

**University of Diyala**  
جامعة ديالى



**First Cycle – Bachelor's Degree (B.Sc.) – Biology**  
بكالوريوس - علوم حياة



**September 2024**

## Table of Contents | جدول المحتويات

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| 1. Mission & Vision Statement        | بيان المهمة والرؤية                  |
| 2. Program Specification             | مواصفات البرنامج                     |
| 3. Program (Objectives) Goals        | أهداف البرنامج                       |
| 4. Program Student learning outcomes | مخرجات تعلم الطالب                   |
| 5. Academic Staff                    | الهيئة التدريسية                     |
| 6. Credits, Grading and GPA          | الاعتمادات والدرجات والمعدل التراكمي |
| 7. Modules                           | المواد الدراسية                      |
| 8. Contact                           | اتصال                                |

### 1. Mission & Vision Statement

#### Vision Statement

Opportunities for high-level training are available for the students enrolled in the Department of Biology, to prepare them to enter the labor market after graduation to work in the medical laboratories, teaching in the secondary schools, and working in the agricultural enterprises, environmental affairs, water resources and other institutions that have relationships with biological sciences in one way or another. The combination of instructional methods leads students to a balanced understanding of the scientific methods used by biologists to make observations, develop insights 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 biology academic staff pursues a multifaceted charge at Diyala University. The Program seeks to provide all biology students with fundamental knowledge of biology, as well as a deeper understanding of a selected focus area within the biological sciences. The curriculum and advising have been designed to prepare graduates for their professional future, whether they choose to work as field biologists specializing in botany or wildlife, or to pursue advanced degrees in the life sciences or health sciences. The biology program also provides the necessary fundamental knowledge of the life sciences to support the Nursing degree, the Environmental Studies degree, and the Associate of Science degree in Forest Technology. In addition, biology courses provide a key laboratory science experience for those students seeking to complete the general education requirements.

## 2. Program Specification

|                        |                       |                              |           |
|------------------------|-----------------------|------------------------------|-----------|
| <b>Programme code:</b> | BSc-Bio               | <b>ECTS</b>                  | 240       |
| <b>Duration:</b>       | 4 levels, 8 Semesters | <b>Method of Attendance:</b> | Full Time |

Biology means the study of life. It is an exciting, wonderful and rapidly developing subject. Biology play an important role in overcoming the global challenges from disease to environment of the earth. The programme puts a strong emphasis on research and academic skills training across all years. The BSc in Biology is designed to provide students with a solid foundation in fundamentals aspects of plant, animal, ecology, genetics and microbiology. The programme provide skills in laboratory and practical skills that are appropriate to the study of living organisms. The programme is also designed to provide students with a wide-ranging exposure to the theory and practice of the courses, as well as an education in its diverse applications in medicine, industry, and environment.

Biology graduates are qualified for many different types of careers. The breadth of biology studied will determine the opportunities available, but regardless of the path chosen, students will have acquired a broad variety of subject-specific and general abilities that are applicable to jobs in both the biological and non-biological domains.

To graduate, a student shall have undergone 8 semesters of study including summer practical training. Course workload must meet the graduation requirements of the University based on minimum academic standards. The student must earn a minimum of 240 ECTS for the four-year programme.

Level one is focusing on fundamental topics such as Zoology, Botany, Chemistry, Biophysics and Mathematics. Level two will cover a range of concepts including biological systems and the importance of biology in real life. The students will explore topics such as Biochemistry, Entomology, Microbiology, Parasitology, Plant Taxonomy and Anatomy allowing them to develop their interests at a higher level. During level three and four, the students will study in-depth courses provide them an opportunities to learn specialist topics such as biotechnology, molecular biology, pathogenic bacteria, medical virology, pollution, histology and immunology. In the fourth year, more emphasis is placed on student centred learning exercises, workshops, and seminars. Year 4 has a compulsory undertaking a research project/dissertation.

