

**Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department**



Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: Al-Qasim Green University

Faculty/Institute: College of Environmental Sciences

Scientific Department: Environment

Academic or Professional Program Name: Remote Sensing

Final Certificate Name:

Academic System:

Description Preparation Date:

File Completion Date:

Signature:

Head of Department Name:

Dr. Ali Akram Abdulateef

Date:

Signature:

Scientific Associate Name:

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

1. Program Vision

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. 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.

2. Program Mission

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

3. Program Objectives

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

4. Program Accreditation

None

5. Other external influences

None

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements				
College Requirements				
Department Requirements				
Summer Training				
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	Define fundamental concepts and principles of remote sensing (electromagnetic spectrum, sensors, platforms).
Skills	
Learning Outcomes 2	Operate specialized software (ENVI, ERDAS, SNAP, QGIS, Google Earth Engine) for image processing.
Learning Outcomes 3	Integrate remote sensing data with GIS for advanced spatial analysis.
Ethics	
Learning Outcomes 4	Demonstrate integrity in the use of data, software, and analytical methods.

Learning Outcomes 5	Recognize the role of remote sensing in environmental monitoring, resource management, and disaster assessment.

9. Teaching and Learning Strategies

The program uses a learner-centered approach combining lectures, interactive discussions, and case studies with practical labs, fieldwork, and projects to bridge theory and application. Digital platforms and e-learning enhance access to global tools and datasets, while guest lectures link students with professional practice. Collaborative activities build teamwork and leadership, and emphasis on ethics and sustainability ensures graduates are prepared for responsible professional and community engagement.

10. Evaluation methods

The program applies continuous and comprehensive evaluation at all stages, including quizzes, assignments, and class participation for formative assessment, alongside lab work, field reports, and projects to measure practical skills. Midterm and final exams assess theoretical understanding, while capstone projects, research, and internships evaluate integration of knowledge with professional practice. Ethical conduct, teamwork, and communication are also considered to ensure holistic student development.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer

Professional Development

Mentoring new faculty members

New faculty are supported through orientation sessions, pairing with experienced mentors, and regular workshops to familiarize them with institutional policies, teaching practices, and research opportunities. At the department level, chairs and senior colleagues provide guidance on curriculum, assessment, and academic service, ensuring smooth integration and continuous professional development.

Professional development of faculty members
--

The institution supports faculty development through training in innovative teaching methods, assessment of learning outcomes, and curriculum alignment. Professional growth is promoted via workshops, conferences, research opportunities, and collaboration, ensuring continuous improvement in teaching, research, and academic competencies.

12. Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13. The most important sources of information about the program
--

- Demers, M.N. 2005. Fundamentals of Geographic Information System. Wiley & Sons.

- Biggs, J., & Tang, C. (2011). <i>Teaching for Quality Learning at University</i> . 4th Edition. Open University Press. Covers teaching strategies, learning outcomes, and assessment design.
--

14. Program Development Plan

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4

- Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

Course Description Form

1. Course Name: Remote Sensing	
2. Course Code:	
3. Semester / Year: 2025 - 2026	
4. Description Preparation Date:	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
7. Course administrator's name (mention all, if more than one name)	
Name: Suhad Mohammed Al-Hedny Email:	
8. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> Provide students with a solid understanding of the principles and fundamentals of remote sensing. Strengthen critical thinking, problem-solving, and decision-making skills through practical applications and case studies. Foster awareness of ethical and professional responsibilities in handling geospatial and environmental data.
9. Teaching and Learning Strategies	
Strategy	The course adopts a mix of interactive lectures, practical labs, case studies, and fieldwork to ensure both theoretical understanding and hands-on application. Active learning is encouraged through discussions, group projects, and problem-solving tasks, while digital tools and software are integrated to enhance analytical skills. Continuous engagement through assignments, presentations, guided research fosters critical thinking and independent learning.
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
11. Course Evaluation					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)					
Main references (sources)					
Recommended books and references (scientific journals, reports...)			Quality Assurance Agency (QAA). (2018). <i>UK Quality Code for Higher Education: Advice and Guidance on Learning and Teaching</i> .		
Electronic References, Websites			https://www.usgs.gov/ https://earthengine.google.com/		

**Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department**



Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: Al-Qasim Green University

Faculty/Institute: College of Environmental Sciences

Scientific Department: Environment

Academic or Professional Program Name: Environmental Impact Assessment

Final Certificate Name:

Academic System:

Description Preparation Date:

File Completion Date:

Signature:

Head of Department Name:

Dr. Ali Akram Abdulateef

Date:

Signature:

Scientific Associate Name:

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

1. Program Vision

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. 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.

