

Course Description Form

1. Course Name:	
Ocular manifestation of systemic and neurological diseases	
2. Course Code:	
3. Semester / Year:	
Semester Two / Third	
4. Description Preparation Date:	
25-1-2025	
5. Available Attendance Forms:	
In-person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4/60	
7. Course administrator's name (mention all, if more than one name)	
Name: Qayssar sattar abd Email: qisser satar@alayen.edu.iq	
8. Course Objectives	
Course Objectives	General objective: To introduce the student to internal diseases and chronic stones in general. Specific objective: To identify eye problems associated with some internal diseases and chronic stones and how to diagnose and treat them.
9. Teaching and Learning Strategies	
Strategy	1-Interactive Lecture

		2- Light and Motion Shows 3- Dialogue and Discussion 4- Exercises 5- Laboratory Experiments 6- Solving the			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	B1	Brain lesion, multiple sclerosis, types of headache, stroke.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
2+3	1	B1+C1	Intracranial lesion, hematoma, trauma to the head	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
4+5	1	B1+C1	Pathophysiology cerebrovascular accident, transient ischemic attack.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
6	1	B1+C1	Physiology cerebrospinal fluid, hydrocephalus.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
7	1	B1+C1	Intracranial aneurysm, symptoms, causes, treatment.	Interactive lectures+ practical	Paper and oral exams and reports

				experiments + exercises	
8	1	B1+C1	Neurological infections, brain infections, meningitis, spinal cord infections, encephalitis, meningitis.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
9+10	1	B1+C1	Neuroinfectious diseases: HIV, herpes zoster, herpes simplex..	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
11	1	B1+C1	Syphilis, toxoplasmosis, sarcoidosis, causes, symptoms, and treatment	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
12	1	B1+C1	Demyelinating disorders: types, and symptoms.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
13+14	1	B1+C1	Demyelinating disorders: causes, and treatment.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
	1	B1+C1	Hereditary diseases affecting the eye	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
	1	B1+C1	Degenerative eye diseases	Interactive lectures= practical experiments + exercises	Paper and oral exams and reports

	1		Ophthalmoplegia, causes, symptoms, management and risk factors.	Interactive lectures+ practical experiments + exercises	Paper and oral exams and reports
15	1	B1+C1	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...)	Kanski's Clinical Ophthalmology: A Systematic Approach Vaughan & Asbury's General Ophthalmology The Wills Eye Manual: Office and Emergency Room Diagnosis and Treatment of Eye Disease
Electronic References, Websites	

Course Description Form

1. Course Name:					
Treatment of ocular disease by LASER					
2. Course Code:					
MTOP3106					
3. Semester / Year:					
First Semester / Third Year					
4. Description Preparation Date:					
25/2/2025					
5. Available Attendance Forms:					
Physical Presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
45 Credit Hours/ 2 Units					
7. Course administrator's name (mention all, if more than one name)					
Name: hassan yossry Email: hassan.yossry_pg@alexu.edu.eg					
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
1	2 Theoretical	(C3) Deep understanding of the importance of laser	Laser in medicine (Define, Properties, Advantages		

		technology, its characteristics, advantages and disadvantages.	Disadvantages, Types of laser)		
2-3	4 Theoretical	(C3) Deep understanding of the importance of laser technology, its characteristics, advantages and disadvantages.	Laser in treatment (diseases in eye, method the treatment),		
4-5	4 Theoretical	(C3) Deep understanding of the effect of laser on biological tissue	Laser effects biological tissue (thermal effects, chemical and mechanical effects).		
6	2 Theoretical	(C3) Deep understanding of the importance of carbon dioxide laser	CO ₂ Laser (wavelength = 10.6 μ m)		
7	2 Theoretical	(C3) Deep understanding of the importance of excimer laser	Excimer Laser (wave length (λ))		
8	2 Theoretical	(C3) Deep understanding of the importance of ND-YAG laser	ND- YAG Laser (Define, $\lambda=1064$ nm).		
9-10	4 Theoretical	(C3) Deep Understanding of the Imprint of	Properties Diode Laser $\lambda=800$ nm to 110 nm.		

		the Diode Laser			
11	2 Theoretical	(C3) Deep understanding of the effect of laser technology on the eye and its side effects	Side effects Laser operation.		
12	2 Theoretical	(C3) Deep understanding of the effect of laser treatment of the retina	Retinal Laser treatment (Dye laser properties).		
13-14	4 Theoretical	(C3) Deep understanding of the effect of Argon Laser use in Eye Treatment	Argon Laser ($\lambda_{\text{blue}} = 488 \text{ nm}$ & $\lambda_{\text{green}} = 514 \text{ nm}$).		
15	2 Theoretical	General Revision	Revision		
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:	
Spectacles medical 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.

