



Program Specification

Program: **Aquaculture Technologies**

Program Code (as per Saudi university ranking): **08310103**

Qualification Level: **3rd level (Diploma)**

Department:

College: **Applied College**

Institution: **Umm Al-Qura University**

Program Specification: **New ☒** **Updated* ☐**

Last Review Date: **19/DEC/2024**

*Attach the previous version of the Program Specification.

Table of Contents

A. Program Identification and General Information	3
B. Mission, Objectives, and Program Learning Outcomes	4
C. Curriculum	5
D. Student Admission and Support:	7
E. Faculty and Administrative Staff:	8
F. Learning Resources, Facilities, and Equipment:	9
G. Program Quality Assurance:	9
H. Specification Approval Data:	12



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-Leith University College - Umm Al-Qura University
Presented at the headquarters of the National Aquaculture Group

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

Presented at the headquarters of the National Aquaculture Group

4. Professions/jobs for which students are qualified

- National Aquaculture Group (NAQWA)
- Jazan Energy and Development Company (Jazadco)
- Saudi Fish Company

5. Relevant occupational/ Professional sectors:

Umm Al-Qura University
National Aquaculture Group (NAQWA)

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)

30 Credit Hours



B. Mission, Objectives, and Program Learning Outcomes

1. Program Mission:

To prepare and qualify national cadres with the skill requirements in the field of aquaculture to achieve food security according to the goals of the Kingdom's Vision 2030.

2. Program Goals:

1. Educating and training national cadres and qualifying them in the field of fish farming.
2. Developing the technical and linguistic skills of national cadres to suit the needs of the fish farming field.
3. Filling the functional and professional deficit in aquaculture companies in the Kingdom of Saudi Arabia with qualified national cadres for all sub-fields of aquaculture.

3. Program Learning Outcomes*

Knowledge and Understanding

- | | |
|----|------------------------------------------------------------------------|
| K1 | Knowledge of aquaculture terminology and what is related to it |
| K2 | Knowledge of aquaculture theories |
| K3 | Understanding the importance of aquaculture in providing food security |
| K4 | Knowledge of supply and manufacturing systems in aquaculture farms |
| K5 | Knowledge of the most important diseases related to fish and shrimp |

Skills

- | | |
|----|--------------------------------------------------------------------------------------------------------|
| S1 | The ability to discuss the most important challenges facing the field of aquaculture |
| S2 | Proficiency in dealing with colleagues at work with high professionalism, regardless of their cultures |
| S3 | Developing professional skills in the international work environment |
| S4 | Manage fish and shrimp farms carefully |
| S5 | Identifying and operating aquaculture laboratories |

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	3	8	26.6%
	Elective	1	2	6.6%
College Requirements	Required	-	-	-
	Elective	-	-	-
Program Requirements	Required	5	14	46.6%
	Elective	-	-	-
Capstone Course/Project		-	-	-
Field Training/ Internship		1	6	20%
Residency year		-	-	-
Others		-	-	-
Total		10	30	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	AP1303	English Language 3	Required		4	Institution
	APAC1605	Principles of Aquaculture Management	Required		2	Program
	APAC1601	Fundamentals of Aquaculture	Required		3	Program
	APAC1602	Aquaculture Microbiology and Operational Biosecurity	Required		4	Program
	APAC1604	Basic math for aquaculturists	Required		2	Program
	APAC1603	Aquaculture Engineering and Production System	Required		3	Program
Level 2	APAC2901	Co-op Training	Required		6	Program
	AP1510	Career Skills	Required		2	Institution
	APAC1310	Islamic Culture	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 in Artificial Intelligence	Elective		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)

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	K5	S1	S2	S3	S4	V1	V2	V3
Fundamentals of Aquaculture	I	I	I	I		I	I	I	I	I	I	I
Aquaculture Microbiology and operational biosecurity	I	I	P	P	P	P	P	P	P	P	P	P
Basic math for aquaculturists	I			I		I	I	I	I	I	I	I
Aquaculture Engineering and production system	P	P	M	M	M	M	M	M	M	M	M	M
Principles of Aquaculture management	M	M	M	M	M	M	M	M	M	M	M	M
Co-op Training	M	M	M	M	M	M	M	M	M	M	M	M

* 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 Aquaculture Technologies 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	Aquaculture	Fish biology		1	1	2
Associate Professor	Aquaculture	Microbiology		1	1	2
Associate Professor	Aquaculture	Aquaculture		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-Leith.

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

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. -Test completion report for test Standards	At the end of every semesters
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.	851141114462/190390
Date	446/11/22

