



# Program Specification

Program:	<b>Sustainable Agricultural Technologies</b>
Program Code (as per Saudi university ranking):	<b>081103</b>
Qualification Level:	<b>3<sup>rd</sup> level (Diploma)</b>
Department:	
College:	<b>Applied College</b>
Institution:	<b>Umm Al-Qura University</b>
Program Specification:	New <input checked="" type="checkbox"/> updated* <input type="checkbox"/>
Last Review Date:	<b>15/JUN/2025</b>

\*Attach the previous version of the Program Specification.

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## A. Program Identification and General Information

### 1. Program's Main Location :

Applied College - Umm Al-Qura University  
Aziziya Campus

### 2. Branches Offering the Program (if any):

Al-Qunfida University College - Umm Al-Qura University

### 3. Partnerships with other parties (if any) and the nature of each:

### 4. Professions/jobs for which students are qualified

### 5. Relevant occupational/ Professional sectors:

Ministry of Agriculture, Water and the Environment  
Agricultural private sector  
General Authority for Metrology and Environmental Protection

### 6. Major Tracks/Pathways (if any): N.A

Major track/pathway	Credit hours (For each track)	Professions/jobs (For each track)
1. Not Applicable		
2.		

### 7. Exit Points/Awarded Degree (if any): N.A

exit points/awarded degree	Credit hours
1. Not Applicable	

### 8. Total credit hours: (30 hours)

31 Credit Hours



## B. Mission, Objectives, and Program Learning Outcomes

### 1. Program Mission:

To be a leading diploma program that equips learners with practical, innovative, and eco-friendly agricultural techniques, fostering sustainability, food security, and environmental stewardship in alignment with the Kingdom's vision 2030 and global development goals

### 2. Program Goals:

1. Equip learners with foundational knowledge of sustainable agricultural principles, including soil health, water management, crop diversity, and integrated pest control.
2. Develop technical skills in modern and traditional sustainable farming techniques suited to different environments and climates.
3. Promote awareness of the environmental, social, and economic impacts of agriculture, encouraging responsible and ethical practices.
4. Prepare graduates to contribute to national goals for food security and environmental protection through applied agricultural practices.
5. Support innovation and problem-solving by integrating research, technology, and local knowledge in sustainable agriculture.

### 3. Program Learning Outcomes\*

#### Knowledge and Understanding

K1	Explain the principles and concepts of sustainable agriculture, including soil health, water conservation, biodiversity, and agroecology
K2	Describe the environmental, social, and economic dimensions of agricultural sustainability
K3	Identify major challenges in conventional farming and the global need for sustainable food systems
K4	Recognize key technologies and innovations that support sustainable agricultural practices (e.g., precision farming, renewable energy use)

#### Skills

S1	Apply sustainable techniques in crop production, soil fertility management, and water-efficient irrigation systems
S2	Implement integrated pest management (IPM), crop rotation, composting, and other agroecological practices
S3	Use relevant tools and technologies such as GIS, soil testing kits, and greenhouse systems to support decision-making in farming
S4	Analyze the sustainability and environmental impact of different agricultural methods
S5	Develop small-scale sustainable agriculture projects and prepare basic business and marketing plans for agri-products

#### Values, Autonomy, and Responsibility

V1	Keep pace with advanced knowledge in the field of work/profession
V2	Employ communication and interpersonal skills required in the field while dealing with field managers, co-workers and customers



V3

Continuous self-development to ensure advancement in the career and professional ladder

\* Add a table for each track or exit Point (if any)





## C. Curriculum

### 1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	4	10	32%
	Elective	-	-	-
College Requirements	Required	-	-	-
	Elective	-	-	-
Program Requirements	Required	6	15	48%
	Elective	-	-	-
Capstone Course/Project		-	-	-
Field Training/ Internship		1	6	20%
Residency year		-	-	-
Others		-	-	-
Total		11	31	100%

\* Add a separated table for each track (if any).

