



**Ministry of Higher education and Scientific Research**  
**UNIVERSITY OF ANBAR**  
**COLLEGE OF EDUCATION FOR PURE SCIENCE**  
**Department of Biology**



**Department of Biology**  
**CATALOGUE**  
**2020/2021**

Prepared by: .....

## **Vision**

A scientific and educational department that seeks to lead in university education and scientific research locally and globally in a way that contributes to the service of society and achieve sustainable development.

## **Mission**

Excellence in the preparation of educators and researchers knowledgeable and practitioners and professional ethically committed by creating a stimulating environment and associtae to the institutions of society

## **Programme Educational Objectives (CEOs)**

## Course Description

Courses are coded as follows:

1. Course code and number
2. Course title
3. Parenthesized numerals, e.g., (4-3-1-3), indicate, in order, the credit hours, the classroom hours (1 hour = 1 credit hour), tutorial hours (credit hour = 0), and the laboratory hours (3 hour = 1 credit hour).

Prerequisites, if any, are indicated at the course description. These have been established to assure an adequate and uniform background for students in advanced classes. Occasionally, students may feel they already have the appropriate background for an advanced course because of previous training, transfer credits, or Credit by examination.

### Course Numbering System:

Course code = ..... (for example **BIO000** represents one of the course of department requirements in the Biology)

The CODE consists of specifically three to four english letters which represent the course code and three digits refers to the level as following:-

100-199: First level

200- 299: Second level

300-399: Third level

400-499: Fourth level

If the course is one of the college requirements then the first three or four letters on the course code represent the college code (for example **EPS000** is college requirement in the College of Education for Pure Sciences).

If the course is one of the university requirements then the first three or four letters on the course code represent the college university code (for example **UOA000** is university requirement in any college).

**Total credit hours of courses according to the adopted levels**

Courses		Levels				Total
		First	Second	Third	Fourth	
University	Compulsory	-	-	-	-	-
	Elective	8	4	2	2	16
Total		8	4	2	2	16
College	Compulsory	4	6	4	8	22
	Elective	-	-	-	-	-
Total		4	6	4	8	22
Department	Compulsory	23	18	25	28	94
	Elective	-	8	6	2	16
Total		23	26	31	30	110
Total		35	36	37	38	148

**Graduation Requirements**

Requirements	Credit
University Requirements	16
College Requirements	22
Department Requirements	94
Elective Courses	16
Total	148

**University Requirements: 13 credit hours**

Course code	Course Title	Credit hours	Weekly hours	Prerequisite
UOA140	English Language-I	2	2	
UOA240	English Language-II	2	2	
UOA340	English Language-III	2	2	
UOA440	English Language-IV	2	2	
UOA135	Human Rights Democracy	2	2	
UOA137	Arabic Language	2	2	
UOA141	Computer science	2	2	
<b>Total</b>		<b>14</b>	<b>14</b>	

## College Requirements: ..... credit hours

Course Code	Course Title	Credit hours	Weekly hours			Prerequisite
			Lec.	Tut.	Lab	
EPS101	Educational Psychology	2	2			
EPS102	Fundamentals of Education	2	2			
EPS202	General Psychology	2	2			
EPS201	Educational Administration	2	2			
EPS211	Methods of Scientific Research	2	2			
EPS311	Curricula and Methodology	2	2			
EPS312	Educational Counselling and Psychological Health	2	2			
EPS411	Measurement and Evaluation	2	2			
EPS413	Teaching Practicum	2	2			
EPS414	Classroom Observation	2	2			
		22	22			

## Department Requirements: ..... credit hours

Course Code	Course Title	Credit hours	Weekly hours			Prerequisite
			Lec.	Tut.	Lab	
BIO121	Principles of zoology	3	2		2	
BIO122	Cytology 1	2	1		2	
BIO128	Principles of botany	3	2		2	
BIO129	Cytology 2	2	1		2	
BIO235	Invertebrates 1	3	2		2	
BIO236	Histology	3	2		2	
BIO237	Comparative plant anatomy	3	2		2	
BIO238	Algae	3	2		2	
BIO241	Invertebrates 2	3	2		2	
BIO242	Embryology	3	2		2	
BIO244	Archegoniates	3	2		2	
BIO347	Entomology	3	2		2	
BIO348	Comparative anatomy of Chordates	3	2		2	
BIO349	Genetics 1	3	2		2	
BIO350	Microbiology	3	2		2	
BIO351	Plant morphology	3	2		2	
BIO352	Microscopic preparation	2	1		2	
BIO354	Applied Entomology	3	2		2	
BIO355	Fungi	3	2		2	
BIO356	Taxonomy	3	2		2	
BIO357	Biotechnology	3	2		2	

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<b>BIO358</b>	<b>Animal physiology</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO359</b>	<b>Genetics 2</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO461</b>	<b>Parasitology 1</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO462</b>	<b>Applied bacteriology</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO463</b>	<b>Plant physiology</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO464</b>	<b>Ecology</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO465</b>	<b>Molecular biology</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO469</b>	<b>Parasitology 2</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO470</b>	<b>Environmental pollution</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO471</b>	<b>Immunology</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO472</b>	<b>Public health</b>	<b>2</b>	<b>2</b>		<b>-</b>	
<b>BIO474</b>	<b>Cellular metabolism</b>	<b>3</b>	<b>2</b>		<b>2</b>	
<b>BIO473</b>	<b>Elective</b>	<b>2</b>	<b>2</b>		<b>-</b>	
<b>Total</b>		<b>98</b>	<b>65</b>		<b>64</b>	