2. Program Mission

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

3. Program Objectives

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

4. Program Accreditation

None

5. Other external influences

None

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements				
College Requirements				
Department Requirements				
Summer Training				
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	Define fundamental concepts and principles of EIA
Skills	
Learning Outcomes 2	Understand principles, methods, and legal frameworks of EIA, and evaluate environmental, social, and economic impacts of projects.
Learning Outcomes 3	Apply EIA tools, GIS, and data analysis techniques; design and assess mitigation measures; prepare and present EIA reports.
Ethics	

Learning Outcomes 4	Demonstrate professional responsibility, sustainability awareness, and ethical decision-making in environmental planning and assessment.
Learning Outcomes 5	Recognize the role of EIA in environmental monitoring, resource management, and disaster assessment.

9. Teaching and Learning Strategies

The program uses a learner-centered approach combining lectures, interactive discussions, and case studies with practical labs, fieldwork, and projects to bridge theory and application. Digital platforms and e-learning enhance access to global tools and datasets, while guest lectures link students with professional practice. Collaborative activities build teamwork and leadership, and emphasis on ethics and sustainability ensures graduates are prepared for responsible professional and community engagement.

10. Evaluation methods

The program applies continuous and comprehensive evaluation at all stages, including quizzes, assignments, and class participation for formative assessment, alongside lab work, field reports, and projects to measure practical skills. Midterm and final exams assess theoretical understanding, while capstone projects, research, and internships evaluate integration of knowledge with professional practice. Ethical conduct, teamwork, and communication are also considered to ensure holistic student development.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer

Professional Development

Mentoring new faculty members

New faculty are supported through orientation sessions, pairing with experienced mentors, and regular workshops to familiarize them with institutional policies, teaching practices, and research opportunities. At the department level, chairs and senior colleagues provide guidance on

curriculum, assessment, and academic service, ensuring smooth integration and continuous professional development.

Professional development of faculty members

The institution supports faculty development through training in innovative teaching methods, assessment of learning outcomes, and curriculum alignment. Professional growth is promoted via workshops, conferences, research opportunities, and collaboration, ensuring continuous improvement in teaching, research, and academic competencies.

12. Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13. The most important sources of information about the program

- International Association for Impact Assessment (IAIA). (2022). *Principles of Environmental Impact Assessment Best Practice*. IAIA.

- Noble, B. (2015). *Introduction to Environmental Impact Assessment: A Guide to Principles and Practice*. Oxford University Press.

14. Program Development Plan

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4

- Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

Course Description Form

1. Course Name: Environmental Impact Assessment					
2. Course Code:					
3. Semester / Year: 2025 - 2026					
4. Description Preparation Date:					
5. Available Attendance Forms:					
6. Number of Credit Hours (Total) / Number of Units (Total)					
7. Course administrator's name (mention all, if more than one name)					
Name: Suhad Mohammed Al-Hedny					
Email:					
8. Course Objectives					
Course Objectives			<ul style="list-style-type: none"> Introduce the fundamental principles, processes, and legal frameworks of Environmental Impact Assessment. Develop the ability to identify, predict, and evaluate the environmental, social, and economic impacts of development projects. Train students to design and apply EIA methodologies, including screening, scoping, baseline studies, impact analysis, and mitigation planning. 		
9. Teaching and Learning Strategies					
Strategy	The course adopts a mix of interactive lectures, practical labs, case studies, and fieldwork to ensure both theoretical understanding and hands-on application. Active learning is encouraged through discussions, group projects, and problem-solving tasks, while digital tools and software are integrated to enhance analytical skills. Continuous engagement through assignments, presentations, guided research fosters critical thinking and independent learning.				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

11. Course Evaluation					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)					
Main references (sources)					
Recommended books and references (scientific journals, reports...)			<ul style="list-style-type: none"> - Petts, J. (Ed.). (1999). <i>Handbook Environmental Impact Assessment</i>. Vol. 2. Wiley-Blackwell. - Glasson, J., Therivel, R., & Chadwick, (2012). <i>Introduction to Environmental Impact Assessment</i>. 4th Edition. Routledge 		
Electronic References, Websites			<ul style="list-style-type: none"> • International Association for Impact Assessment (IAIA) – https://www.iaia.org Leading global network on EIA with guidelines, case studies, and best practices. • United Nations Environment Programme (UNEP) EIA Resources – https://www.unep.org/resources 		