of fundamental biological concepts and principles, including the structure and function of cells, genetics and inheritance, evolution and biodiversity, ecology and environmental interactions, and physiology and behavior.
- b. Develop critical thinking and problem-solving skills, including the ability to analyze scientific data, design and conduct experiments, evaluate scientific arguments, and apply knowledge to solve real-world problems.
- c. Develop laboratory and research skills, including the ability to use scientific instruments and techniques, collect and analyze data, and communicate scientific findings.
- d. Develop effective communication skills, including the ability to write clear, concise, and accurate scientific reports, present scientific findings to diverse audiences, and collaborate effectively with others.

- e. Develop an understanding of the interdisciplinary nature of biology and its connections to other fields, such as chemistry, physics, mathematics, and computer science.

4. Student Learning Outcomes

- a. Identify and classify living organisms and their internal structures.
- b. Recognise the evolutionary and genetic relationships of living organisms.
- c. Knowledge of the physiology of living organisms and the most important metabolic pathways through which they gain or consume energy.
- d. Comprehend the relationships that govern living organisms in their living environments.
- e. Develop thinking skills and scientific research in the various fields of life sciences: microbiology, zoology, botany, and ecology.

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6. Credits, Grading and GPA

Credits

University of Baghdad is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Calculation of the Cumulative Grade Point Average (CGPA)

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

$$\text{CGPA} = [(1\text{st module score} \times \text{ECTS}) + (2\text{nd module score} \times \text{ECTS}) + \dots] / 240$$

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO1101	General Biology	64	136	8	C	
COS1102	General Chemistry	64	136	8	B	
COS1103	General Mathematics and Biostatistics	48	127	7	B	
COS1104	Computer Skills I	63	12	3	B	
UOB1105	Democracy and Human rights	33	17	2	S	
UOB1106	Arabic Language	33	17	2	S	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO1217	Cytology	64	136	8	C	BIO1101
COS1208	Biochemistry	64	86	6	B	
UOB1209	Biosafety and Biosecurity	18	57	5	C	
BIO12010	Bacteriology	64	86	4	B	
COS12011	Biophysics	64	61	5	B	
UOB12012	English language	33	17	2	S	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO23013	Invertebrates	64	61	5	C	

BIO23014	Entomology	64	61	5	C	
BIO23115	Genetics	64	61	5	C	BIO1217
BIO23016	Ecology	64	61	5	C	
BIO23117	Plant Anatomy	64	61	5	C	BIO1101
BIO23018	Mycology	64	61	5	C	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO24119	Protozoan Parasitology	64	111	7	C	BIO23013
BIO24020	Biosystematics	64	86	6	C	
COS24021	Computer Skills II	63	12	3	C	
BIO24122	Pollution	64	86	6	C	BIO23016
BIO24123	Plant Groups	64	86	6	C	BIO1101
UOB24024	English language	33	17	2	S	

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO35125	Plant Physiology	64	61	5	C	BIO23117
BIO35126	Microbial Physiology	64	61	5	C	BIO24021
BIO35027	Histology	64	86	6	C	
BIO35128	Pathogenic Bacteria	64	86	6	C	BIO24021
BIO35029	Immunology	64	86	6	C	
UOB35030	English language	32	18	2	S	

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
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BIO36131	Medicinal Plants	64	86	6	C	BIO35125
BIO36132	Aquatic and Soil Microbiology	64	61	5	C	BIO24021, BIO23018
BIO36133	Animal Physiology	64	86	6	C	BIO35027
BIO36134	Antibiotics	64	61	5	C	BIO35128
BIO36135	Development and Biodiversity	64	61	5	C	BIO23016
BIO36036	Scientific Research Methodology	4	73	3	C	

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO47037	Molecular Biology and Bacterial Genetics	64	86	6	C	
BIO47138	Food Microbiology	64	61	5	C	BIO24021, BIO23018
BIO47139	Embryology	64	61	5	C	BIO35027, BIO36133
BIO47140	Clinical Analyses	64	61	5	C	COS1208, BIO36133, BIO35128, BIO35029
BIO47041	Medical Helminthology	64	61	5	C	
BIO47042	Research Project	0	100	4	C	

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO48143	Genetic Engineering	64	86	6	C	BIO47037
BIO48144	Virology	64	86	6	C	BIO47037
BIO48045	Comparative Anatomy	64	86	6	C	
BIO48046	Biotechnology	64	86	6	C	
UOB48047	English Language	32	18	2	S	
BIO48048	Research Project	0	100	4	C	

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