Course Description Form

1. Course Name:	
Refractive Errors 3	
2. Course Code:	
MTOP3104	
3. Semester / Year:	
1 st /third	
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: Kassem Yasser Aboud Email:	
8. Course Objectives	
Course Objectives	General objective: Identify the types of visual defects. Specific objective: Diagnose refractive errors and determine methods of treatment and correction.
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	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Astigmatism definition& (sing-symptoms) & type & correction	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
3-4	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Anisometropia & correction	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
5	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Aniseikonia& correction	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
6	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Aphakia & pseudo Aphakia	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
7	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Presbyopia & Correction	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
8	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms	Intra ocular lens	Lectures Interactive + Scientific Experiments +	Paper, practical, oral exams and reports

		and classification of refractive errors and strabismus. Squint		Exercises	
9	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Eye strain	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
10-11	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Amblyopia definition & treatment	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
12-13	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Visual acuity test for child	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
14	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	Conductive Keratoplasty	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
15	2 Theory+ 4 Practical	(A2) Description of the causes, symptoms and classification of refractive errors and strabismus. Squint	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. 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:					
Optical instrument 3					
2. Course code:					
MTOP3105					
3. Stage \ semester					
Third stage /first semester					
4. Date this description was prepared					
2025-2-1					
5. Available forms of attendance					
Attendance					
6. Number of study hours (total) / Number of units (total)					
4/105					
7. Name of the course administrator (if more than one name is mentioned)					
name: Hashim Fadhil Abbas email: hashim.abbas@alayen.edu.iq					
8-Subject objectives					
Subject objectives			The student must be familiar with all optical devices their use. He must be able to operate the devices and how maintain them.		
9. Teaching and learning strategies					
Strategy		1- Interactive lecture 2- Laboratory experiments 3 -Dialogue and discussion 4- Self-learning 5-Brainstorming			
10. Course structure					
Week	Hours	Name of the unit or topic	Required learning outcomes	Learning method	Evaluation method

1	2 theory + 4 practical	Colour vision test :Ishihara, hardy –Rand-Ritter	b1) Conduct color blindness tests and visual field assessments accurately using appropriate .equipment	Lectures + Interactive	Paper, practical, oral exams and reports
2	2 theory + 4 practical	Colour vision test :city university, farn sworth-munsell 100 hve-	b1) Perform color blindness tests and visual field assessments accurately using appropriate .equipment	Pictures + Interactive	Paper, practical, oral exams and reports
3	2 theory + 4 practical	Contract sensitivity,The Pelli-robson contrast sensitivity letter	b1) Perform contrast sensitivity tests and visual field assessments accurately using appropriate .equipment	Pictures + Interactive	Paper, practical, oral exams and reports
4	2 theory + 4 practical	Amsler gril	b1) Perform contrast	Pictures + Interactive	Paper, practical, oral exams and reports

			sensitivity tests and visual field assessments accurately using appropriate equipment		
5	2 theory + 4 practical	Dark adaptometry: definition , indication, Gold Mann-weeks adaptometry	b1) Perform dark adaptation tests and visual field assessments accurately using appropriate equipment	ictures + eractive	Paper, practical, oral exams and reports
6	2 theory + 4 practical	Dark adaptometry: sensitivity curve one branch, rod branch break, rod branch.	b2) Skillfully operate and calibrate various vision testing devices to accurately assess dark adaptation, while adhering to infection control procedures	ictures + eractive	Paper, practical, oral exams and reports
7	2 theory + 4 practical	Bagolini striated glasses.	b2) Skillfully operate and calibrate various vision examination devices to accurately assess vision and strabismus, while adhering	ictures + eractive	Paper, practical, oral exams and reports

