Program Specification

Program Name: Mathematics (301100)
Qualification Level: Bachelor of Mathematics
Department: Mathematics
College: Al-Leith University College
Institution : Umm Al-Qura University

Content

A. Program Identification and General Information

1. Program Main Location:

Umm Al-Qura university Male Campus, Al-Abdiya, Mecca

2. Branches Offering the Program:

- Umm Al-Qura university Female Campus, Al-Zahir, Mecca.
- Al-Leith University College. Al-Leith (Male and Female Sections)

3. Reasons for Establishing the Program:
(Economic, social, cultural, and technological reasons, and national needs and development, etc.)

The need of the labor market for graduates of the department especially in all levels of education sector.

4. Total Credit Hours for Completing the Program: (137)

Distributed on 8 semesters including subject and non-specific subject modules.

5. Learning Hours: (6917 Total Work Load**)**

University Requirements

Course Name	Contact Hours Week(Semester + Exam)	Private Study Per Semester	Total Work Load per Semester
Islamic Culture I	2(30 + 4)	56	90
The Holy Qur'an I	2(30 + 4)	85	120
The Biography of Prophet Muhammad	2(30 + 3)	57	90
Arabic Language	2(30 + 4)	57	91
Islamic Culture II	2(30 + 5)	55	90
The Holy Qur'an II	2(30 + 5)	53	88
Islamic Culture III	3(45+4)	67	116
The Holy Qur'an III	2(30 + 4)	55	89
Islamic Culture IV	2(30+7)	80	117
The Holy Qur'an IV	2(30+8)	114	142
Total	21 Credit Hours	-	**1033**

Faculty Requirements

Course Name	Contact Hours Week(Semester + Exam)	Private Study Per Semester	Total Work Load per Semester
English Language I	4(60+10)	168	238
English Language II	4(60+10)	169	239
General Physics 1	4(45L+42P+6)	146	239
General Biology	4(45L+42P+8)	145	240
General Chemistry	4(45L+42P+8)	145	240
Total	**20 Credit Hours**	-	**958**

Department Requirements

Course Name	Contact Hours Week(Lectures + Quiz, Exam)	Private Study (Semester)	Total Work Load per Semester
Calculus	4(60 + 10)	155	225
Elements of Statistics & Probability	3(45 + 8)	100	153
Sets & Algebraic Structures	4(60 + 15)	145	220
Linear Algebra (1)	4(60 + 10)	135	205
Calculus (2)	4(60 + 15)	125	200
Intro. to Real Analysis	3(45 + 8)	95	148

Ord. Differential Equations	4(60 + 10)	155	225
Multivariable Calculus	4(60 + 10)	130	200
Intro. Differential Geometry	3(45 + 8)	95	148
Real Analysis (1)	3(45 + 8)	95	148
Real Analysis (2)	3(45 + 8)	105	158
Probability Theory	3(45 + 8)	105	158
Intro. Group Theory	3(45 + 8)	100	153
Linear Algebra (2)	3(45 + 8)	95	148
Partial Differential Equations	4(60 + 15)	125	200
Continuum Mechanics	4(60 + 20)	145	225
Numerical Analysis	3(45 + 8)	95	148
Intro. to Complex Analysis	4(60 + 10)	115	185
Measure Theory And Integration	3(45 + 8)	100	153
Intro. To Linear Programming.	3(45 + 8)	75	120
Mathematical Software Packages	2Lec.+3Pract (75)	80	161
Mathematical Statistics	3(45 + 8)	105	158
Financial Mathematics	3(45 + 8)	115	168
Number Theory	3(45 + 8)	105	158
Discrete Mathematics	3(45 + 8)	105	158
Rings And Fields Theory	3(45 + 6)	100	151
General Topology	3(45 + 8)	105	158
Fluid Mechanics	4(60 + 10)	115	185
Research Project	2(15 + 15)	115	145
Total	**96**	**-**	**4926**

6. Professional Occupations/Jobs:

- General Education Sector: Teaching.
- Colleges and Universities: Teaching Assistants and Research Assistants.
- Research and Information Technology Centers: Researchers and Data Analysts.
- Banks and others financial facilities: data analyst, researchers, and labor wage specialists, and contributors to the preparation of strategic plans.
- In the public and private sector: Collecting, Coding and analysis of statistical data.
- Astronomical timer.

