

1. Course Name:	
Physiology of the eye and vision 2	
2. Course Code:	
MTOP2201	
3. Semester / Year:	
second semester– second year 2024–2025	
4. Description Preparation Date:	
27-02-2025	
5. Available Attendance Forms:	
100% class attendance	
6. Number of Credit Hours (Total) / Number of Units (Total):	
60 hours per semester – 4 credits	
7. Course administrator's name (mention all, if more than one name)	
Name: associated professor Bassel Adel Ismail Email: bassel.adel@alayen.edu.lb	
8. Course Objectives	
Course Objectives	Provide students with profound and abundant information about the layers of the eye, its sections, biological components and their respective roles, which constitutes an update of the course of the first semester • Developing scientific logic in students by linking the function of each layer in the eye with the function of the next class and integrating the functions to obtain the general function of the eye, which is to consider the role of each in the process of sight. • Linking diseases and problems affecting layers and eye sections to the function of each layer allowing the student to understand partially and completely the diseases and eye problems A. Enabling students to read, understand and analyze Medical reports B. Any research, information or accurate scientific progress in the field of eyesight and eye
9. Teaching and Learning Strategies	
Strategy	

	The teaching of the subject is based on an interactive lecture between the professor and students and dialogue and discussion, allowing students to learn through deep exploration of the tissue of the eye and its roles.
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1+2+3	6	A1	The lens The lens and accommodation Mechanism of accommodation	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
4	2	A1	Optics refraction Accommodation and retinal role	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
5	4	A1	Introduction: lacrimal system and tears	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
6+7	4	A1	The vitreous anatomy, Ultrastructure biochemical aspects Aging of vitreous support function for retina	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
8+9 +10	6	A1	Retina histology function retina central peripheral retina fovea, parafovea pit rod & cone pathways	Interactive Lecture	Classroom Conducting exams late lecture, periodic questions and homework

			difference		
11	2	A1	Color blindness clinical types genetics, Ishihara	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
12	2	A1	High visual center and light reflex	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
13+14	6	A1	Perimetry & visual field testing methods of testing visual field, types of perimetry	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
15	4	A1	Revision	Interactive Lecture	Classroom Conducting exams late lecture, periodic question and homework

11. Course Evaluation

The student grades are distributed from 100 points to the full course and the student examines two university examinations.

The midterm exam is for 40 points and divided according to the following:

5 points of class participation and attendance

15 points Written Practical Examination

20 points Written Theoretical Examination

The Final is for 60 points and divided according to the following:

25 points for practical exam

35 points for theoretical exam

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Adler's Physiology of the Eye, Expert Consult, 11Th Edition 2011
Recommended books and references (scientific journals, reports...)	Elsevier, Sciencedirect springer li Pdfdrive
Electronic References, Websites	https://www.aao.org/

Course Description Form

1. Course Name:	
Optical Equipment 2	
2. Course Code:	
MTOP2102	
3. Semester / Year:	
Second semester / Second	
4. Description Preparation Date:	
5. Available Attendance Forms:	
In attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
90/4	
7. Course administrator's name (mention all, if more than one name)	
Name: Qayssar sattar abd Email: qisser satar@alayer.edu.iq	
8. Course Objectives	
Course Objectives	General objective: The student will be familiar with all optical devices and their use ● Specific objective: To be able to operate the devices ● And how to maintain them
9. Teaching and Learning Strategies	
Strategy	Interactive Lecture 2- Light and Motion Shows 3- Dialogue and Discussion 4- Exercises 5- Laboratory Experiments 6- Problem Solving

10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory 4 Practical	B1	Revision	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
2	2 Theory 4 Practical	B1	Lensometer	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
3	2 Theory 4 Practical	B1	Fundus Camera	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
4	2 Theory 4 Practical	B1	External Eye Photography	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
5	2 Theory 4 Practical	B1	Indirect Ophthalmoscope	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
6	2 Theory 4 Practical	B1	Direct Ophthalmoscope	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports

7	2 Theory 4 Practical	B1	Corneal Examination Placido Disc	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
8+9	2 Theory 4 Practical	B1	Corneal Examination Keratometer	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
10	2 Theory 4 Practical	B1	Corneal Examination VKG	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
11	2 Theory 4 Practical	B1	Corneal Examination Specular Microscopy	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
12	2 Theory 4 Practical	B1	Corneal Examination Aesthesiometer	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
13+14	2 Theory 4 Practical	B1	Corneal Topographer	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
15	2 Theory 4 Practical	B1	Revision	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
11. Course Evaluation					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc					
1. Monthly Exam: 25 marks					

