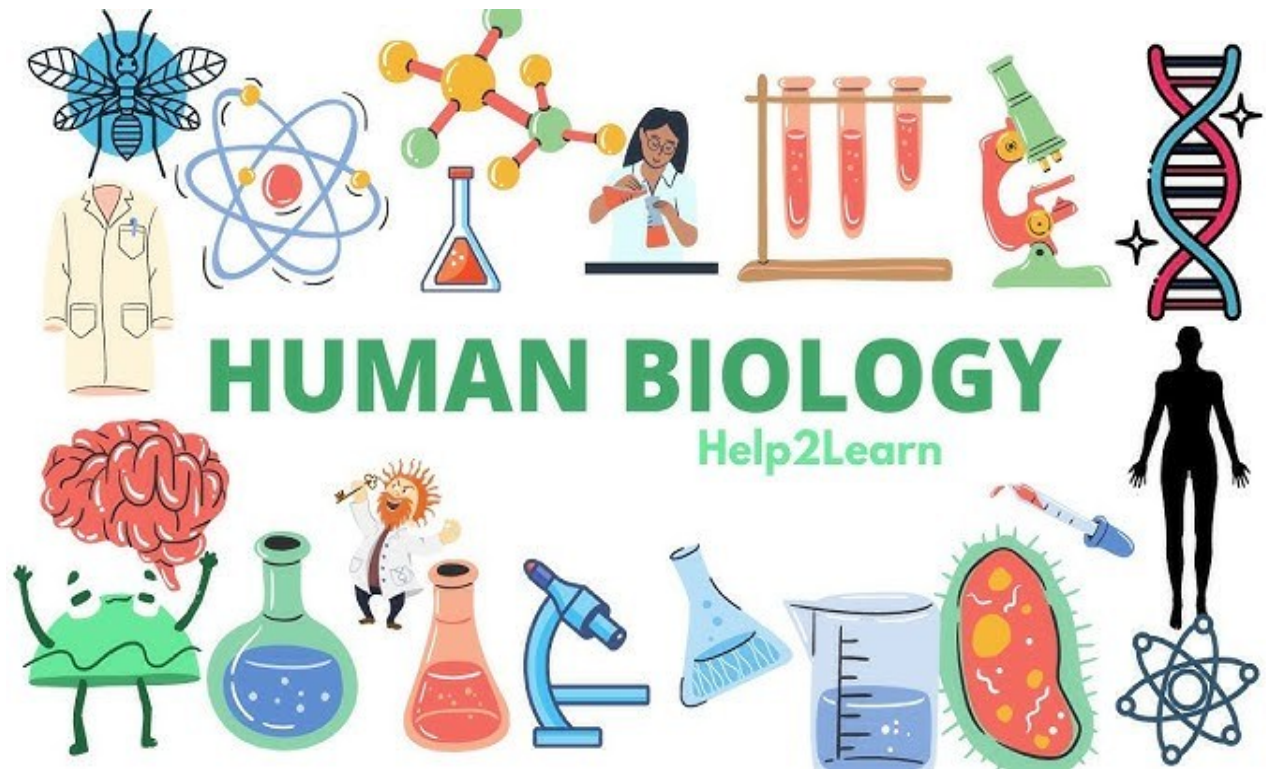


**Al-Iraqia Science University -College of Science**

**Department of Biology**

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

بكالوريوس علوم - علوم الحياة



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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.

#### **5. Academic Staff**

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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
BIO11001	General Zoology	63	137	8.00	C	
BIO11002	General Chemistry	63	87	6.00	S	
BIO11003	General Mathematics and Biostatistics	48	77	5.00	S	
UOB103	Computer Skills I	48	27	3.00	B	
UOB104	Democracy and Human rights	33	17	2.00	S	
UOB101	Arabic Language I	33	17	2.00	B	

### Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO12007	General Botany	63	137	8.00	C	
BIO12108	Biochemistry	63	87	6.00	S	
BIO12009	Biosafety and Biosecurity	18	57	3.00	C	
BIO12010	Bacteriology	63	87	6.00	C	
BIO12011	General Physics	63	62	5.00	S	
UOB102	English language I	33	17	2.00	B	

### Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO23013	Invertebrates	63	62	5	C	
BIO23014	Entomology	63	62	5	C	
BIO23115	Cytology	63	62	5	C	
BIO23016	Ecology	63	62	5	C	
BIO23117	Plant Anatomy	63	37	4	C	
BIO23018	Mycology	63	37	4	C	
UOB208	The Crimes of the Baath Regime in Iraq	33	17	2.00	S	

### Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO24120	Protozoan Parasitology	63	87	6.00	C	
BIO24021	Plant Taxonomy	63	62	5.00	C	
UOB207	Computer Skills II	48	27	3.00	B	
BIO24023	Pollution	63	87	6.00	C	
BIO24024	Phycology and Archegoniate	63	87	6.00	C	
UOB206	English language II	33	17	2.00	B	
UOB205	Arabic Language II	33	17	2	B	

**Semester 5 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO35127	Plant Physiology	63	62	5.00	C	
BIO35128	Microbial Physiology	63	62	5.00	E	
BIO35029	Animal Histology	63	62	5.00	C	
BIO35130	Pathogenic Bacteria	63	62	5.00	C	
BIO35031	Medical Helminthology	63	62	5.00	E	
BIO35132	Genetics	63	62	5.00	C	

**Semester 6 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO36133	Medicinal Plants	63	87	6.00	E	BIO35127
BIO36134	Aquatic and Soil Microbiology	63	87	6.00	E	BIO12010, BIO23016
BIO36135	Animal Physiology	63	87	6.00	C	BIO35029
BIO36136	Antibiotics	63	87	6.00	E	BIO35128
BIO36137	Development and Biodiversity	63	62	5.00	C	BIO23016
UOB309	Scientific Research Methodology	18	7	1.00	B	

**Semester 7 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO47039	Molecular Biology	63	112	7.00	C	
BIO47140	Food Microbiology	63	87	6.00	E	
BIO47141	Embryology	63	87	6.00	E	
BIO47142	Clinical Analyses	63	112	7.00	C	
BIO47044	Research Project	33	67	4.00	C	

**Semester 8 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
BIO48145	Genetic Engineering	63	87	6.00	E	
BIO48146	Virology	63	62	5.00	C	
BIO48147	Comparative Anatomy	63	62	5.00	E	
BIO48148	Biotechnology	63	62	5.00	C	
BIO48149	Immunology	63	62	5.00	C	
BIO48150	Research Project	33	67	4.00	C	BIO36038

## 8. Contact

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