7. Major Tracks/Pathways (if any)**:**

Major track/pathway	Credit hours (For each track)	Professional Occupations/Jobs (For each track)
None		

8. Intermediate Exit Points/Awarded Degree (if any)**:**

Intermediate exit points/awarded degree	Credit hours
None	

B. Mission, Goals, and Learning Outcomes

1. Program Mission:

Our mission is to provide distinguished programs in Mathematical Sciences that serve education and scientific research to prepare professionals able to strongly compete in the labor market.

2. Program Goals:

G-I. Provide students a wide range of the basic concepts and theories of mathematics:

O-a. Retain basic knowledge in the core branches of mathematics.

O-b. Profound overview of the contents of fundamental mathematical theories and rules and able to identify their correlations.

G-II. Reveal the relation between mathematics and other basic science:
O-a. Utilize the appropriate mathematical techniques to analyze and to interpret practical data.
O-b. Use computer science applications and information technology to solve mathematical problems.
G-III. Recognize the role of mathematics in the development of society.
O-a. Apply mathematical skills and knowledge to understand and to solve real life: problems.
O-b. Activate teamwork effectively.
G-IV. Able to obtain employment in their area of mathematical interest and gain admittance to a graduate program in mathematics:
O-a. Succeed in gaining admission and perform adequately in graduate programs.
O-b. Obtain entry-level employment in math-related fields.
O-c. Improve mathematical language and self-learning skills.

3. Relationship between Program Mission and Goals and the Mission and Goals of the Institution/College.

Mission of Umm Al-Qura University:

Provision of distinctive scientific education and research that serve the community, Hajj, and Umrah and contribute to the development of the knowledge-based economy in accordance with the Saudi Vision 2030.

Objectives of UQU Major and Subsidiary Strategic Plan

S/N	Objective	Strategic Objective	Sub-Objective
1.	Learning and Education	Application of the learning organization model	1- Development of staff performance
			2- Enhancement of student experience
			3- Update of the colleges' educational programs to keep pace with the labor market
2.	Scientific Research	Sustainability of scientific research and improvement of its outputs to meet the needs of the community	1- Increasing outstanding scientific publishing
			2- Development of the research environment and improvement of the outputs of scientific research
3.	Social Responsibility	Active participation in volunteering, and the service of community and pilgrims	1-Community awareness and education
			2- Dissemination and adoption of the volunteerism culture
4.	Infrastructure	Infrastructure enhancement	1- Completion of lame duck projects
			2- Creation of new projects
5.	Leadership, Administrative and Technical Affairs	Developing the performance, and the scientific, creative and intellectual abilities, of leaders, administrators and technicians	1- Leadership Development
			2- Administration Development
			3- Technical Development

6.	Quality Assurance and Improvement	Establishing an integrated system for total quality management	1- Obtaining the NCAAA 2- Obtaining the AACSB by some colleges' programs
7.	External Cooperation	Convening local, regional and international agreements and partnerships with different organizations	1- Local agreements 2- Regional agreements 3- International agreements
8.	Media and Marketing	Marketing of UQU and its programs and activities to be a reliable academic brand	1- Improve the mental image of UQU to the concerned parties 2- Marketing of UQU programs and activities
9.	Investment and Knowledge-Based Economy	Development of the University's own resources	1- Material utilization of the university's facilities 2- Investment in knowledge-based economy

Consistency between Goals and objectives of the Math and UQU Goals:

Math. / UQU	G-I		G-II		G-III		G-IV		
	O-a	O-b	O-a	O-b	O-a	O-b	O-a	O-b	O-c
1	✓	✓	✓						
2		✓	✓	✓		✓		✓	✓
3			✓		✓	✓	✓		
4					✓				
5		✓	✓				✓		
6			✓	✓					
7	✓	✓			✓	✓			✓
8				✓					
9					✓	✓		✓	

4. Graduate Attributes:

- Highly qualified and competitive graduates,
- Demonstrate deep conceptual understanding of different fields of Mathematical Sciences,
- Work effectively in teams and with same and multiple disciplinary,
- Approach challenges with curiosity, critical thinking and creativity,
- Apply acquired skills to tackling real life problems,
- Able to learn independently with high efficiency,
- Display a strong sense of personal and professional identity.