- 2. Semester Exam: 70 marks
- 3. Interaction: 1 mark
- 4. Reports: 2 marks
- 5. Oral Exams: 1 mark
- 6. Practical Exams: 1 mark

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Borish's Clinical Refraction Clinical Optics Optical Devices in Ophthalmology and Optometry: Technology, Design Principles and Clinical Applications
Electronic References, Websites	

Course Description Form

1. Course Name:					
Refractive Errors 2					
2. Course Code:					
MTOP2204					
3. Semester / Year:					
2 nd semester/2 nd year					
4. Description Preparation Date:					
09/02/2025					
5. Available Attendance Forms:					
Physical Presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
6 Credit Hours/4 Units					
7. Course administrator's name (mention all, if more than one name)					
Name: Qassim Aboud Yasser			Email:		
8. Course Objectives					
Course Objectives			- General objective: Identify the types of visual defects - Specific objective: Diagnose refractive errors and methods of treating them		
9. Teaching and Learning Strategies					
Strategy		- Interactive lecture - Brainstorming - Laboratory experiments			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1-3	6 Theory+ 12 Practical	((A2) Describe the causes, symptoms, classification and strabismus. (B2) Operation and calibration of strabismus diagnostic and measurement devices	Strabismus (definition, types and diagnosis, correlation)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
4	2 Theory+ 4 Practical	(A1) Definition and classification of different types of visual acuity and visual impairment	Definition of Low vision and types	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
5	2 Theory+ 4 Practical	(B2) Operation and calibration of devices used with visually impaired patients	Instrument and devices uses in low vision	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
6	2 Theory+ 4 Practical	(B2) Operation and calibration of visual impairment diagnostic devices	Test of low vision (V.A for far and Near)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
7	2 Theory+ 4 Practical	(B2) Operation and calibration of optical field measuring devices	Visual field	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
8	2 Theory+ 4 Practical	(B2) Operation and calibration of optical magnification measuring devices	Magnification	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports

9-10	2 Theory+ 4 Practical	(A2) Describe the causes and symptoms of color blindness.	Color blindness	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
11-12	4 Theory+ 8 Practical	(B3) Measurement and calculation of the criteria for describing glasses	Writing prescription	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
13-14	2 Theory+ 4 Practical	(B3) Measurement and calculation of the criteria for describing glasses	Transposition	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
15	2 Theory+ 4 Practical	General Revision	Revision	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc

1. Monthly Exam: 25 marks
2. Semester Exam: 70 marks
3. Interaction: 1 mark
4. Oral Exam: 3 marks
5. Practical Exam: 1 mark

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Shukla, Y. (2015). Management Refractive Errors & Prescription Spectacles. JP Medical Ltd.
Recommended books and references (scientific journals, reports...)	, Lens, A. (2024). Optics, retinoscopy, a refractometry. CRC Press.
Electronic References, Websites	www.eyewiki.org

Course Description Form

1. Course Name:	
Pharmacology	
2. Course Code:	
MTOP2206	
3. Semester / Year:	
2 nd semester/2 nd year	
4. Description Preparation Date:	
09/02/2025	
5. Available Attendance Forms:	
Physical Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
6 Credit Hours/4 Units	
7. Course administrator's name (mention all, if more than one name)	
Name: AMMAR ADEL FAHD Email: AmmarAdilFahad@Gmail.com	
8. Course Objectives	
Course Objectives	General Objective: For the student to be knowledgeable in understanding the effect of medications and their multiple uses. Specific Objective: To understand the mechanism of action of medications across their different classes, drug interactions, pharmacokinetics, and the side effects of each medication.
9. Teaching and Learning Strategies	
Strategy	- Interactive lecture - Discussion - Discovery Learning - Tutorials

10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory	A5: Adhering to the use of evidence-based practices.	Principles of Drug Therapy	Lectures Interactive + Scientific Exercises	Paper, practical, oral exams and reports
2	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs Affecting the Autonomic Nervous System – I	Lectures Interactive + Scientific Exercises	Paper, practical, oral exams and reports
3	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs Affecting the Autonomic Nervous System – II	Lectures Interactive + Scientific Exercises	Paper, practical, oral exams and reports
4	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs Affecting the Central Nervous System	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
5	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs Affecting the Cardiovascular System – I	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
6	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs Affecting the Cardiovascular System – II	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
7	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs Affecting the Endocrine System	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
8	2 Theory	A5: Adhering to the use of evidence-based practices.	Chemotherapeutic Drugs – I	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
9	2 Theory	A5: Adhering to the use of evidence-based practices.	Chemotherapeutic Drugs – II	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports

10	4 Theory	A5: Adhering to the use of evidence-based practices.	Anti-inflammatory, Antipyretic, and Analgesic Agents	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
11	2 Theory	A5: Adhering to the use of evidence-based practices.	Gastrointestinal and Antiemetic Drugs	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
12	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs for Disorders of the Respiratory System	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
13	2 Theory	A5: Adhering to the use of evidence-based practices.	Anti-inflammatory, Antipyretic, and Analgesic Agents	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
14	2 Theory	A5: Adhering to the use of evidence-based practices.	Drugs of Abuse	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports
15	2 Theory	A5: Adhering to the use of evidence-based practices.	Principles of Drug Therapy	Lectures Interactive + Scientific Experiments	Paper, practical, oral exams and reports

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc

1. Monthly Exam: 25 marks
2. Semester Exam: 70 marks
3. Interaction: 1 mark
4. Oral Exam: 3 marks
5. Practical Exam: 1 mark

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Shukla, Y. (2015). Management Refractive Errors & Prescription Spectacles. JP Medical Ltd.
Recommended books and references (scientific journals, reports...)	, Lens, A. (2024). Optics, retinoscopy, a refractometry. CRC Press.
Electronic References, Websites	www.eyewiki.org

Course Description Form

1. Course Name:					
Eye health 2					
2. Course Code:					
MTOP2203					
3. Semester / Year:					
Second/ Second year					
4. Description Preparation Date:					
2025/02/09					
5. Available Attendance Forms:					
In person					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4 / 90					
7. Course administrator's name (mention all, if more than one name)					
Name: Qassim Abood Yasser Email: Qassim.abood@alayen.edu.iq					
8. Course Objectives					
Course Objectives			General objective: For the student to become familiar with all the diseases and injuries that the eye is exposed to. Special objective: To become familiar in a broad way with every disease that may affect the eye and the methods of early diagnosis and thus guidance, advice and referral to specialists to provide the correct treatment.		
9. Teaching and Learning Strategies					
Strategy	Interactive Lecture Dialogue and Discussion Learning by Exploration				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1-2	4 Theoretical + 8 Practical	C4 Understand the anatomical structure of the eye and its different parts. Know the basic physiological functions of the eye and how they work.	National program for control of blindness	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
3-4	4 Theoretical + 8 Practical	A5 Understanding terminology related to diseases, diagnostic procedures and treatment in the eyes	Acute loss of vision, differential diagnosis	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports
6-5	4 Theoretical + 8 Practical	A5 Understanding terminology related to diseases, diagnostic procedures and treatment in the eyes	Gradual loss of vision	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports
8-7	4 Theoretical + 8 Practical	A5 Understanding terminology related to diseases, diagnostic procedures and treatment in the eyes	Painful eye: differential diagnosis	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports
10-9	4 Theoretical + 8 Practical	A5 Understanding terminology related to diseases, diagnostic procedures and treatment in the eyes	Red eye: differential diagnosis	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports

11	2 Theoretical + 4 Practical	C4 Understand the anatomical structure of the eye and its different parts. Know the basic physiological functions of the eye and how they work.	Information, education and communication	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports
13-12	4 Theoretical + 8 Practical	C4 Understand the anatomical structure of the eye and its different parts. Know the basic physiological functions of the eye and how they work.	Rehabilitation of visually handicapped	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports
14	2 Theoretical + 4 Practical	C4 Understand the anatomical structure of the eye and its different parts. Know the basic physiological functions of the eye and how they work.	National program for control of blindness	Lectures Interactive + Scientific Experiments + Exercises	practical, oral exams and reports
15	2 Theoretical + 4 Practical	Revision	Revision	Lectures Interactive	practical, oral exams and reports
11. Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc

1. Monthly Exam: 25 marks

2. Semester Exam: 70 marks

3. Interaction: 1 mark

4. Reports: 1 mark

5. Oral Exam: 2 marks

6. Practical Exams: 1 mark

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	American academy of ophthalmolog kanski clinical ophthalmology
Recommended books and references (scientific journals, reports...)	Journal of Optometry
Electronic References, Websites	