

Faisalabad Medical University

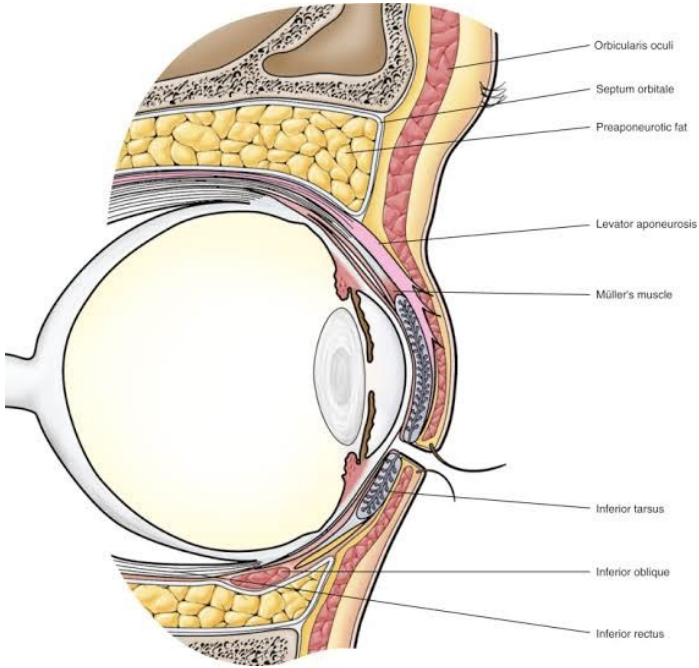


**Faisalabad Medical
University
Ophthalmology M-II
BLOCK
4th Year MBBS**

Table of Contents:

Approval Statement	0
Module Committee	1
Introduction to the Module	2
Rationale	2
Teaching Hour Allocation	3
List of Themes	4
General Learning Objectives	5
Specific Learning Objectives	6
Theme 1: Diseases of Lens	11
Theme 2: Diseases of Optic nerve & Glaucoma	15
Theme 3: Diseases of Cornea and Conjunctiva	18
Theme 4: Diseases of Visual Pathways and Squint	21
Theme 5: Diseases of Eyelids and Orbit	24
Theme 6: Diseases of Retina & Vitreous	27
Theme 7: Red Eye	30
Theme 8: Ocular Trauma	31
Learning Resources	33
Assessment Blue Print	34
Internal Assessment	35

MODULE – M2



Approval Statement

Study Guide – M2

The undersigned subject heads, hereby approve the study guides for undergraduate MBBS students, having thoroughly reviewed and validated the content for accuracy, relevance, and alignment with the curriculum. We confirm that the study guides have undergone rigorous evaluation and have met the standards set by PMDC and our institution.

By signing below, we endorse these study guides as a valuable resource for our students, ensuring they receive comprehensive and high-quality educational materials to support their academic success.

Head of Department	Name of Department	Signature
Prof. Dr Humaira Gulnaz	HOD Anatomy and Chairperson FMU IMC	
Prof. Dr. Imtiaz Ahmad	HOD Psychiatry	
Dr Muhammad Rizwan Khan	HOD Ophthalmology	
Dr. Ayesha Ayub(In charge)	HPERD	

Module Committee:

Chairperson Curriculum Committee	Prof. Dr. Humaira Gulnaz	Professor & Head of Anatomy Department		
Curriculum Coordinator	Dr. Ayesha Ayub	In-charge Health Professions Education & Research Department		
Block & Module Coordinator	Dr. Farah Huma	Senior Registrar Ophthalmology		
Academic Team Members				
Department	Focal person name	Designation	Head of Department name	Signature
EYE	Dr. Farah Huma	Senior Registrar Ophthalmology	Dr. Muhammad Rizwan Khan (Associate Professor)	
PRIME	Dr Sinha	SR Psychiatry	Prof. Dr Imtiaz Ahmad Dogar	

Introduction of Module M2

Introduction of Module

The Ophthalmology (EYE) module (M2) is an essential part of the undergraduate medical curriculum that introduces students to the anatomical, physiological, pathological, and clinical aspects of diseases related to the Eye region. As disorders of the Eye and Visual pathways are among the most common reasons for outpatient visits, it is imperative for future physicians to be equipped with adequate knowledge and clinical skills to diagnose and manage these conditions effectively.

This module provides a comprehensive overview of the anomalies related to eyes. Emphasis is placed on understanding the common congenital anomalies, infectious diseases, traumatic conditions, neoplasms, and recent advancements in Ophthalmology practice. Students will learn through a combination of lectures, group discussions, and clinical case-based teaching to enhance both theoretical knowledge and practical competence.