			to infection control .procedures		
8+9	4 theory + 8 practical	Synaptophore	b2) Skillfully operate and calibrate various vision examination devices to accurately assess strabismus, while adhering to infection control procedures + practicing maintenance and sterilization policies of equipment to prevent cross-contamination and ensure patient safety	ictures + eractive	Paper, practical, oral exams and reports
10	2 theory + 4 practical	Maddox wing , Maddox rod	b2) Skillfully operate and calibrate various vision examination devices to accurately assess squint, while adhering to infection control .procedures	ictures + eractive	Paper, practical, oral exams and reports
11	2 theory + 4 practical	Exophthalmometer	b2) Skillfully operate and calibrate various vision examination devices to accurately assess the eye	ictures + eractive	Paper, practical, oral exams and reports

			socket and strabismus, while adhering to infection control procedures		
12	2 theory + 4 practical	Frequency doubling perimeter	b1) Perform visual acuity tests and visual field assessments accurately using appropriate equipment + practice equipment maintenance and sterilization policies to prevent cross-contamination and ensure patient safety	ictures + eractive	Paper, practical, oral exams and reports
13	2 theory + 4 practical	Diagnostic ultra sound	b1) Perform visual acuity tests and visual field assessments accurately using appropriate equipment + practice maintenance and sterilization policies to prevent cross-contamination and ensure patient safety	ictures + eractive	Paper, practical, oral exams and reports
14	2 theory + 4 practical	Heidelberg retino-tomography HRT11	b1) Perform visual acuity tests and	ictures + eractive	Paper, practical, oral exams and reports

			visual field assessments accurately using appropriate equipment		
15	2 theory + 4 practical	Nerve fiber analyser	b1) Perform visual acuity tests and visual field assessments accurately using appropriate equipment	ctures + eractive	Paper, practical, oral exams and reports

11. Course Evaluation	
The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams, reports, etc. 1- Monthly exam 15 points 2- Semester exam 70 points 3- Interaction 2 points 4- Reports 1 point 5- Oral exams 2 points 6- Practical exams 10 points	
12. Learning and teaching resources	
Required textbooks (methodology if any)	1-Ophthalmic Instruments and Surgical Tools 2-Diagnostic Instruments
Main References (Sources)	1-Ophthalmic Instruments and Surgical Tools
Recommended supporting books and references (scientific journals, reports..)	1-Ophthalmic Instruments and Surgical Tools
Electronic references, websites	1-ISO 7921:2024 (en), Ophthalmic optics and instruments Near reading charts: 2-Ophthalmic Surgical Instruments - Academia.edu: 3-Ophthalmic Instruments and Surgical Tools SpringerLi

Course Description Form

1. Course Name:	
Squint 1	
2. Course Code:	
MTOP3003	
3. Semester / Year:	
1 st /third	
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:	
8. Course Objectives	
Course Objectives	General objective: The student will learn about squint, its types, how to diagnose it, and methods of evaluation and treatment. Specific objective: To be able to identify the forms of strabismus and how to examine and diagnose the patient.
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	(A2) Description, causes, symptoms, classification of Squint	Anatomy and physiology of extraocular muscles	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
2	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Sensory physiology and pathology: the physiology of normal binocular vision, suppression,	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
3	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Retinal correspondence (normal versus Anomalous), monofixation syndrome	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
4	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Binocular eye movement, Definitions, Simultaneous perception Fusional mechanism, Stereopsis	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
5	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Amblyopia-1: Definitions, Classification, Detection and Screening, Evaluation	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
6	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of	Amblyopia-2: Detailed treatment	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports

		Squint	plans		
7	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Management of. Refractive. Error in childhood	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
8	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Introduction to Strabismus: Definitions, Types (Classifications), Terminology related to it	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
9	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Laws of Ocular Motility	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
10-11	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Esotropia-1: Definition, types, pseudoesotropia, congenital esotropia (from diagnosis to management)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
12	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Esotropia-2: Accommodative esotropia (classification, presentation, diagnosis, and management)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
13	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Esotropia-3: Acquired non-accommodative esotropia (types, presentation, diagnosis, and management)	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports
14	2 Theory+ 4 Practical	(A2) Description, causes, symptoms, classification of Squint	Esotropia-4: Incomitant esotropia; types, focusing	Lectures Interactive + Scientific Experiments + Exercises	Paper, practical, oral exams and reports

			on Sixth Nerve Palsy		
15	2 Theory+ 4 Practical	Review	Review	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. 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	

