

Name of the University

**Al-Qasim Green University**



اسم الجامعة

القاسم الخضراء

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

بكالوريوس علوم البيئة - قسم البيئة



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

#### *Vision Statement*

The College of Environmental Sciences at Al-Qasim Green University, which was established according to the order of the Ministry of Higher Education and Scientific Research No. 4119 on 21-8-2013, is one of the leading colleges in the environmental field in Iraq. Therefore, it seeks to achieve a distinguished level in the theoretical and practical educational fields, since environmental specialization is one of the most important specialties in the civilized countries of the world and has become one of the urgent specialties and the necessities of the times. The college seeks to provide an appropriate scientific and applied environment that attracts students wishing to major in the environment. The college prepares them and provides them with skills, practical and scientific values, and work ethics, so that they can contribute effectively to community service by protecting and improving the Iraqi environment.

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### ***Mission Statement***

Contribute to the scientific and practical environmental knowledge that are necessary to keep pace with the accelerating challenges in the Iraqi environment through preparing environmental cadres specialized in the field of environment, environmental pollution and sustainable development.

Preparing scientific cadres with a high degree of understanding and awareness in theory and practice in the field of specialization, for the purpose of contributing and achieving community partnership for the scientific outputs of the department and stimulating awareness and environmental culture and its importance in preserving and sustaining Iraqi society through the following points:

1. The Department of Environment is committed to providing specialized programs that meet national needs, including qualifying students and providing them with the skills and knowledge necessary for the requirements and needs of society and the academic and applied labor market.
2. The Department of Environment continuously strives to improve and develop the quality standards of the scientific programs it adopts to keep pace with the continuous changes in the needs of society through continuous review of the department's plan, objectives and mission.
3. The commitment of the Department of Environment to assist in finding real applied research and solutions to environmental problems in a way that serves the local community and raises the economic level of the region.
4. The Environment Department's commitment to continuous communication with the public and private sectors to find out the qualifying needs of the department's graduates, in order to ensure an increase in the employment rate of graduates.
5. The Department of Environment's commitment to national quality standards, lofty scientific principles and goals in creativity, innovation, scientific excellence and patents, so that the department's mission and objectives are consistent with the mission of the college and the university

## **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

The Department of Environment is one of the main scientific departments in the College of Environmental Sciences, and it aims to develop the scope of environmental education and raise awareness in the field of environmental components.

A variety of issues of interaction between components of the environment and living organisms are carefully addressed through educational courses. The Department of Environment offers in-depth elective courses, which enable students to develop proficiency in a wide range of environmental skills.

Graduates may focus on ecology, microbiology, plant, animal, and human ecology. The Department of the Environment aims to contribute significantly to efforts to protect the environment from potential pollution risks that may occur.

The teaching objective of this department is to provide the skills that qualify students to work in many fields.

Level 1 introduces students to the fundamentals of environment, and is suitable for progression in all programs within the environment program group. The core program-specific topics are covered at Level 2 to prepare for the specialized research-led units at Levels 3 and 4.

Thus, the graduate of the School of Environmental Sciences is trained to appreciate how research informs teaching, according to the university, college, and department mission statements.

The research spirit is developed and reinforced from the outset through practical procedures, which are either integrated into lecture units or taught in dedicated practical units, research seminars and practical exercises.

Modules studied are held at Levels 1 and 2, providing continuity and progressive guidance. Levels 1 and 2 educational programs include a number of workshops to teach skills through students' structured and unstructured workload, eg library use and presentation skills, followed by assessment exercises, eg essays and talks, as opportunities to practice these skills in the context of a given topic.

At Level 4 all students undertake an independent research project, which may be a high credit library or data analysis project, a high credit field-based project or a lab project.

### **3. Program Objectives**

1. To provide a comprehensive education in ecology that emphasizes scientific thinking and problem-solving across a range of disciplines within ecology
2. To prepare students for a variety of post-baccalaureate pathways, including graduate studies, apprenticeship programs, or entry-level jobs in any field of ecology
3. To provide extensive hands-on training in electronic technology, statistical analysis, laboratory skills, and field techniques
4. To provide comprehensive training in written and oral communication of scientific information
5. To enrich students with opportunities for alternative education in the field 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 environment components and explain how they interact in a human life.