5.Program learning Outcomes*

Knowledge:

K1	Describe the related basic scientific facts, concepts, principles and techniques
K2	Identify the relation between the studied topics and the environment
K3	Express mathematical concepts accurately and concisely in numerical and spoken language
K4	Present the written proofs using standard methods
K5	Draw logical conclusions using the logic, and inductive and deductive reasoning

Skills	
S1	Analyze qualitatively and quantitatively science relevant data
S2	Develop lines of argument and appropriate judgments in accordance with scientific theories and concepts
S3	Derive theories in different field of mathematical Sciences
S4	Use mathematical models to make predictions and informed decisions.
S5	Apply mathematical techniques and tools considering scientific ethics
S6	Develop conjectures appropriate conclusions
S7	Consider community linked problems, ethics and traditions
S8	Acquire self- and long life-learning
S9	Use the mathematical skills confidently and independently
Competence	
C1	Work in groups effectively
C2	Apply scientific models, systems, and tools effectively
C3	Exhibit the sense of beauty and neatness
C4	Use computer and its applications such as office and computational tools
C5	Evaluate the circumstances of the challenge to propose feasible processes

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

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	10	21	15
	Elective	0	0	0
College Requirements	Required	5	20	15
	Elective	0	0	0
Program Requirements	Required	28	94	69
	Elective	0	0	0
Capstone Course/Project		2	2	1
Field Experience/ Internship		-	-	
Others		-	-	
Total		45	137	

* Add a table for each track (if any)

2. Program Study Plan

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 1	3001101-2	Holy Quran (1)	Required	-	4	Institution
	3001102-2	Islamic Culture (1)	Required	-	4	Institution
	30111101-4	Calculus	Required	-	4	Department
	30121401-4	English Language (1)	Required	-	4	College
	30321101-4	General Chemistry	Required	-	4	College
Level 2	3002101-2	Arabic Language	Required	-	2	Institution
	3001141-2	Prophet Biography	Required	-	2	Institution
	30121402-4	English Language (2)	Required	30121401-4	4	College
	30131101-4	General Physics	Required	-	4	College
	30331101-4	General Biology	Required	-	4	College

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 3	3001202-2	Islamic Culture (2)	Required	3001102-2	2	Institution
	30112501-4	Calculus (2)	Required	30111101-4	4	Department
	30112401-4	Sets & Algebraic Structures	Required		4	Department
	30112401-4	Elements of Statistics & Probability	Required	30111101-4	3	Department
	30112402-4	Linear Algebra (1)	Required		4	Department
Level 4	3001201-2	Holly Quran (2)	Required	3001101-2	2	Institution
	30112502-4	Ordinary Differential Equation	Required	30112501-4	4	Department
	30112101-3	Intro. Real Analysis	Required	30112501-4	3	Department
	30112503-4	Multi-Variable Calculus	Required	30112501-4	3	Department
	30112601-3	Differential Geometry	Required	30112401-4	3	Department
Level 5	3001301-2	Holly Quran (3)	Required	3001201-2	2	Institution
	3001302-3	Islamic Culture (3)	Required	3001202-2	3	Institution
	30113102-3	Real Analysis (1)	Required	30112101-3	3	Department
	30113403-3	Group Theory	Required	30112401-4	3	Department
	30113302-3	Probabil3001402-2ity Theory	Required	30112301-3	3	Department
	30113701-4	Continuum Mechanics	Required	30112502-4	4	Department
Level 6	3001402-2	Islamic Culture (4)	Required	3001302-3	2	Institution
	30113103-3	Real Analysis (2)	Required	30113102-3	3	Department
	30113702-3	Numerical Analysis	Required	30112502-4	3	Department
	30113405-3	Discrete Mathematics	Required	30112402-4 30113403-3	3	Department
	30113404-3	Linear Algebra (2)	Required	30112402-4	3	Department
	30113504-4	Partial Differential Equations	Required	30112502-3 30112503-4	4	Department
Level 7	3001401-2	Holly Quran (4)	Required	3001301-2	2	Institution
	30114303-3	Mathematical Statistics	Required	30113302-3	3	Department
	30114406-3	Number Theory	Required	30112401-4	3	Department
	30114703-4	Fluid Mechanics	Required	30113701-4	4	Department
	30114602-3	General Topology	Required	30113102-3	3	Department
	30114201-3	Linear Programming	Required	30112402-4	3	Department
Level 8	30114407-3	Rings & Fields Theory	Required	30113403-3	3	Department
	30114105-3	Measure & Integration	Required	30113103-3	3	Department
	30114104-4	Complex Analysis	Required	30113102-3	4	Department
	30114202-3	Mathematical Software-Packages	Required	30113702-3 30114303-3	3	Department
	30114901-2	Research Project	Required	Pass the 6th Level	2	Department
	30114304-3	Financial Mathematics	Required	30114303-3	3	Department

