

Academic Program Description Form

University Name: AL-Ayen University

Faculty/Institute: College of Health & Medical Technology

Scientific Department: Optics Technology

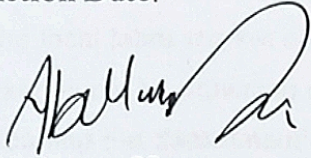
Academic or Professional Program: Name: Academic Program Description Form

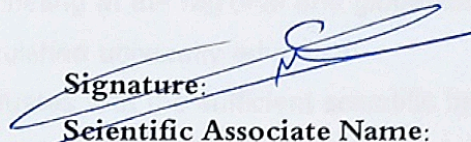
Final Certificate Name: PhD of Philosophy in Science

Academic System:

Description Preparation Date:

File Completion Date:

Signature: 
Head of Department Name:
Dr. Abdullah Hasan Jabbar
Date: 01-09-2024

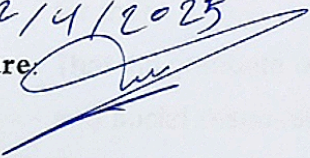
Signature: 
Scientific Associate Name:
Date: 12/4/2025

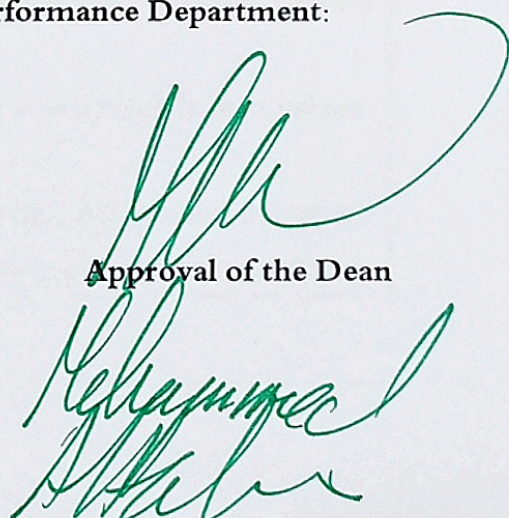
The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 12/4/2025

Signature: 


Approval of the Dean

12.4.2025

1. Program Vision

The Department of Optometry at the College of Health and Medical Technology at Al Ain University seeks to be a pioneer at the local and regional levels and to achieve a distinguished position at the global level in the field of academic education, scientific research and community service.

2. Program Mission

- Graduating a cadre of distinguished opticians capable of meeting the needs of the local labor market and competing at the regional and global labor market levels by providing distinguished university education
- Supporting the department's graduates with the sufficient scientific base and research skills that prepare them to complete their postgraduate studies at prestigious local, Arab and international universities.
- Supporting and encouraging scientific research within the department by its students and graduates.

3. Program Objectives

1. Training students in scientific research through research projects for scientific graduation students and providing all possible means of support for them.
2. That the graduate of the Opticianry Program appreciates human values and social responsibility.
3. The graduate of the Opticianry Program should be able to meet the needs of the local market and compete in the global market by being able to:

- a. Examination of the degree of visual acuity of all types and the visual field.
- b. Examination and correction of refractive errors and squint.
- c. Dealing with and using various modern devices in the field of optics, taking care of them, and preventing the transmission of infection through them.
- d. Description of eyeglasses, their manufacture, and description of contact lenses
- e. Using computers in eye examination and evaluation
- f. Educating patients about various eye diseases and how to maintain eye health and diagnose these diseases.
- g. Understanding and reading scientific articles and books related to eye health and general health.
- h. Work in health institutions affiliated with the Ministry of Health and eye examination and correction clinics.
- i. Use of scientific research skills and computer applications

4. Program Accreditation

Optometry Technologies / National Accrediting Board for Health and Medical Technology Colleges and Institutes

5. Other external influences

Central Library – Electronic Library – Internet – Laboratories – Summer Training Sites

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6. Program Structure				
Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	–	–	–	
College Requirements	–	–	–	
Department Requirements	51	192	%100	Basic
Summer Training	2	–	--	Basic
Other				

