

Republic of Iraq  
Ministry of Higher Education & Scientific Research  
Supervision and Scientific Evaluation Directorate  
Quality Assurance and Academic Accreditation

## Academic Program Specification Form for The Academic

*University: Anbar*  
*College: Education for Pure Science*  
*Department: Mathematics*  
*Date of Form Completion: 20/6/2020*

**Prof. Dr. Abdul Rahman  
Salman. Juma**

*Dean's Name*

*Date: 25 /6/2020*

*Signature*

**Assist. Prof. Haider Khadim  
Yaquob**

*Dean's Assistant for  
Scientific Affairs*

*Date: 23/6/2020*

*Signature*

**Assist. Prof. Alaa Adnan  
Auad**

*Head of Department*

*Date: 21 / 6 / 2020*

*Signature*

**Dr. Alaa Mahmood Farhan**

**Quality Assurance and University Performance Manager**

*Date: 25 /6/2020*

*Signature*

## TEMPLATE FOR PROGRAMME SPECIFICATION

### HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

#### PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the programme.

<b>1. Teaching Institution</b>	University of Anbar
<b>2. University Department</b>	College of education for pure science- Mathematics
<b>3. Programme Title</b>	Education Mathematic Sciences
<b>4. Title of Final Award</b>	Bachelor of Education Mathematic Sciences
<b>5. Modes of Attendance offered</b>	Quarterly
<b>6. Accreditation</b>	Nothing
<b>7. Other external influences</b>	School application - practical graduation research projects
<b>8. Date of production</b>	20/6/2020
<b>9. Aims of the Programme</b>	
1. Achieving the specified standards for the quality of material, human, technical and financial resources.	
2. Providing an efficient administrative staff that knows its duties and powers according to the work structures and regulations, in which the requirements of the job description are fulfilled.	
3. Providing a specialized teaching staff who is fluent in using modern techniques and methods in education with good job satisfaction.	
4. Preparing academic programs in accordance with international academic standards and providing their knowledge, training and technical requirements.	
5. Preparing students with scientific, practical and educational knowledge that meets the needs of the labor market.	
6. Paying attention to scientific research in terms of laboratory, research and researcher in order to achieve a distinguished research reputation locally and globally.	
7. Research and professional openness to community institutions to meet their needs and aspirations.	
8. Evaluate all individuals and processes to ensure quality performance and continuous improvement.	

## 10. Learning Outcomes, Teaching, Learning and Assessment Methods

### A1. Knowledge and Understanding

A1. Enable the student to acquire theoretical knowledge of Mathematics.

A2. Empowering the student how to teach and ways of communicating scientific information to students.

A3. The student's knowledge of the methods of measurement and evaluation and methods of modern teaching methods in Mathematics.

A4. The student is acquainted with the educational material by providing it electronically in the virtual classroom. In addition to enabling the student to know the learning theories related to the ages of students for the secondary school stage.

### B. Subject-specific skills

B1. Gaining knowledge and enriching the student with the methods of laboratory work.

B2. Orienting the student to the scientific method in solving all scientific problems.

B3. Knowing the objectives and origins of the art of teaching chemistry.

B4. Enabling students to acquire the skills of using virtual classrooms

### Teaching and Learning Methods

1. The method of listening and thinking deeply in order to understand the problem to solve it.

2. The method of scientific discussion and meaningful dialogue.

3. Adopting the method of monthly and final exams and submitting weekly reports.

### Assessment methods

1. The treatment method using final scores.

2. Random and surprise tests.

3. Teaching tasks in the virtual classroom.

### C. Thinking Skills

C1. Adopting the method of dialogue between the student and the professor.

C2. Interest in research projects and preparing organized reports

C3. Adopt the method of discussion. (Performance tests and seminars).

C4. Adopting e-learning to provide an interesting and flexible learning environment.

### Teaching and Learning Methods

1. Method of application in research laboratories
2. Adopting the method of constructive dialogue and discussion
3. Adopt the trial-and-error method.
4. The adoption of multimedia in the virtual classes (image, text, audio, video)

### Assessment methods

1. Preparation of the seminar (graduation research)
2. Adoption of the grading method as a basis in the evaluation process.
3. Adoption of the test method.
4. Adopting the method of discussions and dialogues between the students and the professor.
5. Create a test task in the virtual classes.

### D. General and Transferable Skills (other skills relevant to employability and personal development)

D1- That the student benefit from his learning and embody this in his personal and professional development.

D2- That the student is able to employ the knowledge he receives during the study stage.

D3- That the student benefit from theoretical knowledge in employing the teaching profession and mastering it in a concept-based manner.

Fundamentals of teaching chemistry.

D4 - Skills of modern technologies in communication, documentation and communication.

### Teaching and Learning Methods

1. Field visits in laboratories.
2. Scientific application in laboratories.
3. Take advantage of graduation research.
4. Presentation and presentation of educational content in virtual classes using multimedia (video, recorded lecture).