* Include additional levels if needed

** Add a table for each track (if any)

3. Course Specifications

Insert hyperlink for all course specifications using NCAAA template

https://uqu.edu.sa/en/luc_math/App/Plans?major=791&type=1&edition=37

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)**

Program Learning Outcomes																				
Course		**Knowledge**					**Skills**									**Competence**				
Name	**Code**	K1	K2	K3	K4	K5	S1	S2	S3	S4	S5	S6	S7	S8	S9	C1	C2	C3	C4	C5
Calculus	30111101-4	I		I		I	I		I		I				I		I		I	
Calculus (2)	30112501-4	I	I	I		I	I		I	I	I				I		I		I	
Sets & Algebraic Structures	30112401-4	I		I		I	I		I		I				I		I	I	I	
Elements of Statistics & Probability	30112301-3	P		I		I	I			P	I		I		I		I	I	I	I
Linear Algebra (1)	30112402-4	P		I		P	I		I		I				I		I		I	
Differential Geometry	30112601-3	M		I		I	P	I	I		I				I		I	P	I	
Ordinary Differential Equation	30112502-4	M	P	I		I	P		I		I				I		I		I	
Multi-Variable Calculus	30112503-4	M	I	I		M	I		I		I	I	I		I		I		I	I
intro. Real Analysis	30112101-3	P			I	I	I	I	I		I	I			I		I			
Probability Theory	30113302-3	P	I	I			I	I		I	P		P			I	I		I	
Continuum Mechanics	30113701-4	M		I		I	I	I		M	I			I			I	I	I	
Real Analysis (1)	30113102-3	P				I	P		I	I	I	P			I	I	I			
Group Theory	30113403-3	P			I	I	I		I		I				I		I	I	I	
Partial Differential Equations	30113504-4	M		I		I	I	I		M	I			I			I	I	I	
Real Analysis (2)	30113103-3	M			I	I	P		I	I	I	M			I	I	I			
Linear Algebra (2)	30113404-3	M		I		P	I		I		P				I		I		I	
Numerical Analysis	30113702-3	M		I		I	I	I		M	I			I			I	I	I	I
Discrete Mathematics	30113405-3	P	I	I			I	I		I	P		P			I	I		I	
Linear Programming	30114201-3	M	I	I		I	I	I		M	I			I			I	I	I	I
Mathematical Statistics	30114303-3	M		P		P	M			P	I		M		I		I	I	I	I
General Topology	30114602-3	M		I		I	P	I	I		I				I		I	P	I	
Fluid Mechanics	30114703-4	M	I	I		I	I	I		M	I				I		I	I	I	
Number Theory	30114406-3	P		I			I	I		I	P		P			I	I		I	
Research Project	30114901-2	P		I		P	I	I		I	P		P	P		I	I		I	
Financial Mathematics	30114304-3	M	I	I		I	M	I		M	I			I			I	I	I	
Mathematical Software-Packages	30114202-3	M	I	I		M	I	I		M	I			I	M		I	I	I	M
Complex Analysis	30114104-4	M			I	I	P		I	I	I	M			I	I	I			
Measure & Integration	30114105-3	M			I	I	P		I	I	I	M			I	I	I			
Rings & Fields Theory	30114407-3	M				I	P		I	I	I	P			I	I	I			

* Add a table for each track (if any)

5. Teaching and learning strategies to achieve program learning outcomes

Describe policies, teaching and learning strategies, learning experience, and learning activities, including curricular and extra-curricular activities, to achieve the program learning outcomes.

- **Lectures:** A traditional strategy in which the lecturer talk most of the time.
- **Brainstorming:** A strategy for developing creativity and imagination. Students are divided into groups to create more ideas.
- **Cooperative learning:** Lecturer divide the students into small groups to work together about a topic.
- **Discussion:** Students are given the opportunity to discuss some topics in the classroom
- **Solving problem:** Students are asked to solve problems related to the given topic then discuss the solution with lecturer.

