

# University of Anbar

## جامعة الانبار



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

بكالوريوس علوم - علوم حياة - الدورة الأولى



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### 1. **Mission & Vision Statement**

#### *Vision Statement*

The academic staff of biology department – Collage of Science at University of Anbar believe that students registered at this department in order to understand the multidiscipline of biology through a variety of patterns of course work, laboratory experiences, research, and teamwork. This combination of instructional methods leads students to equalized understanding of the scientific techniques used by biologists to construct interpretations, develop visions and create theories about the living organisms that populate our planet. Small class sizes within the biology program foster a close working relationship between academic staff and students in an informal and nurturing atmosphere.

#### *Mission Statement*

The academic staff of biology department – Collage of Science pursues a multifaceted charge at University of Anbar. The Program seeks to provide all biology students with ultimate knowledge of biology, as well as a deeper understanding in certain focus field within the biological sciences. The curriculum and advising have been proposed to prepare graduates for their professional future, whether they choose to work as a biologist specializing in a wide variety of special field such as microbiology, botany or wildlife, or to pursue advanced degrees in life sciences or health sciences. The program in this department, also delivers the principal fundamental knowledge of the life sciences to support the Nursing degree, the biomedical Studies degree, and the Associate of Science degree in Forest Technology. In addition, biology courses provide a key laboratory science experience for those students pursuing to accomplish the general education requirements.

## 2. Program Specification

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

Biology is astonishingly wide-ranging subject and is well fortified to deliver. The emphasis of this programme is the whole organism to which everything is correlated, be it the molecules that form proteins or communities of organisms in our ecosystem. It is a common degree - –or some it's' the breadth of the subject that appeals, for others it's a path to specialization. All students have the opportunity to transfer onto our specialist degrees in Genetics, Zoology, and Microbiology at the end of the first year.

In Level 1 students are exposed to core topics such as General Microbiology, Safety and Biosecurity as well as other topics, appropriate for progression to all programmes within the biology programme group. The majority of programme-specific core topics are covered at Level 2 preparing for research-led topic specialist modules at Levels 3 and 4. The University Biology graduate is therefore instructed to gain how research informs teaching, according to the University and School Mission statements.

At Levels 4 students have the opportunity to choose one or two topics from their module credits with the proviso a range of modules are selected that reflect the complexity of life forms from molecules, through organisms, both plants and animals, to populations to ensure the breadth of knowledge expected of a graduate with a biology degree. This allows students to develop their own wide-ranging interests in organismal biology. Decisions on what to study are made with input from personal tutors.

The research ethos is developed and fostered from the start via practicals, which are either embedded in lecture modules or taught in enthusiastic practical modules, research seminars and tutorials. There is a compulsory field course in Level 1, which students have to pass in order to progress into Level 2, and optional field courses in Levels 4. At Level 4 all students carry out an independent research project, which has a 4-credit library or data analysis project, or laboratory-based project or a combination of all of the above mentioned.

Academic tutorials are held at Levels 1 and 2 with the same tutor, who is also the individual tutor, providing continuity and progressive guidance. Level 1 and 2 tutorials include a number of workshops to demonstrate skills such as library usage and presentation skills, followed by evaluated exercises (essays and talks) as opportunities to exercise these skills in a subject-specific context.

International years and Industrial placements are also offered and individual needs are discussed with the appropriate tutor and accommodated wherever possible.

### **3. Program Objectives**

1. To provide a comprehensive education in biology that stresses scientific reasoning and problem solving across the spectrum of disciplines within biology
2. To prepare students for a wide variety of post-baccalaureate paths, including graduate school, professional training programs, or entry level jobs in any area of biology
3. To provide extensive hands-on training in electronic technology, statistical analysis, laboratory skills, and field techniques
4. To provide thorough training in written and oral communication of scientific information
5. To enrich students with opportunities for alternative education in the area of biology through undergraduate research, internships, and study-abroad

### **4. Student Learning Outcomes**

Biology is the study of the organization and operation of life at the molecular, cellular, organism, and population levels. Graduates obtain information on the historical, technical and social aspects of biology and utilize basic knowledge toward realizing broader concepts. The Department offers a Bachelor of Science in Biology with a concentration in General Biology; Pre-medicine / Pre-dentistry; Biotechnology / Molecular Biology and a minor in Secondary Education that leads to a Public Instruction License. Additionally, the Department offers courses to a large number of students from other departments and supports pre-professional programs. The biology curriculum and experiences are designed to prepare students, in part, for entry into professional health programs, graduate studies, technical careers and education.

#### **Outcome 1**

##### *Identification of Complex Relationships*

Graduates will be able to illustrate the structure and function of cellular components and explain how they interact in a living cell.