### 2. Program Courses

Level	Course Code	Course Title	Required or Elective	Pre- Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	AP1301	English Language 1	Required		4	Institution
	APSA1601	Fundamentals of Soil Science	Required		3	Program
	APSA1602	Botany and Crop Science	Required		3	Program
	APSA1603	Modern Agricultural Techniques	Required		2	Program
	APSA1604	Applications of Agricultural Microbiology	Required		3	Program
	APSA1605	Agricultural Project Management and Marketing	Required		2	Program
	APSA1606	Water and Fertilizers Management	Required		2	Program
Level 2	APSA2901	Co-op Training	Required		6	Program
	AP1510	Career Skills	Required		2	Institution



Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	AP1201	Applications of Artificial Intelligence	Required		2	Institution
	AP1310	Morals and Ethics	Required		2	Institution

\* Include additional levels (for three semesters option or if needed).

\*\* Add a table for the courses of each track (if any)

### 3. Course Specifications:

Insert hyperlink for all course specifications using NCAAA template (T-104)

[توصيف المقررات](#)

### 4. Program learning Outcomes Mapping Matrix:

Align the program learning outcomes with program courses, according to the following desired levels of performance (I = Introduced & P = Practiced & M = Mastered).

Course code & No.	Program Learning Outcomes											
	Knowledge and understanding				Skills					Values, Autonomy, and Responsibility		
	K1	K2	K3	K4	S1	S2	S3	S4	S5	V1	V2	V3
Fundamentals of Soil Science	I	I			I		I	I		I	I	I
Botany and Crop Science	I		I		I				I		I	
Morden Agricultural Techniques		M	M	M	M	M		M			M	M
Applications of Agricultural Microbiology	M		M	M	M	M	M	M	M	M	M	M
Water and Fertilizers Management	P	P	P		P			P			P	P
Agricultural Project Management and Marketing		P	P				P		P		P	P
Co-op Training	P	P			P	P				P	P	

\* Add a separated table for each track (if any).

### 5. Teaching and learning strategies applied to achieve program learning outcomes.

Describe teaching and learning strategies, including curricular and extra-curricular activities, to achieve the program learning outcomes in all areas.

- Faculty members attend training courses conducted by specialists in the teaching and learning strategies.
- Displaying the curriculum from time to time to update the evaluation to keep up with modern education and learning processes.

Using the following teaching and learning strategies: Lectures, Solved problems, Group discussions, Cooperative learning, active learning, self – Learning, Hands on work, Lab activities, Brainstorming, Presentations, Research activities, Lab activities, Class activities.

## 6. Assessment Methods for program learning outcomes.

Describe assessment methods (Direct and Indirect) that can be used to measure the achievement of program learning outcomes in all areas.

The program should devise a plan for assessing Program Learning Outcomes (all learning outcomes should be assessed at least twice in the bachelor program's cycle and once in other degrees).

- Annual program reports
- Program Advisory Committee's recommendation
- Faculty self-reports in course reports
- Student Course evaluation
- Evaluation of questionnaires that measure opinions of stakeholders (employers - Students – teaching staff- ...) on the program quality.
- Written exams
- Practical exams
- Oral Exam
- Reports and evaluation of research activities
- Internship evaluation report

## D. Student Admission and Support:

### 1. Student Admission Requirements

1. Obtaining a diploma or bachelor's degree in a scientific specialty .
2. Good level of English .

### 2. Guidance and Orientation Programs for New Students

(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

In the beginning of each academic year the deanship of student affairs in Al-Qura University establishing an orientation program for all new university students according to specialization. This program explained their rights and duties during the study period. After that, the Applied College organizes a program for new students, including students of the Sustainable Agriculture program, and then the students tour the laboratories and classrooms .

### 3. Student Counseling Services







(Academic, professional, psychological and social)

(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

Describe the arrangements for academic counseling and advising for students, including both scheduling of faculty office hours and advising on program planning, subject selection and career planning (which might be available at college level).

(1) Academic advisor is assigned for students to provide guidance and assistance regarding their program planning

(2) All academic staff members will specify "office hours" for meeting students every semester

(3) Applied college Course Coordinator (also Applied college vice dean for academic affairs) is responsible for guiding and assisting all students regarding their program planning and solving their academic problems and providing academic / non-academic counseling.

#### 4. Special Support

(Low achievers, disabled, gifted, and talented students).

This program does not accept students with special needs.