## 3. Program Objectives

1. A comprehensive study of biological sciences, their applications and uses in society theoretically, scientifically and applicability.
2. Preparation of scientific cadres to work in the fields of medicine and health, agricultural and food industries.
3. Providing the students with the necessary scientific techniques and how to deal with devices and equipments that can be used in theoretical and applied studies.
4. Providing the state institutions, private and mixed sectors (medical, industrial and laboratory institutions) with specialized cadres.
5. Investigate and study the new developments in the biological sciences and keep updated with the scientific developments in this field and incorporate that within the prescribed curriculum.
6. 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.

## 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.

1. Graduates will be able to illustrate the structure and function cellular components and explain how they interact in a living cell.
2. Graduates will be able to formally communicate the results of biological investigations using both oral and written communication skills.
3. Graduates will be able to perform laboratory experiments and field studies, by using scientific equipment and computer technology while observing appropriate safety protocols.
4. Graduates will be able to demonstrate a balanced including the historical development of foundational concept of how scientific knowledge develops, theories and laws and the nature of science.
5. Graduates will be able to demonstrate scientific quantitative skills, such as the ability to conduct simple data analyses.
6. Graduates will be able to use critical-thinking and problem-solving skills to develop a research project and/or paper.

## 5. Academic Staff

Ibrahim Hadi Mohammed | Ph.D. in Biology | Professor.  
Email: dr.ibrahimhadi@uodiyala.edu.iq  
Mobile No.: 07700605812

---

Hadi Rahman Rashid | Ph.D. in Biology | Professor  
Email: hadialtaai@uodiyala.edu.iq  
Mobile No.: +9647700361772

---

Khazaal Dhbea Wadi | Ph.D. in Biology | Professor  
Email: dr.khazal@uodiyala.edu.iq  
Mobile No.: +9647506101755

---

Zainab Mohammed Nsaif | Ph.D. in Biology | Professor  
Email: dr.zainab@uodiyala.edu.iq  
Mobile No.: +9647712249370

---

Kareem Ibrahim Mubarak | Ph.D. in Biology | Professor  
Email: kareemmubarak@uodiyala.edu.iq  
Mobile no.: +9647704332205

---

Esam Hamid Hameed | Ph.D. in Biotechnology | Assistant Professor  
Email: esam\_hummadi@uodiyala.edu.iq  
Mobile No.: +9647713553577

---

Abbas Yaseen Hasan | Ph.D. in Biology | Assistant Professor  
Email: abbasyaseen@uodiyala.edu.iq  
Mobile No.: +9647703715569

---

Anwar Abdulameer Mohammed | Ph.D. in Biology | Assistant Professor  
Email: anwarabdulameer@uodiyala.edu.iq  
Mobile No.: +9647902677357

---

Izdihar Mohammed Jassim | Ph.D. in Biology | Assistant Professor  
Email: izdehar@uodiyala.edu.iq  
Mobile No.:

---

Abbas Mohe | Ph.D. in Biology | Assistant Professor  
Email: abbas@uodiyala.edu.iq  
Mobile No.: +9647706381732

---

Ibtihal Hameed Mohsin | Ph.D. in Biology | Assistant Professor  
Email: ibtihalhameed@uodiyala.edu.iq  
Mobile No.: +9647707902094

---

Lina Abdulameer Salman Dawood | Ph.D. in Biology | Assistant Professor  
Email: linaabdulameer@uodiyala.edu.iq  
Mobile No.: +9647716118858

---

A Ansam Dawood Salman | Ph.D. in Biology | Assistant Professor  
Email: ansamdawood@uodiyala.edu.iq  
Mobile No.: +9647711236340

---

Iman Abbas Ali | Ph.D. in Biology | Assistant Professor  
Email: imanabbas@uodiyala.edu.iq  
Mobile No.: +9647710678065

---

Raghad Ibrahim Ahmed | Ph.D. in Biology | Assistant Professor  
Email: raghadibrahim@uodiyala.edu.iq  
Mobile No.: +9647715127185

---

Sana Najam Abed | Ph.D. in Biology | Assistant Professor  
Email: sanaa.abed@uodiyala.edu.iq  
Mobile No.: +9647708028840

---

Mayyadah Nazar Jabbar | M.Sc. in Biology | Assistant Prof.  
Email: mayyadanazar@uodiyala.edu.iq  
Mobile No.: +9647751669585