#### **Outcome 2**

##### *Oral and Written Communication*

Graduates will be able to formally communicate the results of biological investigations using both oral and written communication skills.

### **Outcome 3**

#### *Laboratory and Field Studies*

Graduates will be able to perform laboratory experiments and field studies, by using scientific equipment and computer technology while observing appropriate safety protocols.

### **Outcome 4**

#### *Scientific Knowledge*

Graduates will be able to demonstrate a balanced concept of how scientific knowledge develops, including the historical development of foundational theories and laws and the nature of science.

### **Outcome 5**

#### *Data Analyses*

Graduates will be able to demonstrate scientific quantitative skills, such as the ability to conduct simple data analyses.

### **Outcome 6**

#### *Critical Thinking*

Graduates will be able to use critical-thinking and problem-solving skills to develop a research project and/or paper.

## **5. Academic Staff**

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## 6. Credits, Grading and GPA

### *Credits*

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

## 7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Semester	No.1	Module Code	Module Name in English	اسم المادة الدراسية	SSWL	USSWL	SWL	ECTS	Module Type	Prerequisite Module(s) Code
					hr/sem	hr/sem	hr/sem			
One	1	BIO-111	General Zoology	علم الحيوان العام	63	137	200	8.00	C	
	2	COS-111	General Mathematics	الرياضيات العامة	48	77	125	5.00	C	
	3	COS-112	Analytical Chemistry	كيمياء تحليلية	63	112	175	7.00	C	
	4	COS-113	Biophysics	فيزياء حيوية	63	87	150	6.00	C	
	5	UOA-111	Human Rights and Freedoms	حقوق انسان و الحريات	33	17	50	2.00	B	
	6	UOA-112	Arabic Language 1	اللغة العربية ١	33	17	50	2.00	B	
					303	447	750	30.00		

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Semester	No.2	Module Code	Module Name in English	اسم المادة الدراسية	SSWL	USSWL	SWL	ECTS	Module Type	Prerequisite Module(s) Code
					hr/sem	hr/sem	hr/sem			
Two	1	BIO-121	General Botany	علم النبات العام	63	137	200	8.00	C	
	2	BIO-122	Safety and biosecurity	السلامة والامن البيولوجي	33	67	100	4.00	C	
	3	COS-121	Biostatistics	احصاء حيائي	48	77	125	5.00	C	
	4	COS-122	Organic Chemistry	كيمياء عضوية	63	137	200	8.00	C	
	5	UOA-121	Computer Science 1	علم الحاسوب ١	48	27	75	3.00	B	
	6	UOA-003	English Language 1	اللغة الإنكليزية ١	33	17	50	2.00	B	
					288	462	750	30.00		



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

Semester	No.	Module Code	Module Name in English	اسم المادة الدراسية	SSWL	USSWL	SWL	ECTS	Module Type	Prerequisite Module(s) Code
					hr/sem	hr/sem	hr/sem			
Three	1	BIO-211	I Entomology	علم الحشرات I	63	37	100	4.00	C	
	2	BIO-212	Plant Anatomy	علم تشريح النبات	63	62	125	5.00	C	
	3	BIO-213	Invertebrates	علم اللاقريات	63	62	125	5.00	C	
	4	BIO-214	Microbiology I	علم الاحياء المجهرية I	63	62	125	5.00	C	
	5	BIO-215	Biochemistry I	كيمياء حيائية I	63	37	100	4.00	C	
	6	BIO-216	Plant Groups	مجاميع نباتية	63	62	125	5.00	C	
	7	UOA004	English Language 2	اللغة الإنكليزية ٢	33	17	50	2.00	S	
					411	339	750	30.00		

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

Semester	No.	Module Code	Module Name in English	اسم المادة الدراسية	SSWL	USSWL	SWL	ECTS	Module Type	Prerequisite Module(s) Code
					hr/sem	hr/sem	hr/sem			
Four	1	BIO-221	II Entomology	علم الحشرات II	63	37	100	4.00	C	
	2	BIO-222	Plant Taxonomy	علم تصنيف النبات	63	62	125	5.00	C	
	3	BIO-223	Parasitology	علم الطفيليات	63	62	125	5.00	C	
	4	BIO-224	Microbiology II	علم الاحياء المجهرية II	63	62	125	5.00	C	
	5	BIO-225	Biochemistry II	كيمياء حيائية II	63	37	100	4.00	C	
	6	UOA006	Baath Party Crimes	جرائم حزب البعث البائد	33	17	50	2.00	S	
	7	UOA008	Computer Science 2	علم الحاسوب ٢	48	27	75	3.00	S	
	8	UOA002	Arabic Language 2	اللغة العربية ٢	33	17	50	2.00	S	
					429	321	750	30.00		

## 8. Contact

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