دليل البرنامج الدراسي | Program Catalogue | 2024-2025

Meddle East University College

كلية الشرق الاوسط الجامعة

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 – College of Meddle East 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 pursues a multifaceted charge at College of Meddle East. 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 Chemistry, Zoology, and Biophysics at the end of the first year.

In Level 1 students are exposes to core topics such Zoology 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

Bashar Sadeq Nooni | Ph.D. in Microbiology Immunology and diagnosis of bacteria. | Prof.

Email:Vetbashar@tu.edu.iq.

Mobile no.:077161844

Mujahid Ismail Hamdan | Ph.D. in genetic and plant breeding | Chief Researcher. Email: muj1971m@Yahoo.com Mobile no.: 07901728530

Osama Qasim Abdulameer | Ph.D. in Plant Physiology | Lecturer Email: osama.hash@yahoo.com Mobile no.: 07705823973

Hamsa Munem Yaseen | Ph.D. in Chemistry/Analytical Chemistry | Assistant Prof. Email: hamsa.m.y@hcoedu.uobaghdad.edu.iq Mobile no.: 07715200951 Raneem Mohammed Abd Aljalel | M.Sc. in Agricultural Engineering /Entomology | Assistant Lect. Email: Ranem.alkinani.95@gmail.com Mobile no.: 007706210717

# 6. Credits, Grading and GPA

### Credits

College of Middle East 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<br>مخطط الدر جات |                     |                     |              |                                       |  |  |
|---------------------------------|---------------------|---------------------|--------------|---------------------------------------|--|--|
| Group                           | Grade               | التقدير             | Marks<br>(%) | Definition                            |  |  |
|                                 | A – Excellent       | امتياز              | 90 - 100     | Outstanding Performance               |  |  |
| <b>C</b>                        | B - Very Good       | جيد جدا             | 80 - 89      | Above average with some errors        |  |  |
| Group                           | C-Good              | ختر                 | 70 - 79      | Sound work with notable errors        |  |  |
| (50 - 100)                      | D –<br>Satisfactory | متوسط               | 60 - 69      | Fair but with major shortcomings      |  |  |
|                                 | E - Sufficient      | مقبول               | 50 - 59      | Work meets minimum criteria           |  |  |
| Fail                            | FX – Fail           | راسب - قيد المعالجة | (45-49)      | More work required but credit awarded |  |  |
| Group<br>(0 – 49)               | 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:

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

# 7. Curriculum/Modules

|  | Code     | Module         | SSWL | USSWL | ECTS | Туре | Pre-request |
|--|----------|----------------|------|-------|------|------|-------------|
|  | Bio-211  | Entomology I   | 64   | 61    | 5.00 | С    |             |
|  | BIO-212  | Plant Anatomy  | 64   | 61    | 5.00 | С    |             |
|  | BIO-213  | Invertebrates  | 64   | 61    | 5.00 | С    |             |
|  | BIO-214  | Microbiology I | 64   | 61    | 5.00 | С    |             |
|  | BIO -215 | Biochemistry I | 64   | 61    | 5.00 | С    |             |
|  | BIO- 216 | Plant Groups   | 64   | 61    | 5.00 | С    |             |

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

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

| Code      | Module             | SSWL | USSWL | ECTS | Туре | Pre-request |
|-----------|--------------------|------|-------|------|------|-------------|
| BIO-221   | Entomology II      | 64   | 61    | 5.00 | С    |             |
| BIO-222   | Plant Taxonomy     | 64   | 86    | 6.00 | С    |             |
| BIO-223   | Parasitology       | 64   | 86    | 6.00 | С    |             |
| BIO-224   | Microbiology II    | 64   | 86    | 4.00 | С    |             |
| BIO-225   | Biochemistry II    | 49   | 26    | 3.00 | В    |             |
| UOA-20000 | Baath Party Crimes | 33   | 17    | 2.00 | В    |             |

## 8. Contact

Program Manager: Saleh Abdul Kader Alessa | Ph.D in Freshwater biology | Prof. Email: dr.salehalessa@gmail.com Mobile no.: 07801443178

Program Coordinator: Farid M. Mahdi | M.Sc. in Physics | Assistant Prof. Email: Fareedm1969@gmail.com Mobile no.: 07901728530