---

Khalid Dheyaa Abdulwahid | M.Sc. in Biology | Assistant Professor  
Email: chechanikd75@uodiyala.edu.iq  
Mobile No.: +9647724390485

---

Asraa Dawod Farhan | Ph.D. in Biology | Lecturer

Email: asraa@uodiyala.edu.iq  
Mobile no.: +9647700286309

---

Ishtar Imad Majeed | Ph.D. in Biology | Lecturer  
Email: IshtarImad@uodiyala.edu.iq  
Mobile no.: +9647733000577

---

Ahmed Hatem Alwan | Ph.D. in Biochemistry | Lecturer  
Email: ahmedchem@uodiyala.edu.iq  
Mobile no.: 07704724168

---

Ahlam Kadhim Abed | M.Sc. in Biology | Lecturer  
Email: ahlam@uodiyala.edu.iq  
Mobile no.: 07711018743

---

Saba Adnan Abbas | M.Sc. in Biology | Lecturer  
Email: sabaadnan@uodiyala.edu.iq  
Mobile no.: +9647706942011

---

Naseer Khalil Abed | Ph.D. in Biology | Lecturer  
Email: naseerkhalel@uodiyala.edu.iq  
Mobile No.: 07711934650

---

Mohammed Abdulmir Shawket | M.Sc. in Biology | Lecturer  
Email: mohammadabdulmir@uodiyala.edu.iq  
Mobile No.: +9647702671387

---

Shaymaa Majeed Mohammed | M.Sc. in Biology | Assistant Lecturer  
Email: shayamaamajeed@uodiyala.edu.iq  
Mobile No.: +9647710749459

---

Ali Atiyah Nife | M.Sc. in Biology | Assistant Lecturer  
Email: aliatiyah@uodiyala.edu.iq  
Mobile No.: +9647745753444

---

Huda Abdulhameed Abdulrahman | M.Sc. in Biology | Assistant Lecturer  
Email: hudaabdulhamied@uodiyala.edu.iq  
Mobile No.: +9647706911729

---

## 6. Credits, Grading and GPA

### Credits

Diyala University 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<br>(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<br>(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):

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:

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

## 7. Curriculum/Modules

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

| Code     | Module         | SSWL | USSWL | ECTS | Type | Pre-request |
|----------|----------------|------|-------|------|------|-------------|
| Bio-2311 | Entomology I   | 77   | 50    | 5.00 | C    | Bio-1101    |
| Bio-2312 | Plant Anatomy  | 77   | 50    | 5.00 | C    | Bio-1201    |
| Bio-2313 | Invertebrates  | 77   | 42    | 5.00 | C    | Bio-1101    |
| Bio-2314 | Plant Groups   | 77   | 46    | 5.00 | C    |             |
| Bio-2315 | Biochemistry I | 77   | 50    | 5.00 | C    | Bio-1212    |
| Bio-2316 | Microbiology I | 77   | 50    | 5.00 | C    |             |

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

| Code     | Module                     | SSWL | USSWL | ECTS | Type | Pre-request |
|----------|----------------------------|------|-------|------|------|-------------|
| Bio-2411 | Entomology II              | 77   | 65    | 5.00 | C    | Bio-2311    |
| Bio-2412 | Plant Taxonomy             | 77   | 60    | 5.00 | C    | Bio-2312    |
| Bio-2413 | Parasitology               | 77   | 60    | 5.00 | C    |             |
| UD24     | Extinct Baath Party Crimes | 33   | 17    | 2.00 | B    |             |
| Bio-2414 | Biochemistry II            | 77   | 65    | 6.00 | C    | Bio-2315    |
| Bio-2415 | Microbiology II            | 77   | 65    | 7.00 | C    | Bio-2316    |

## 8. Contact

### Program Manager:

**Dr. Esam Hamid Hameed | Ph.D. in Biotechnology | Assistant Professor**

**Email: esam\_hummadi@uodiyala.edu.iq**

**Mobile No.: 07713553577**

### Program Coordinator:

**Naseer Khalil Abed | Ph.D. in Biology | Lecturer**

**Email: naseerkhalel@uodiyala.edu.iq**

**Mobile No.: 07711934650**