- Outcome 2

Oral and Written Communication

Graduates will be able to formally communicate the results of environmental 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 while observing appropriate environmental 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 environmental science.

- Outcome 5

Data Analyses

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

- 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

(Al-Qasim Green University - College of Environmental Sciences - Department of Environment) The university follows the Bologna Process through the European Credit Transfer System (ECTS) credit system. The total number of the ECTS degree program is 240, 30 ECTS per semester. 1 ECTS equivalent to 25 hours of the student's 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:

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



## 7. Curriculum/Modules

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

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
QEDE1401	Math.	48	27	3.00	B	Non
QEDE2502	General physics	64	61	5.00	B	Non
QEDE3603	General Biology	79	96	7.00	C	Non
QEDE1304	Arabic language	63	37	4.00	B	Non
QEDE2505	Analytical chemistry	79	46	5.00	B	Non
QEDE3706	Ecology	64	86	6.00	C	Non

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

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
QEDE3607	Climatology	79	71	6.00	C	Non
QEDE1408	Human Rights and Demorcy	34	96	5.20	B	Non
QEDE3709	Soil Science	78	52	5.20	C	Non
QEDE1410	Computer I	64	36	4.00	B	Non
QEDE1411	English Language	63	52	4.60	B	Non
QEDE2512	Organic chemistry	79	46	5.00	B	Non

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

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
QEDE1413	Computer II	79	46	5.00	B	Non
QEDE3514	Biochemistry	64	61	5.00	C	Non
QEDE3515	Plant Environment	79	96	7.00	C	Non
QEDE3516	Fundamental of pollution	34	61	3.80	C	Non
QEDE3617	Microbial ecology	48	27	3.00	C	Non
QEDE3518	Animal taxonomy	64	61	5.00	C	Non

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

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
QEDE3519	Environmental Chemistry	93	12	4.20	C	Non
QEDE3620	Plant taxonomy	64	61	5.00	C	Non

QEDE3621	Biostatistics	64	61	5.00	C	Non
QEDE3722	Biodiversity	64	46	4.40	C	Non
QEDE3623	Planning and Environmental Management	34	86	4.80	B	Non

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

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
QEDE3624	Aquatic ecology	79	71	6.00	C	Non
QEDE3625	Ecological physiology	79	71	6.00	C	Non
QEDE3626	Algal	79	71	6.00	C	Non
QEDE3627	Molecular biology	78	52	5.20	C	Non
QEDE3628	Air Pollution	63	17	3.20	C	Non

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

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
QEDE3629	Water pollution	79	46	5.00	C	Non
QEDE3730	Soil Pollution	79	61	5.60	C	Non
QEDE3431	Research method	34	61	3.80	B	Non
QEDE3632	Remote Sensing	79	61	5.60	C	Non
QEDE3733	Human environment	63	62	5.00	C	Non

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

Code	Module	SSW L	USSW L	ECT S	Type	Pre-request
QEDE3634	Community health	34	86	4.80	C	Non
QEDE3435	Environmental legislations and laws	78	47	5.00	B	Non
QEDE3736	Sustainable	78	52	5.20	C	Non
QEDE3737	Environmental impact assessment	34	86	4.80	C	Non
QEDE3738	Graduation project	63	62	5.00	C	Non

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

Code	Module	SSW L	USSW L	ECTS	Type	Pre-request
QEDE3639	Graduation project	79	46	5.00	C	Non

QEDE3740	<b>Environmental engineering</b>	<b>93</b>	<b>62</b>	<b>6.20</b>	<b>C</b>	<b>Non</b>
QEDE3441	<b>Professional Ethics</b>	<b>64</b>	<b>56</b>	<b>4.80</b>	<b>B</b>	<b>Non</b>
QEDE3642	<b>Renewable Energy</b>	<b>63</b>	<b>62</b>	<b>5.00</b>	<b>C</b>	<b>Non</b>
QEDE3743	<b>Environmental toxins</b>	<b>93</b>	<b>52</b>	<b>5.80</b>	<b>C</b>	<b>Non</b>

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