Rationale

Eye disorders significantly impact the quality of life and are frequently encountered in general medical practice. Early identification and management of Eye related conditions can prevent serious complications, including visual loss, visual impairment, and the loss of eye. Therefore, it is crucial for medical students to acquire a sound understanding of Eye-related anatomy, common pathologies, clinical presentations, diagnostic tools, and management strategies.

The rationale behind incorporating this module into the 4th-year MBBS curriculum is to:

- Build foundational knowledge of Eye conditions that are critical for general practice and further specialization.
- Enable students to perform Eye examinations confidently and interpret common clinical findings.
- Train students to recognize emergencies in Ophthalmology and respond appropriately.
- Introduce recent technological advances and therapeutic modalities in Ophthalmology to align with modern medical practices.

This integrated approach ensures that students are well-prepared for clinical rotations and capable of contributing effectively in diverse healthcare settings.

Teaching Hours Allocation

Sr. No	Subject	Hours Needed
1.	Disease of Lens	20
2.	Disease of Optic nerve & Glaucoma	20
3.	Diseases of Cornea & Conjunctiva	20
4.	Diseases of Visual Pathways and Squint	30
5.	Diseases of Eyelids & Orbit	20
6.	Diseases of Retina & Vitreous	20
7.	Red Eye	10
8.	Ocular Trauma	7
	TOTAL	147

List of Themes

Sr. No.	Theme	Clinical (Hours)	In class Teaching (Hours)	Total (Hours)
1	Diseases of Lens	10	10	20 hours
2	Diseases of Optic nerve & Glaucoma	15	5	20 hours
3	Diseases of Cornea & Conjunctiva	15	5	20 hours
4	Diseases of Visual Pathways & Squint	20	10	30 hours
5	Diseases of Eyelids & Orbit	15	5	20 hours
6	Diseases of Retina & Vitreous	15	5	20 hours
7	Red Eye	5	5	10 hours
8	Ocular Trauma	5	2	07 hours
	Total	100	47	147

General Learning Objectives

By the end of Module ,4th year MBBS students will be able to:

1. Describe the anatomy and physiology of eye, orbit & adnexa.
2. Demonstrate examination of Visual acuity.
3. Describe benign and malignant tumors involving the Eye & Orbit.
4. Explain the method of intraocular pressure assessment.
5. Demonstrate direct and indirect ophthalmoscopy.
6. Practice clinical tests of Extraocular movements, Pupil assessment, Visual fields and Diplopia.
7. Explain Visual Acuity, Pinhole visual acuity and Optic nerve function tests.
8. Discuss Corneal diseases, Keratoconus, Keratoplasty and Corneal abscess.
9. Discuss differential diagnosis of Red eye and its management accordingly.
10. Describe cataract & it's types. Learn and observe the steps of cataract surgery.
11. Discuss glaucoma and its classification. Learn about Primary & Secondary Glaucomas.
12. Describe anti-glaucoma medicine, and surgical management of glaucoma. Learn steps of Trabeculectomy.
13. Describe the management of Neovascular glaucoma and Painful Blind eye.
14. Describe Conjunctivitis, and discuss about Dry Eye symptoms and Management.
15. Describe the management of ptosis, and it's surgical management.
16. Differentiate clinically between ectropion & entropion.
17. Describe Benign and Malignant tumors of eyelids.
18. Describe Strabismus & It's different types.
19. Explain the thermal, chemical burns to eye and about blow-out fractures of orbit.
20. Describe the signs and symptoms of Third Cranial Nerve Paralysis and Sixth cranial nerve paralysis.
21. Diagnose Orbital Celullitis and Pre-Septal cellulitis and learn it's management.
22. Describe the Steps of squint surgery and it's post-operative complications.
23. Describe Amblyopia and it's management.
24. Describe Nystagmus and how to manage it.

Faisalabad Medical University

25. Describe the pathophysiology, Classification, and management of Diabetic Eye disease.
26. Discuss various conditions resulting in Central Retinal Artery and Central Retinal Vein occlusion.
27. Describe Hypertensive retinopathy. And How to manage it.
28. Describe Vitreous Hemorrhage and Posterior vitreous detachment.
29. Summarize protocols of YAG-Capsulotomy, Pan-retinal Photocoagulation and Pars-Plana Vitrectomy.
30. Classify different types of Retinal detachments, and their management.
31. Describe Exophthalmos and Proptosis.
32. Write informed consent from patient and communicate with the patients, their families and community regarding diseases & its relevant issues.
33. Describe Thyroid Eye Disease & it's management.
34. Describe Proptosis and Dystopia.