#### E. Faculty and Administrative Staff:

**1. Needed Teaching and Administrative Staff (the teaching staff required must fulfill the specific majors listed below, if no associate professor available, assistant professor can be sufficient. Professors are also good choice if available)**

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professor	-	-		-	-	-
Associate Professor	Agriculture	Plant Biology		1	1	2
Associate Professor	Agriculture	Environmental Microbiology		1	1	2
Associate Professor	Agriculture	Environmental Chemistry		1	1	2
Assistant Professor						





Lecturer						
Teaching Assistant						
Technicians and Laboratory Assistant						
Administrative and Supportive Staff						
Others (specify)						

## F. Learning Resources, Facilities, and Equipment:

### 1. Learning Resources

Learning resources required by the Program (textbooks, references, and e-learning resources and web-based resources, etc.)

Mechanism for providing and quality assurance of learning resources (textbooks, references and other resource materials, including electronic and web-based resources, etc.) .

### 2. Facilities and Equipment

(Library, laboratories, classrooms, etc.)

The program will be presented in cooperation with the National Aquaculture Group, and they have laboratories and headquarters equipped for the program. You can also benefit from the headquarters of the University College in Al-Qunfida

### 3. Procedures to ensure a healthy and safe learning environment

(According to the nature of the program)

Make appropriate preparations for student safety

## G. Program Quality Assurance:

### 1. Program Quality Assurance System

Provide a link to quality assurance manual.

[https://drive.uqu.edu.sa/\\_/quality/files/Policies/quality%20manual%201.pdf](https://drive.uqu.edu.sa/_/quality/files/Policies/quality%20manual%201.pdf)

### 2. Procedures to Monitor Quality of Courses Taught by other Departments

- Program is reviewed annually within the department by individual faculty members and the group as a whole.



- A departmental committee is formed to look into the recommendations and to make a final proposal
- The revised program is discussed in the departmental council before approval.
- Held Meetings, dialogues and debate sessions
- Questionnaires are assigned for stockholders to express an opinion on the program
- Evaluation of questionnaires and stand on weaknesses in the program
- Ask for advice from colleagues in similar departments of other universities

### 3. Procedures Used to Ensure the Consistency between Main Campus and Branches (including male and female sections).

Not Applicable

### 4. Assessment Plan for Program Learning Outcomes (PLOs),

- Student course evaluations completed for all courses each semester.
- Using the students' results as an indicator to assess the PLOs
- Displaying the curriculum from time to time to update the evaluation to keep up with modern education and learning processes
- Faculty self-reports in course reports
- Questionnaires are assigned for students to express their opinion on the department faculty members
- Evaluation of questionnaires and stand at the level of teaching staff skills
- Take the opinion of the employer about the graduate proficiency after 6 month of recruitment
- Take the opinion of the alumni and graduate about the quality of learning experience in the program

### 5. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Leadership	Students-Teaching and administrative staff	E- Surveys	At the end of academic year
effectiveness of teaching & assessment	Students –Peer reviewers	- E- Surveys, -Random grading report.	At the end of every semesters

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
		-Test completion report for test Standards	
learning resources	Students	- E- Surveys	At the end of academic year
The quality of learning experience in the program	graduates, alumni	- E- Surveys - Interviews	At the end of academic year
The program graduates proficiency	Employers	E- Surveys, visits	At the end of academic year

**Evaluation Areas/Aspects** (e.g., leadership, effectiveness of teaching & assessment, learning resources, services, partnerships, etc.)

**Evaluation Sources** (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others.)

**Evaluation Methods** (e.g., Surveys, interviews, visits, etc.)

**Evaluation Time** (e.g., beginning of semesters, end of the academic year, etc.)

## 6. Program KPIs\*

The period to achieve the target 5 year(s).

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
1	KPI-P-02	Students' Evaluation of quality of learning experience in the program	4	E- Surveys	At the end of academic year
2	KPI-P-08	Average number of students in the class	4	From College data base	At the end of every semesters
3	KPI-P-09	Employers' evaluation of the program graduates proficiency	4	E-Surveys, visits	At the end of academic year
4	KPI-P-10	Students' satisfaction with the offered services	4	E- Surveys	At the end of every semesters

\*including KPIs required by NCAAA

## H. Specification Approval Data:

Council / Committee	Umm Al-Qura University Council
Reference No.	851110214476/195626
Date	18/2/1447

