

1. Course Name:	
Physiology of the eye and vision 1	
2. Course Code:	
3. Semester / Year:	
First 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 abundant information about the layers of the eye, its sections, its biological components and their respective roles • Developing scientific logic in students by connecting 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 and is to consider • 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 • 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	4	A1	Visual acuity	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
3	2	A1	Binocular vision Benefits of having two eyes	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
4+5	4	A1	Optics and refraction: the image of the eye The age of the eye	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
6	2	A1	Stereopsis: 3-dimensional vision	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework
7	2	A1	Pupillary reflex	Interactive Lecture	Classroom Conducting exams in lecture, periodic questions and homework

8	2	A1	Extrinsic muscle action, ocular movement	Interactive Lecture	Class	Conducting exams in lecture, periodic questions and homework
9	2	A1	Eye movement types coordinated movements	Interactive Lecture	Class	Conducting exams in lecture, periodic questions and homework
10+11+12	6	A1	Cornea and sclera anatomy corneal transparency, responses wounding wounding healing corneal nutrition vit.A & cornea	Interactive Lecture	Class	Conducting exams in lecture, periodic questions and homework
13+14	4	A1	Aqueous humor and IOP	Interactive Lecture	Class	Conducting exams late lecture, periodic question and homework
15	2	A1	The lens	Interactive Lecture	Class	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/ American academy of ophthalmolo

Course Description Form

1. Course Name:					
Refractive Errors 1					
2. Course Code:					
MTOP2104					
3. Semester / Year:					
First Semester/ Second Year					
4. Description Preparation Date:					
25/2/2025					
5. Available Attendance Forms:					
Physical Presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
90 Credit hours in total/ 4 units					
7. Course administrator's name (mention all, if more than one name)					
Name: hassan.yossry_pg@alexu.edu.eg 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	2 theoretical + 4 practical	(B2) Describe and classify the properties of light.	light	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
2	2 theoretical + 4 practical	(A1) Describe and classify the properties of mirrors and lenses.	Mirrors and Lens	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
3	2 theoretical + 4 practical	(B2) Operation and calibration of vision testing devices for measuring visual acuity	Visual Acuity	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
4	2 theoretical + 4 practical	(B2) Operation and calibration of lenses for evaluation and correction of refractive errors	Trial Lens Case	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
5	2 theoretical + 4 practical	(B2) Operation and calibration of retinoscopy devices	Retinoscope (Introduction+types of movement)	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
6	2 theoretical + 4 practical	(B2) Operation and calibration of retinoscopy devices	Retinoscope	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
7	2 theoretical + 4 practical	(A2)		Interactive lectures + practical	Paper, practical, oral exams and reports

		Description and classification of types of refractive errors	Refractive Errors(Defintion and Types)	experiments + exercises	
8	2 theoretical + 4 practical	(A2) Describe the causes and symptoms of myopia	Myopia (Signs and Symptoms)	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
9	2 theoretical + 4 practical	(A2) Describe the causes and symptoms of myopia	Myopia	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
10	2 theoretical + 4 practical	(A2) Describe the causes and symptoms of hypermetropia	Hypermetropia (Signs and Symptoms)	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
11	2 theoretical + 4 practical	(A2) Describe the causes and symptoms of hypermetropia	Hypermetropia	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
12	2 theoretical + 4 practical	(A2) Describe the causes and symptoms of astigmatism	Astigmatism	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
13	2 theoretical + 4 practical	(A2) Describe the causes and symptoms of astigmatism	Astigmatism	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports
14	2 theoretical + 4 practical	(A2) Describe the causes and	Astigmatism (signs and symtoms)	Interactive lectures + practical experiments + exercises	Paper, practical, oral exams and reports

		symptoms of astigmatism			
15	2 theoretical + 4 practical	General Revision	Revision	Interactive lectures + practical 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 exams: 3 marks
5. Practical exams: 1 mark

12. Learning and Teaching Resources

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

Course Description Form

1. Course Name:					
2. Course Code:					
3. Semester / Year:					
4. Description Preparation Date:					
5. Available Attendance Forms:					
6. Number of Credit Hours (Total) / Number of Units (Total)					
7. Course administrator's name (mention all, if more than one name)					
Name: Email:					
8. Course Objectives					
Course Objectives					
9. Teaching and Learning Strategies					
Strategy					
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

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					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)					
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					

Course Description Form

1. Course Name:	
Eye Health 1	
2. Course Code:	
MTOP2103	
3. Semester / Year:	
1 st /Second	
4. Description Preparation Date:	
09/02/2025	
5. Available Attendance Forms:	
Physical Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 Credit Hours/2 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: The student learns about eye diseases in children. Specific objective: How to diagnose, treat or prevent eye diseases in children, as well as what pertains to school health..
9. Teaching and Learning Strategies	
Strategy	- Interactive Lecture - Dialogue and Discussion - Exercises - Self-learning

