



# Course Specification

## (Bachelor)

Course Title:	Ophthalmic lenses
Course Code:	APOP1104
Program:	Optician Diploma
Department:	
College:	Applied Collage
Institution:	Umm Al-Qura University, Makkah, Saudi Arabia
Version:	1
Last Revision Date:	8 December 2024

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## A. General information about the course:

### 1. Course Identification

#### 1. Credit hours: ( 2h )

2 credit hrs (theoretical)

#### 2. Course type

- A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
- B. ☒ Required ☐ Elective

#### 3. Level/year at which this course is offered: ( 1<sup>st</sup> level / 1<sup>st</sup> year)

#### 4. Course General Description:

Ophthalmic Lenses are corrective lenses prescribed to improve vision by correcting refractive errors such as myopia (nearsightedness), hyperopia (farsightedness), astigmatism, and presbyopia. The specifications and measurements of ophthalmic lenses are essential to ensure proper visual correction, comfort, and optimal performance. These specifications involve several key factors, including lens power, material, coatings, and measurements that determine how the lenses fit into frames and sit in front of the eyes.

#### 5. Pre-requirements for this course (if any):

NA

#### 6. Co-requisites for this course (if any):

NA

#### 7. Course Main Objective(s):

**Be the end of the course, students should to:**

- 1- Understanding Optical Principles
- 2- Corrective Lenses for Vision Errors
- 3- Lens Prescriptions
- 4- Lens Design and Materials
- 5- Optical Calculations
- 6- Lens Coatings and Enhancements

### 2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	100
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> <li>• Traditional classroom</li> <li>• E-learning</li> </ul>		
4	Distance learning		



### 3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	<b>Lectures</b>	30
2.	<b>Laboratory/Studio</b>	
3.	<b>Field</b>	
4.	<b>Tutorial</b>	
5.	<b>Others (specify)</b>	
<b>Total</b>		<b>30</b>

### B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and understanding</b>			
1.1	Understand the basic principles of optics, including light behavior, refraction, and lens design	K1	Interactive Lecturing	Examinations
1.2	Recognize the role of lenses in modifying light paths to correct visual deficiencies	K2	Interactive Lecturing	Examinations
1.3	Identify different types of ophthalmic lenses	K4	Interactive Lecturing	Examinations
<b>2.0</b>	<b>Skills</b>			
2.1	Accurately interpret and transcribe ophthalmic prescriptions	S1	Interactive Lecturing	Examinations
2.2	Perform calculations for lens power, thickness, decentration, and prismatic effects.	S3	Interactive Lecturing	Examinations
3.2	Choose suitable materials and coatings for specific patient lifestyles and environments	S1	Interactive Lecturing	Examinations
<b>3.0</b>	<b>Values, autonomy, and responsibility</b>			
3.1	Work effectively with optometrists and opticians to deliver optimal solutions for patients.	V1	Individual and Group Presentations	Presentations
3.2	Prioritize the well-being and visual comfort of patients above all else	V2	Individual and Group Presentations	Presentations

## C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Ophthalmic Lenses	2
2.	Vision and Optics Basics	2
3.	Lens Types and Classification	2
4.	Lens Materials	2
5.	Refractive Errors and Lens Correction	2
6.	Lens Power and Prescriptions	2
7.	Prism in Lenses	2
8.	Aberration Control in Lenses	2
9.	Lens Coatings and Treatments	2
10.	Progressive Addition Lenses (PALs)	2
11.	Specialized Lenses	2
12.	Pediatric Lenses	2
13.	Advanced Lens Types	2
14.	Low Vision Aids	2
15.	Troubleshooting Lens Issues	2
Total		30

## D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes	5	10
2.	Mid-Term Exam	8	20
3.	Presentations	12	10
4.	Homework	1 - 14	10
5.	Final Exam	16	50

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

## E. Learning Resources and Facilities

### 1. References and Learning Resources

Essential References	"Principles of Ophthalmic Lenses" by M. Jalie
Supportive References	
Electronic Materials	
Other Learning Materials	

### 2. Required Facilities and equipment





Items	Resources
<b>facilities</b> (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classrooms, , exhibition rooms
<b>Technology equipment</b> (Projector, smart board, software)	Projector
<b>Other equipment</b> (Depending on the nature of the specialty)	

## F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students and Faculty	Direct
Effectiveness of students' assessment	Faculty and Program Leaders	Direct
Quality of learning resources	Students, Faculty and Program Leaders	Indirect
The extent to which CLOs have been achieved	Faculty and Program Leaders	Indirect
<b>Other</b>		

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))

**Assessment Methods** (Direct, Indirect)

## G. Specification Approval

<b>COUNCIL /COMMITTEE</b>	Umm Al-Qura University Council
<b>REFERENCE NO.</b>	851141114462/190386
<b>DATE</b>	1446/11/22