### Assessment Methods

1. Articles and periodical research
2. The interview
3. Final exams
4. Determining study tasks and duties periodically and regularly in the virtual classroom

## 11. Programme Structure

Level/ Year	Course or Module Code	Course or Module Title	Weekly hours	
			Lec.	Lab.
First	<b>MAT105</b>	Calculus1	2	3
	<b>MAT106</b>	Fundamental of mathematics1	2	2
	<b>MAT107</b>	Linear of Algebra 1	2	2
	<b>UOA141</b>	Computer 1	1	2
	<b>PHY105</b>	Physics 1	2	2
	<b>MAT113</b>	Calculus2	2	3
	<b>MAT114</b>	Fundamental of mathematics2	2	2
	<b>MAT115</b>	Linear of Algebra 2	2	2
	<b>UOA142</b>	Computer 2	1	2
	<b>PHY110</b>	Physics 2	2	2
	<b>EPS101</b>	Educational psychology	2	-
	<b>EPS120</b>	Education principles	2	-
	<b>UOA135</b>	Arabic language	2	
	<b>UOA140</b>	English language	2	
	<b>UOA135</b>	Human rights	1	-
	<b>UOA136</b>	freedom and democracy	2	-
Second	<b>MAT201</b>	Advance Calculus 1	2	2
	<b>MAT202</b>	Ordinary differential equation 1	2	2
	<b>MAT203</b>	Groups Algebra1	2	2
	<b>MAT204</b>	Geometry 1	2	2
	<b>MAT205</b>	Advance Computer1	2	2
	<b>MAT206</b>	Advance Calculus2	2	2
	<b>MAT207</b>	Ordinary differential equation 2	2	2
	<b>MAT208</b>	Groups Algebra2	2	2
	<b>MAT209</b>	Geometry 2	2	2
	<b>MAT210</b>	Advance Computer2	2	2
	<b>EPS 211</b>	Scientific Research Methodolgy	2	-
	<b>EPS 202</b>	Childhood psychology	2	-
	<b>EPS 201</b>	Educational administration	2	-
	<b>UOA240</b>	English language	2	-

Third	<b>MAT301</b>	Analysis Mathematical1	2	2
	<b>MAT302</b>	Partial differential equations1	2	2
	<b>MAT303</b>	Rings Algebra 1	2	2
	<b>MAT304</b>	Probability1	2	2
	<b>MAT305</b>	Numerical analysis1	2	2
	<b>MAT306</b>	Analysis Mathematical1	2	2
	<b>MAT307</b>	Partial differential equations2	2	2
	<b>MAT308</b>	Rings Algebra 2	2	2
	<b>MAT309</b>	Probability2	2	2
	<b>MAT310</b>	Numerical analysis2	2	2
	<b>EPS 311</b>	Curriculum and teaching methods	2	-
	<b>EPS312</b>	Educational guidance	2	-
	<b>UOA340</b>	English language	2	-
Fourth	<b>MAT401</b>	Analysis complex1	2	2
	<b>MAT402</b>	Topology 1	2	2
	<b>MAT403</b>	Statistic Mathematical1	2	2
	<b>MAT404</b>	Analysis Functional1	2	2
	<b>MAT405</b>	Modules 1	2	2
	<b>MAT406</b>	Analysis complex2	2	2
	<b>MAT407</b>	Topology 2	2	2
	<b>MAT408</b>	Statistic Mathematical2	2	2
	<b>MAT409</b>	Analysis Functional2	2	2
	<b>MAT410</b>	Modules 2	2	2
	<b>EPS411</b>	Measuring and evaluating	2	-
	<b>EPS412</b>	Teaching apps	2	-
	<b>EPS413</b>	School apps	2	-
	<b>EPS414</b>	Graduation Project	2	-
	<b>UOA440</b>	English language	2	-



### 13. Personal Development Planning

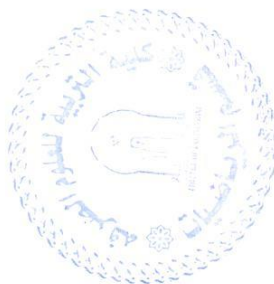
1. Using modern scientific sources.
2. Using rapid communication networks to transfer information such as the Internet.
3. Visits and practical practices in service laboratories.
4. Acquisition of scientific and modern experiences and skills in the field of modern technical communication

### 14. Admission criteria

1. Admission according to the general and central average system.
2. Admission to departments is according to the student's desire and is modified.
3. It is a condition for a graduate of the preparatory school and the scientific stream exclusively.
4. The accepted student's personal and mental integrity and freedom from physical impairments

### 15. Key sources of information about the programme

1. Curriculum books approved by the Sectorial Committee of the Faculties of Education for Pure Sciences.
2. Helping books.
3. Books and archaeological resources / sources in the English language.
4. Additional sources from the Internet.
5. The training courses held by the university on e-learning platforms.