- Learning by Exploration

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory+ 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.	Introduction: review of anatomy & physiology the eye	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
2	2 Theory+ 4 Practical	(A5) Learn how to take an accurate medical history for eye diseases.	Introduction: history & examination of the eye	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
3	2 Theory+ 4 Practical	(A5) Understanding terminology related to diseases, diagnostic and therapeutic procedures in the eyes	Introduction: certain ophthalmic terms. (terminology)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
4-5	2 Theory+ 4 Practical	(C4) Striving to educate and empower patients to maintain their eye health.	Primary eye care	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
6-7	2 Theory+ 4 Practical	(A5) Learn about early screening techniques for common eye diseases.	Screening procedures in ophthalmology	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
8	2 Theory+ 4 Practical	(A5) Understanding the importance of	School eye screening programs	Lectures Interactive + Scientific Experiments +	Paper, practical, oral exams and reports

		school-based eye examinations for early detection of vision problems in children		Exercises	
9	2 Theory+ 4 Practical	(A5) Understand the role of community ophthalmology in the prevention of common eye diseases. Know the possible causes of eye stickiness and excessive tearing.	Concept of community ophthalmology sticky eye, watery eye	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
10	2 Theory+ 4 Practical	(C4) Know the causes of seeing flashes of light and floaters in your field of vision Understand the relationship between these symptoms and conditions such as Retinal detachment	Concept of community ophthalmology flashes of light, floating object in visual field	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
11	2 Theory+ 4 Practical	(C4) Understanding the importance of long-term follow-up of glaucoma patients	Concept of community ophthalmology long term glaucoma monitoring	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
12-13	2 Theory+ 4 Practical	(A5) Understanding the basic concepts of the epidemiology of blindness and visual impairment	The epidemiology of blindness, general principles & disease specific strategy	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
14	2 Theory+ 4 Practical	(A5) Understanding the goals of the Vision 2020	The right to sight (vision 2020)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports

		initiative to eliminate avoidable blindness			
15		Revision	Revision	2 Theory+ 4 Practical	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. Reports: 1 mark 5. Oral Exam: 2 marks					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)					
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					

Course Description Form

1. Course Name:	
Prescription Eye Glasses 1	
2. Course Code:	
MTOP3102	
3. Semester / Year:	
Semester	
4. Description Preparation Date:	
2025	
5. Available Attendance Forms:	
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: Salim Oudah Mezan Email: salim.oudah@alayer.edu.iq	
8. Course Objectives	
Course Objectives	General objective: To learn how to examine and write a prescription for eyeglasses and the techniques used to quickly maintain and install them. • Specific objectives: How to examine and write a prescription for eyeglasses and to know all types and how eyeglasses work for the patient and the methods of assistance and maintenance.
9. Teaching and Learning Strategies	
Strategy	1. Interactive Lecture 2. Laboratory Experiments 3. Research-Based Learning
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6	(A3) (B3)	Lenses, Types of Medical lenses with drawing.	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
3&2	6	(A3)	How can write a prescription for patients.	Practical and oral exams + reports	Practical and oral exams + reports
4	6	(B3)	How can read a prescription for patients.	Paper-based exams	Practical and oral exams + reports
5	6	(A3)	Spectacles, Parts of Spectacles with drawing.	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
6	6	(B3)	Spectacles frames. (Advantages).	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
7	6	(A3)	Spectacles frames and measurements.	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
8	6	(B3)	Frames of sports and measurements.	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
9	6	(A3)	Stages of making glass lens (Generation, Blocking and Polishing).	Paper-based exams	Practical and oral exams + reports
10	6	(B3)	Centering the glass lens with the edging.	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
12&11	6	(A3)	Coating, Coated requirements, Types of coating, Anti-Reflection coatings (AR) for (MC & HMC).	Practical and oral exams + reports	Practical and oral exams + reports

13	6	(B3)	Blue Cut lens, Multifocal, Ensues, Progressive.	Interactive lectures + practical experiments + exercises	Practical and oral exams + reports
14	6	(A3)	Cementing lens for the different types of lenses.	Interactive lectures + practical experiments + exercises	Practical and oral exams + 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

2-Interaction: 2

3-Reports: 3

3-Monthly: 70

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Kingslake, R. (2012). <i>Optical system des</i> Academic Press.
Main references (sources)	Katz, M. (2002). <i>Introduction to geometr optics</i> . World Scientific Publishing Company.
Recommended books and references (scientific journals, reports...)	Katz, M. (2002). <i>Introduction to geometr optics</i> . World Scientific Publishing Company.
Electronic References, Websites	Katz, M. (2002). <i>Introduction to geometr optics</i> . World Scientific Publishing Company.