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
First Year	MTOP1101	Anatomy of the Head and Neck	6	4 Theoretical + 2 Practical
First Year	MTOP1102	Chemistry Principles	4	2 Theoretical + 2 Practical
First Year	MTOP1103	Medical and Optical Physics 1	4	2 Theoretical + 2 Practical
First Year	MTOP1104	Biology 1	4	2 Theoretical + 2 Practical
First Year	MTOP1105	Computer Principles 1	3	2 Theoretical + 1 Practical
First Year	MTOP1106	Human Rights and Democracy	2	2 Theoretical + 0 Practical
First Year	MTOP1107	English Language	2	2 Theoretical + 0 Practical
First Year	MTOP1201	Anatomy of the Eye	6	4 Theoretical + 2 Practical
First Year	MTOP1202	Biochemistry	4	2 Theoretical + 2 Practical
First Year	MTOP1203	Medical and Optical Physics 2	4	2 Theoretical + 2 Practical

First Year	MTOP1204	Biology 2	6	4 Theoretical + 2 Practical
First Year	MTOP1205	Computer Principles 1	3	2 Theoretical + 1 Practical
First Year	MTOP1206	Arabic Language	2	2 Theoretical + 0 Practical
Second Year	MTOP2101	Physiology of the Eye and Vision 1	4	2 Theoretical + 2 Practical
Second Year	MTOP2102	Optical Equipment 1	6	2 Theoretical + 4 Practical
Second Year	MTOP2103	Eye Health 1	3	1 Theoretical + 2 Practical
Second Year	MTOP2104	Refractive Errors 1	6	2 Theoretical + 4 Practical
Second Year	MTOP2105	Statistical Applications 1	3	1 Theoretical + 2 Practical
Second Year	MTOP2106	Medical Terminology	2	2 Theoretical + Practical
Second Year	MTOP2201	Physiology of the Eye and Vision 2	4	2 Theoretical + 2 Practical
Second Year	MTOP2202	Optical Equipment 2	6	2 Theoretical + 4 Practical
Second Year	MTOP2203	Eye Health 2	3	1 Theoretical + 2 Practical
Second Year	MTOP2204	Refractive Errors 2	6	2 Theoretical + 4 Practical
Second Year	MTOP2205	Statistical Applications 2	3	2 Theoretical + 1 Practical
Second Year	MTOP2206	Pharmacology	2	2 Theoretical + Practical
Second Year	MTOP2207	Laser in Ophthalmology	3	1 Theoretical + 2 Practical
Third Year	MTOP3101	Ocular Manifestation in Systemic Disorders 1	4	2 Theoretical + 2 Practical
Third Year	MTOP3102	Prescription Eye Glasses 1	4	2 Theoretical + 2 Practical
Third Year	MTOP3103	Squint 1	4	2 Theoretical + 2 Practical
Third Year	MTOP3104	Refractive Errors 3	4	2 Theoretical + 2 Practical
Third Year	MTOP3105	Optical Equipment 3	6	2 Theoretical + 4 Practical
Third Year	MTOP3106	Treatment of Eye Diseases with Laser	3	1 Theoretical + 2 Practical
Third Year	MTOP3107	Computer Applications 1	3	1 Theoretical + 2 Practical

Third Year	MTOP3201	Ocular Manifestation in Systemic Disorders 2	4	2 Theoretical + 2 Practical
Third Year	MTOP3202	Prescription Eye Glasses 2	6	2 Theoretical + 4 Practical
Third Year	MTOP3203	Squint 2	4	2 Theoretical + 2 Practical
Third Year	MTOP3204	Refractive Errors 4	6	2 Theoretical + 4 Practical
Third Year	MTOP3205	Optical Equipment 4	4	2 Theoretical + 2 Practical
Third Year	MTOP3206	Computer Applications 2	2	1 Theoretical + 1 Practical
Third Year	MTOP3207	Research Methods	4	2 Theoretical + 2 Practical
Fourth Year	MTOP4001	Ocular Manifestation of Systemic and Neurological Disease	6	2 Theoretical + 4 Practical
Fourth Year	MTOP4002	Squint 2	6	2 Theoretical + 4 Practical
Fourth Year	MTOP4003	Pediatric Ophthalmology	6	2 Theoretical + 4 Practical
Fourth Year	MTOP4004	Glasses and Contact Lenses 2	6	2 Theoretical + 4 Practical
Fourth Year	MTOP4005	Ocular Prosthetics	6	2 Theoretical + 4 Practical
Fourth Year	MTOP4006	X-ray and Ultrasound of the Eye	6	2 Theoretical + 4 Practical
Fourth Year	MTOP4007	Graduation Project	4	
Fourth Year	MTOP4008	Workshop	4	0 Theoretical + 4 Practical
Fourth Year	MTOP4009	Professional Ethics	4	2 Theoretical + 2 Practical

8. Expected learning outcomes of the program	
Knowledge	
A1	Define and classify different types of visual acuity, low vision, and visual field defects.
A2	Describe the causes, symptoms, and classification of refractive errors and strabismus.
A3	Explain the principles of lens design and materials for both spectacles and contact lenses.