- **Tutorials:** Students are attending the lecturers' office to get more information about any topic or discuss certain tasks and solve some problem.

6. Assessment Methods for program learning outcomes.

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

- Homework,
- Exams,
- Quizzes,
- Discussion,
- Reports.

D. Student Admission and Support:

1. Student Admission Requirements

Prospective students applying in the bachelor's degree Program in universities are expected to have the following requirement:

- Have obtained a general high school certificate or its equivalent from within or outside the Kingdom of Saudi Arabia.
- High school certificate or its equivalent should not be older than five years. The University Council may make some exceptions if convincing reasons are provided.
- Successfully pass any test or interview assigned by the University Council.
- Should be medically fit.
- Provide a permission for study from the employer, if he works in government or private sector.
- Should not have been dismissed from any other university for disciplinary or academic reasons.
- A student registered for another university degree, shall not be admitted in another program, in the same university or another

Study and exams regulations for undergraduate students at Umm Al-Qura University can be found in the following site:

https://drive.uqu.edu.sa/_/dadregis/files/homePage/EDU.pdf

2. Guidance and Orientation Programs for New Students

- At the beginning of the year, advisors from the faculty help the new students to know the facilities and offices of the faculty that can help them locate their needs.
- Students get some guidance and advice through the university, faculty and department website.

3. Student Counseling Services

(academic, career, psychological and social)

- Faculty members are assigned advisors to help students understand the program requirements and registration process
- Each faculty member posts six office hours per week declared on his door for student's guidance.
- Assign of a committee from department staff to examine the complaints and suggestions and to stand on the ways to solve them.

4. Support for Special Need Students

(low achievers, disabled, gifted and talented)

E. Teaching and Administrative Staff

1. Needed Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professors	Pure Math Applied Math	Number Theory Fluid Mechanics	-	2	2	4
Associate Professors	Pure Math Applied Math	Algebra Numerical Analysis + Financial Mathematics	-	2	2	4
Assistant Professors	Pure Math Applied Math	Different Specialties	The specialty will be proposed during the periods of recruitment	5	5	10
Lecturers	Different Specialties	Different Specialties	The specialty will be proposed during the periods of recruitment	2	2	4
Teaching Assistants	Different Specialties	Different Specialties	The specialty will be proposed during the periods of recruitment	5	5	10
Technicians and Laboratory Assistants	Media	Media	-	1	1	2
Administrative and Supportive Staff	Secretary	-	-	2	2	4
Others (specify)	-	-	-	-	-	-

2. Professional Development

2.1 Orientation of New Teaching Staff

Describe briefly the process used for orientation of new, visiting and part-time teaching staff

- Awareness of newly appointed faculty members, visitors, or part-time employees about the vision, mission and objectives of the department and faculty.
- Explain the study plan and the outputs that must be achieved upon completion of the program.
- Clarify that scientific research related to scientific activities, research and publication and attend conferences and follow-up developments in various disciplines.

2.2 Professional Development for Teaching Staff

Describe briefly the plan and arrangements for academic and professional development of teaching staff (e.g., teaching & learning strategies, learning outcomes assessment, professional development, etc.)

- Umm Al-Qura University offers many workshops to develop and improve the ability of staff in the field of teaching and research.
- The announcement on the website of the Deanship of Academic Development and Quality Assurance: https://uqu.edu.sa/quality

- In addition, the Deanship of Scientific Research offers some workshops to develop the research activity of the staff. Their website: https://uqu.edu.sa/luc_math/App/Instructors
- Announce some workshops for the scientific research.

F. Learning Resources, Facilities, and Equipment

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

- Assigning textbooks through a scientific resource committee after reviewing the appropriateness of the material by concerned faculty and approval in the departmental and higher academic councils
- Books published by faculty members of the department are also used a resource.
- Periodically committees are formed to inspect the current textbook and compare it to the most recent textbooks in the field. The new book selected will be approved by departmental.