## Elective Courses

Course Code	Course Title	Credit hours	Weekly hours			Prerequisite
			Lec.	Tut.	Lab	
CHE111	Analatical chemistry	2	2		2	
AGES101	Geology	2	2		-	
CHE121	Organic chemistry	2	2		2	
EPS211	Research methodology	2	2		-	
BIO243	Biochemistry	3	2		2	
BIO245	Biostatistics	2	2		-	
<b>Total</b>		<b>13</b>	<b>12</b>		<b>6</b>	

**Total Credits = 147**

**Total In-Touch Hours = 222**

**FIRST LEVEL**

Course code	Course Title	Credit Hours	Weekly hours			Prerequisite
			Lec	Tut.	Lab	
BIO121	Principles of zoology	3	2		2	
BIO122	Cytology 1	2	1		2	
CHE111	Analatical chemistry	2	2		2	
UOA137	Arabic language	2	2		-	
AGES101	Geology	2	2		-	
UOA135	Human rights	1	1		-	
EPS101	Educational Psychology	2	2		-	
BIO128	Principles of plant	3	2		2	
BIO129	Cytology 2	2	1		2	
CHE121	Organic chemistry	2	2		2	
UOA140	English language	2	2		-	
UOA141	Computer	2	2		2	
UOA135	democracy	2	2		-	
EPS102	Bases of education	2	2		-	
<b>Total</b>		<b>29</b>	<b>25</b>		<b>14</b>	

**SECOND LEVEL**

Course code	Course Title	Credit Hours	Weekly hours			Prerequisite
			Lec	Tut.	Lab	
BIO235	Invertebrates 1	3	2		2	
BIO236	Histology	3	2		2	
BIO237	Comparative plant anatomy	3	2		2	
BIO238	Algae	3	2		2	
BIO239	Research methodology	2	2		-	
EPS202	Growth psychology	2	2		-	
UOA140	English language	2	2		-	
BIO241	Invertebrates 2	3	2		2	
BIO242	Embryology	3	2		2	
BIO243	Biochemistry	3	2		2	
BIO244	Archegoniatates	3	2		2	
BIO245	Biostatistics	2	2		-	
EPS201	Educational administration	2	2		-	
<b>Total</b>		<b>34</b>	<b>26</b>		<b>16</b>	

**THIRD LEVEL**

Course code	Course Title	Credit Hours	Weekly hours			Prerequisite
			Lec.	Tut	Lab	
BIO347	Entomology	3	2		2	
BIO348	Comparative anatomy of Chordates	3	2		2	
BIO349	Genetics 1	3	2		2	
BIO350	Microbiology	3	2		2	
BIO351	Plant morphology	3	2		2	
BIO352	Microscopic preparation	2	1		2	
EPS311	Educational curriculum	2	2		-	
BIO354	Applied Entomology	3	2		2	
BIO355	Fungi	3	2		2	
BIO356	Taxonomy	3	2		2	
BIO357	Biotechnology	3	2		2	
BIO358	Animal physiology	3	2		2	
BIO359	Genetics 2	3	2		2	
EPS312	Counseling and mental health	2	2		-	
UOA140	English language	2	2		-	
<b>Total</b>		<b>41</b>	<b>29</b>		<b>24</b>	

**FOURTH LEVEL**

Course code	Course Title	Credit Hours	Weekly hours			Prerequisite
			Lec	Tut.	Lab	
BIO461	Parasitology 1	3	2		2	
BIO462	Applied bacteriology	3	2		2	
BIO463	Plant physiology	3	2		2	
BIO464	Ecology	3	2		2	
BIO465	Molecular biology	3	2		2	
EPS411	Measurement and evaluation	2	2		-	
EPS412	Classroom viewing	2	2		-	
UOA140	English language	2	2		-	
BIO469	Parasitology 2	3	2		2	
BIO470	Environmental pollution	3	2		2	
BIO471	Immunology	3	2		2	
BIO472	Public health	2	2		-	
BIO474	Cellular metabolism	3	2		2	
BIO473	Elective	2	2		-	
EPS413	practical School application	2	-		4	
EPS414	Research project	3	-		6	
<b>Total</b>		<b>42</b>	<b>28</b>		<b>28</b>	

**Curriculum Map of the PEOs with courses according to learning outcomes**

Programme Educational Objectives PEOs		1	2	3	4	5	6	7	8	9
<b>FIRST LEVEL</b>										
<b>Course code</b>	<b>Course title</b>									
<b>SECOND LEVEL</b>										
<b>Course code</b>	<b>Course title</b>									
<b>THIRD LEVEL</b>										
<b>Course code</b>	<b>Course title</b>									
<b>FOURTH LEVEL</b>										
<b>Course code</b>	<b>Course title</b>									
<b>Elective Courses</b>										
<b>Course code</b>	<b>Course title</b>									


**UNIVERSITY REQUIREMENT COURSES**

**OR**

**College REQUIREMENT COURSES**

**OR**

**Department REQUIREMENT COURSES**

**Course code** (for example MECE110) – **Course title** (for example English Language I)  
(number of: **Credit units-Lecture hours-Tutorial hours-lab hours** (for example 3-3-0-0))

- **Course Definition**
  
- **Course Topics**
  
- **Course Description**
  
- **Course Outcomes**
  
- **Recommended Textbook(s):**
  
- **Prerequisites:**
  
- **Lab. Topics**