A4	Identify and explain the functions of various software programs used in optometry to assess vision.
A5	Summarize common eye diseases, their associated risk factors, and preventive measures.
A6	Critically analyze and interpret research findings from scientific publications related to eye health.
A7	Explain the principles of research methodology and data analysis
Skills	
B1	Accurately perform visual acuity and visual field assessments using appropriate equipment.
B2	Skillfully operate and calibrate various vision testing devices to accurately assess refractive errors and strabismus, while adhering to infection control procedures.
B3	Accurately measure and calculate lens parameters and prescribe eyeglasses and contact lenses.
B4	Effectively use computer equipment and software to perform visual assessments and analyze data.
B5	Ability to facilitate work using computer applications and information technology.
Ethics	
C1	Demonstrate patience and understanding when explaining visual acuity and visual field test results to patients.
C2	Practice maintenance and equipment sterilization policies to prevent cross-contamination and ensure patient safety. .
C3	Deeply understand the importance of technology in efficient and accurate vision care.
C4	Efforts to educate and empower patients in maintaining their eye health.

C5	Adhere to the use of evidence-based practices.
C6	Appreciate high human values and ethics.
C7	Communicate effectively with individuals from diverse disciplines

9. Teaching and Learning Strategies

Teaching Strategies

1. Interactive Lecture
2. Light and Motion Displays
3. Dialogue and Discussion
4. Exercises
5. Laboratory Experiments
6. Problem Solving
7. Brainstorming
8. Projects

Learning Strategies

1. Self-Learning
2. Learning by Exploration
3. Learning by Research
4. Learning by Modeling and Simulation
5. E-Learning

10. Evaluation methods

- 1– Final and midterm exams
- 2– Practical exams
- 3– Oral questions

- 4- Student reports
- 5- Termwork
- 6- Simulation programs and websites

11. Faculty						
Faculty Members						
Academic Rank	Specialization		Special Requirements/S kills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	Chemistry	Biochemistry			1	
Professor	Physics	Solid State Physics and Thin Films			1	
Assistant Professor	General Medicine	Microbiology			1	
Assistant Professor	General Medicine	Medicine and Eye Surgery			1	
Lecturer Doctor	General Medicine	Medicine and Eye Surgery			1	
Lecturer Doctor	General Medicine	Medicine and Eye Surgery			1	
Lecturer Doctor	Physics	Biophysics			1	
Lecturer Doctor	Physics	Nano-Sensing and Image Processing			1	
Lecturer Doctor	Physics	Nanotechnology and			1	

		Laser Applications				
Lecturer Doctor	Physics	Optical Electronics			1	
Lecturer Doctor	Arabic Language	Literary Criticism			1	
Lecturer Doctor	Mathematics Education	Operations Research			1	
Lecturer Doctor	Environmental Sciences	Environmental Sciences			1	
Assistant Lecturer	Chemistry Sciences	Inorganic Chemistry				1
Assistant Lecturer	Genetic Sciences Engineering	Molecular Genetics				1
Assistant Lecturer	Curriculum and Teaching	General Curriculum				1
Assistant Lecturer	Arabic Language	Arabic Language				1
Assistant Lecturer	English	English				1
Assistant Lecturer	Business Administration	Business Administration				1
Assistant Lecturer	Administration and Economics	Accounting				1
Assistant Lecturer	Physics	Physics Teaching Methods				1
Assistant Lecturer	Administration and Economics	Accounting				1
Assistant Lecturer	Optical Techniques	Optical Techniques			1	
Research Assistant	Optical Techniques	Optical Techniques				8

Professional Development

Mentoring new faculty members

1. Commitment to Iraqi quality standards for education
2. Keeping curriculum resources up-to-date with new scientific research
3. Continuously measuring the educational performance of instructors and using this measurement to guide them
4. Expanding the use of diverse teaching strategies

Professional development of faculty members

1. New faculty members are inducted by the department head and the department coordinator.
2. Department Council meetings.
3. Seminars and workshops related to the educational and academic process.
4. Curriculum book.