### Curriculum Skills Map

#### Programme Learning Outcomes

Year / Level	Course Code	Course Title	Core (C) or Option (O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
	<b>MAT105</b>	Calculus1	Core	√	√	√		√	√			√	√			√	√	√	√
	<b>MAT106</b>	Fundamental of Mathematics1	Core	√		√		√	√			√				√			
	<b>MAT107</b>	Linear of Algebra 1	Core	√		√		√	√			√				√			
<b>First</b>	<b>UOA141</b>	Computer 1	Core	√		√		√	√			√				√			
	<b>PHY105</b>	Physics 1	Core	√		√		√	√			√				√			
	<b>MAT113</b>	Calculus2	Core	√		√		√	√			√				√			
	<b>MAT114</b>	Fundamental of Mathematics2	Core	√		√		√	√			√				√			
	<b>MAT115</b>	Linear of Algebra 2	Core	√		√		√	√			√				√			
	<b>UOA142</b>	Computer 2	Core	√		√		√	√			√				√			
	<b>PHY110</b>	Physics 2	Core	√		√		√	√			√				√			
	<b>EPS101</b>	Educational psychology	Core			√		√	√			√				√			
	<b>EPS120</b>	Education principles	Core			√		√	√			√				√			
	<b>UOA135</b>	Arabic language	Core			√		√	√			√				√			
<b>UOA140</b>	English language	Core			√		√	√			√				√				
<b>UOA135</b>	Human rights	Core	√		√		√	√			√				√				
<b>UOA136</b>	freedom and democracy	Core	√		√		√	√			√				√				



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				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4	
<b>Second</b>	MAT201	Advance Calculus1	Core	√		√		√	√			√					√			
	MAT202	Ordinary differential equation 1	Core	√		√		√	√			√					√			
	MAT203	Groups Algebra1	Core	√		√		√	√			√					√			
	MAT204	Geometry 1	Core	√		√		√	√			√					√			
	MAT205	Advance Computer1	Core	√		√		√	√			√					√			
	MAT206	Advance Calculus2	Core	√		√		√	√			√					√			
	MAT207	Ordinary differential equation 2	Core	√		√		√	√			√					√			
	MAT208	Groups Algebra2	Core	√		√		√	√			√					√			
	MAT209	Geometry 2	Core	√		√		√	√			√					√			
	MAT210	Advance Computer2	Core	√		√		√	√			√					√			
	EPS 211	Scientific Research Methodolgy	Core			√		√	√			√					√			

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				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4	
<b>Third</b>	MAT301	Analysis Mathematical1	Core	√		√		√	√				√				√			
	MAT302	Partial differential equations1	Core	√		√		√	√				√				√			
	MAT303	Rings Algebra 1	Core	√		√		√	√				√				√			
	MAT304	Probability1	Core	√		√		√	√				√				√			
	MAT305	Numerical analysis1	Core	√		√		√	√				√				√			
	MAT306	Analysis Mathematical1	Core	√		√		√	√				√				√			
	MAT307	Partial differential equations2	Core	√		√		√	√				√				√			
	MAT308	Rings Algebra 2	Core	√		√		√	√				√				√			
	MAT309	Probability2	Core	√		√		√	√				√				√			
	MAT310	Numerical analysis2	Core	√		√		√	√				√				√			
	EPS 311	Curriculum and teaching methods	Core			√		√	√				√				√			
	EPS312	Educational guidance	Core			√		√	√				√				√			
	UOA340	English language	Core			√		√	√				√				√			

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				Programme Learning Outcomes																
Year / Level	Course Code	CourseTitle	Core (C) or Option (O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4	
	MAT401	Analysis complex1	Core	√		√		√	√				√				√			
	MAT402	Topology 1	Core	√		√		√	√				√				√			
	MAT403	Statistic Mathematical1	Core	√		√		√	√				√				√			
	MAT404	Analysis Functional1	Core	√		√		√	√				√				√			
	MAT405	Modules 1	Core	√		√		√	√				√				√			
	MAT406	Analysis complex2	Core	√		√		√	√				√				√			
	MAT407	Topology 2	Core	√		√		√	√				√				√			
	MAT408	Statistic Mathematical2	Core	√		√		√	√				√				√			
<b>Fourth</b>	MAT409	Analysis Functional2	Core	√		√		√	√				√		√		√			
	MAT410	Modules 2	Core	√		√		√	√				√		√		√	√	√	
	EPS411	Measuring and evaluating	Core	√		√		√	√				√		√		√	√	√	
	EPS412	Teaching apps	Core			√		√	√				√		√		√	√	√	
	EPS413	School apps	Core			√		√	√				√		√		√	√	√	
	EPS414	Graduation Project	Core			√		√	√				√		√		√	√	√	
	UOA440	English language	Core			√		√	√				√				√	√		