2. Facilities and Equipment
(Library, laboratories, medical facilities, classrooms, etc.).

Umm Al-Qura university has suitable faculties to facilitate and support students' academic and social activities such as

- King Abdullah University Library and common libraries in each faculty and department.
- Well Equipped classrooms with all teaching assistant devices
- A university polyclinic medical center
- Computer Laboratories with all needed software
- A university Sports Center

3. Arrangements to Maintain a Healthy and Safe Environment (According to the nature of the program)

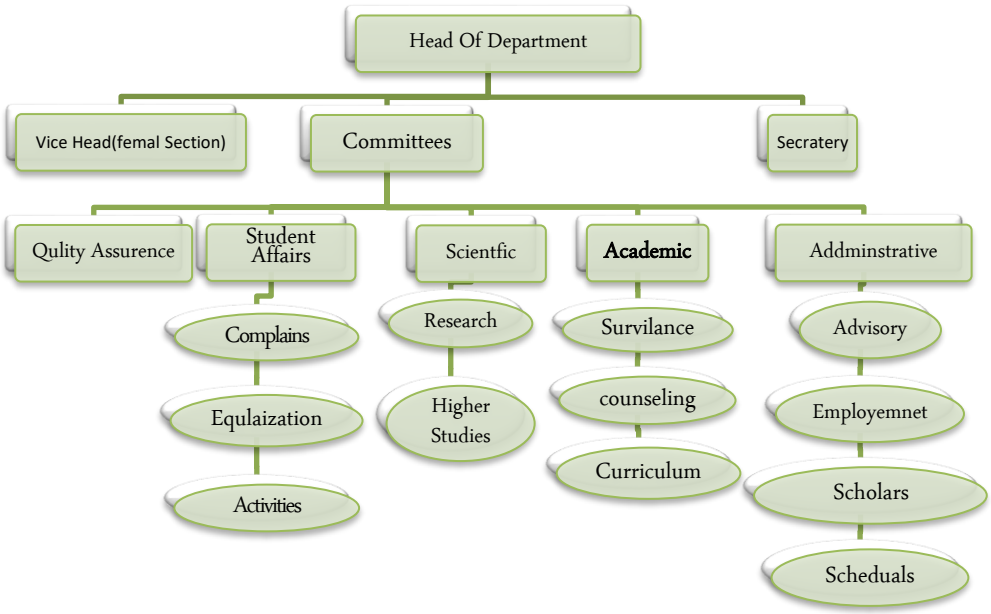
The nature of the Mathematics Program does not need extra arrangement more than what is provided by Umm Al-Qura University and faculty of Applied Sciences.

G. Program Management and Regulations

1. Program Management

1.1 Program Structure

(including boards, councils, units, committees, etc.)



1.2 Stakeholders Involvement

Describe the representation and involvement of stakeholders in the program planning and development. (students, professional bodies, scientific societies, alumni, employers, etc.)

- Regular and periodic questioners and scurvies both manually and electronically to find out the opinion, response and suggestion of stakeholders
- Establishment of alumni unit to keep contacted with students graduated for the Program
- Involvement of labor markets' personals in the meetings of Advisory Committee

2. Program Regulations

Provide a list of related program regulations, including their link to online version: admission, study and exams, recruitment, appeals and complaint regulations, etc.)

- Umm Al-Qura University deanship of student affairs provide a list of regulation concerning student recruitment, appeals and complaint in a form of a guide Student Rights and Duties Regulation, which can be found on the following document
  https://drive.uqu.edu.sa/_/studaff/files/qanon.pdf
- Moreover, Umm Al-Qura University deanship of registration and admission provide the study and exams regulations for undergraduate students at Umm Al-Qura University can be found in the following site
  https://drive.uqu.edu.sa/_/dadregis/files/homePage/EDU.pdf

H. Program Quality Assurance

1. Program Quality Assurance System

Provide online link to quality assurance manual

- https://uqu.edu.sa/quality/15352
- https://drive.uqu.edu.sa/_/quality/files/Policies/quality%20manual%201.pdf

2. Program Quality Monitoring Procedures

- Individual faculty members review current programs occasionally within the department.
- Questionnaires are assigned for faculty members 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
- A departmental committee is formed to look into the recommendations of various divisions and to make a final proposal.
- The revised program is discussed in the departmental council before approval.

3. Arrangements to Monitor Quality of Courses Taught by other Departments.

- Exchange of adequate information between Mathematics program administration and other Departments providing service courses.
- For all service courses required as part of Mathematics program, clear documentation on course details, including course evaluation results, must be provided to Mathematics program periodically.