12. Acceptance Criterion

Central (by the Ministry of Higher Education and Scientific Research)

13. The most important sources of information about the program

- 1– The Optometry Department's page on the Al Ain University website
- 2– Department bulletin boards
- 3– The university's social media accounts

14. Program Development Plan

1. Holding scientific and knowledge-based seminars and workshops for faculty members
2. Developing teaching strategies
3. Encouraging scientific research by faculty members
4. Commitment to an advanced teaching and learning strategy

Program Skills Outline																						
				Required program Learning outcomes																		
Year/Level	Course Code	Course Name	Basic or optional	Knowledge							Skills					Ethics						
				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	C7
First Year	MTOP1101	Anatomy of the Head and Neck	Basic	•																		
	MTOP1102	Chemistry Principles	Basic																			
	MTOP1103	Medical and Optical Physics 1	Basic	•														•				
	MTOP1104	Biology 1	Basic	•																		
	MTOP1105	Computer Principles 1	Basic				•								•							
	MTOP1106	Human Rights and Democracy	Basic																		•	
	MTOP1107	English Language	Basic																			•
	MTOP1201	Anatomy of the Eye	Basic	•																		
	MTOP1202	Biochemistry	Basic	•																		
	MTOP1203	Medical and Optical Physics 2	Basic	•														•				

Second Year	MTOP1204	Biology 2	Basic																			
	MTOP1205	Computer Principles 1	Basic				•								•			•				
	MTOP1206	Arabic Language	Basic																			•
	MTOP2101	Physiology of the Eye and Vision 1	Basic	•																		
	MTOP2102	Optical Equipment 1	Basic									•					•					
	MTOP2103	Eye Health 1	Basic					•											•			
	MTOP2104	Refractive Errors 1	Basic		•								•									
	MTOP2105	Statistical Applications 1	Basic						•					•						•		
	MTOP2106	Medical Terminology	Basic																			•
	MTOP2201	Physiology of the Eye and Vision 2	Basic	•																		
	MTOP2202	Optical Equipment 2	Basic									•					•					
	MTOP2203	Eye Health 2	Basic					•											•			
	MTOP2204	Refractive Errors 2	Basic		•							•										
	MTOP2205	Statistical Applications 2	Basic							•	•			•						•		
	MTOP2206	Pharmacology	Basic																	•		
	MTOP2207	Laser in Ophthalmology	Basic									•						•				
Third Year	MTOP3101	Ocular Manifestation in Systemic Disorders 1	Basic					•								•						

	MTOP3102	Prescription Eye Glasses 1	Basic			•							•									
	MTOP3103	Squint 1	Basic		•																	
	MTOP3104	Refractive Errors 3	Basic		•							•										
	MTOP3105	Optical Equipment 3	Basic									•					•					
	MTOP3106	Treatment of Eye Diseases with Laser	Basic															•				
	MTOP3107	Computer Applications 1	Basic				•						•					•				
	MTOP3201	Ocular Manifestation in Systemic Disorders 2	Basic					•							•							
	MTOP3202	Prescription Eye Glasses 2	Basic			•							•									
	MTOP3203	Squint 2	Basic		•																	
	MTOP3204	Refractive Errors 4	Basic		•							•										
	MTOP3205	Optical Equipment 4	Basic									•					•					
	MTOP3206	Computer Applications 2	Basic				•						•									
	MTOP3207	Research Methods	Basic						•											•		
Fourth Year	MTOP4001	Ocular Manifestation of Systemic and Neurological Disease	Basic					•							•							
	MTOP4002	Squint 2	Basic																			

	MTOP4003	Pediatric Ophthalmology	Basic					●						●								
	MTOP4004	Glasses and Contact Lenses 2	Basic			●							●									
	MTOP4005	Ocular Prosthetics	Basic											●								
	MTOP4006	X-ray and Ultrasound of the Eye	Basic	●													●					
	MTOP4007	Graduation Project	Basic										●						●			
	MTOP4008	Workshop	Basic										●									
	MTOP4009	Professional Ethics	Basic																	●		

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