4. Arrangements Used to Ensure the Consistency between Main Campus and Branches (including male and female sections)

Department council assign a faculty member to coordinate the teaching process of common courses to ensure the consistency of nits taught and teaching material and strategies and unify assessment techniques

5. Arrangements to Apply the Institutional Regulations Governing the Educational and Research Partnerships (if any).

Deanship of Scientific Research at Umm Al-Qura university contains a Community Partnerships Unit with the following tasks:

- Suggesting community partnerships with foreign agencies that carry out the tasks of the Vice Deanship of Research Volunteering and Voluntary Research.
- Suggesting local cooperation with colleges, deanships, and institutes to carry out the tasks of the Vice Deanship of Research Volunteering and Voluntary Research.
- Inventorying and following up and implementing of the memoranda of partnership and foreign and local cooperation.
- Assessing and regulating local and foreign community partnerships, in addition to those involving voluntary services.
- Laying out plans and suggestions to improve local and foreign community partnerships.

6. Assessment Plan for Program Learning Outcomes (PLOs), and Mechanisms of Using its Results in the Development Processes

Mathematics Program administration regularly ass the PLOs through the following mechanisms

- Questioning and surveying stakeholders,
- Internal and External review process,
- Discussions within curriculum committee and quality assurance committee

7. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
leadership	Teaching staff and administrators	Questionnaire to evaluate the performance of administrative leaders	End of the semester
effectiveness of teaching	Students	evaluation Questionnaire	End of the semester
assessment	Review Committees of Questionnaire	Analyzing the Questionnaire	End of the semester
learning resources	Library, internet, Communicate with similar departments in other universities	Report beneficiaries on the effectiveness of learning methods	During the semester

Evaluation Areas/Aspects (e.g., leadership, effectiveness of teaching & assessment, learning resources, partnerships, etc.)
Evaluation Sources (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others (specify)
Evaluation Methods (e.g., Surveys, interviews, visits, etc.)
Evaluation Time (e.g., beginning of semesters, end of academic year, etc.)

8. Program KPIs*

The period to achieve the target (5) year.

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
1	S 1.1	Stakeholders awareness ratings of the Mission Statement and Objectives	5	Surveys	End of academic year
2	S3.1	Students overall evaluation on the quality of their learning experiences. (Average rating of the overall quality on a five points scale in an annual survey of final year students.)	4	Surveys	End of academic year
3	S3.2	Proportion of courses in which student evaluations were conducted during the year	100%	From a specific program (Oracle)	End of academic year
4	S4.1	Ratio of students to teaching staff. (Based on full time equivalents).	25/1	From a specific program (Oracle)	Beginning of academic year
5	S4.2	Students overall rating on the quality	5	Surveys	End of semesters

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
		of their courses. (Average rating of students on five points scale on overall evaluation of courses.)			
6	S4.3	Proportion of teaching staff with verified doctoral qualifications	70%	From a specific program (Oracle)	Beginning of academic year
7	S4.4	Percentage of students entering programs who successfully complete first year.	75%	From a specific program (Oracle)	End of academic year
8	S4.5	Proportion of students entering undergraduate programs who complete those programs in minimum time.	70%	From a specific program (Oracle)	End of academic year
9	S5.3	Student evaluation of academic and career counselling. (Average rating on the adequacy of academic and career counselling on a five-point scale in an annual survey of final year students.)	5	Surveys	End of academic year
10	S9.1	Proportion of teaching staff leaving the institution in the past year for reasons other than age retirement.	0%	From a specific program (Oracle)	End of academic year
11	S9.2	Proportion of teaching staff participating in professional development activities during the past year.	100%	From program report	End of academic year
12	S10.1	Number of refereed publications in the previous year per full	4	From program report	End of academic year

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
		time equivalent teaching staff. (Publications based on the formula in the Higher Council Bylaw excluding conference presentations)			
13	S10.3	Proportion of full-time member of teaching staff with at least one refereed publication during the previous year.	50%	From program report	End of academic year
14	S10.4	Number of papers or reports presented at academic conferences during the past year per full time equivalent faculty members.	3	From program report	End of academic year
15	S11.1	Proportion of full-time teaching, and other staff actively engaged in community service activities.	50%	From program report	End of academic year

I. Specification Approval Data

Council / Committee	Council of the Mathematics Department	The mathematical sciences (college of applied sciences) and the mathematics (Al Leith university college) department's first meeting of the coordinative committee
Reference No.	4101050782	First meeting
Date	Sunday, 17 November 2019	Thursday, 17 October 2019

Department Head

Dr. Ali Hassani