Specific Learning Objectives

Theme 1 : Diseases of Lens

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Duration/Time Allocation	Assessment Tool
1	Cataract Types	Classification of cataract Congenital cataract Traumatic cataract Nuclear Sclerosis Cortical cataract Cataracts in Systemic diseases Steroid Induced Cataract Lens Induced Glaucoma	Describe various types of cataract. Explain pathophysiology of cataracts.	Lecture	1 Hour	MCQs
2	Cataract in systemic disorders	Systemic diseases Steroid Induced Cataract	Discuss about the cataract and systemic diseases.	Lecture	1 Hour	MCQs
3	Cataract Surgery	Types of Local anesthesia Steps of Extracapsular cataract extraction Phacoemulsification procedure and its steps	Discuss the steps of cataract surgery. Describe differences between ECCE and Phacoemulsification.	Group Discussion	1 Hour	OSCE

Faisalabad Medical University

		Sutures used in cataract surgery Intraocular lenses used in cataract	Discuss the Type of intraocular lenses used in cataract surgery.	Lecture	1 Hour	MCQs
		Various Dyes used in ophthalmology	Explain different dyes used in ophthalmology	Lecture	1 Hour	MCQs
4	Complications of cataract surgery	Post-Operative complications of cataract surgery	Discuss the post-operative complications of cataract surgery.	Group Discussion	2 Hours	MCQs
		Per-Operative complications of cataract surgery Nucleus Drop Posterior capsular rupture Suprachoroidal Hemorrhage Iris prolapse Endothelial damage Retinal Detachment	Discuss about the per-operative complications of cataract surgery.	Lecture	1 Hour	MCQs
		Endophthalmitis Posterior capsular opacification Pan ophthalmitis Posterior Uveitis Toxic Anterior Segment Syndrome (TASS) Wound leak Posterior Synechia Anterior capsular phimosis	Discuss about the Endophthalmitis signs and symptoms and it's management. Describe Posterior capsular opacification and it's management. Describe Endophthalmitis and it's management. Discuss Toxic Anterior Segment Syndrome	Lecture	1 Hour	MCQs

Faisalabad Medical University

		Capsulorrhexis and Capsulotomy	Describe the difference between capsulotomy and capsulorrhexis.	Group Discussion	2 Hours	OSCE
	Lens Induced Glaucoma	Phacolytic glaucomas	Discuss about phacolytic glaucoma and it's management	Group Discussion	2 Hours	MCQs
		Phacomorphic glaucomas	Describe phacomorphic glaucoma and how will you manage it.	Group Discussion	2 Hours	OSCE
	Subluxated Crystalline Lens	Marfan's syndrome and eye disease Homocystinuria and Eye disease	Explain various conditions associated with subluxated crystalline lenses.	Lecture	1 Hour	MCQs
		Traumatic Subluxation of crystalline lens into anterior or posterior chamber				
		Refraction and Improvement of vision Lensectomy and Anterior vitrectomy with secondary Scleral fixation of intraocular lens	Discuss the Management of subluxated crystalline lenses	Lecture	1 Hour	MCQs
		Purkinjee images Convex and Concave lenses Objective and Subjective refraction Near vision correction	Classify types of refraction and discuss their management in detail.	Group Discussion	2 Hours	VIVA
		Presbyopia	Discuss the causes and management of Presbyopia.	Lecture	1 Hour	MCQs
5	Investigative ophthalmology	BSCAN ASCAN	Discuss the indications of Bscan	Lecture	1 Hour	MCQs

Faisalabad Medical University

		BIOMETRY KERATOMETER	and describe how it functions. Describe the use of Biometry in Ophthalmology Discuss the AScan and Keratometer.			
6	Instruments used in cataract surgery	Corneal and Plain forceps Eutrata and Mcphersons forceps Simcoe's cannula Dialer and Chopper	Describe the instruments used in cataract surgery and their identification points.	Group discussion	2 Hours	OSCE
7	Drugs used in surgery	Tropicamide, Atropine, Pilocarpine, Adrenaline, Cyclopen, Trypan Blue Dye.	Discuss the mechanism of action of various drugs used in Ophthalmic surgery.	Lecture	1 Hour	MCQs

Theme 2 (Diseases of Optic nerve & Glaucoma)

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Duration/ Time Allocation	Assessment Tool
1	Visual Field Tests	Visual Fields Optic Nerve head examination Optic Coherence Tomography of Optic nerve head Color vision test	Describe the visual fields assessment. Discuss about the optic nerve	Lecture	1 Hour	MCQs
2	Tonometry	Goldman applanation tonometer Air-Puff tonometer	Perform the intraocular pressure measurement. In a normotensive patient.	Group discussion	2 Hours	OSCE
3	Types Of Glaucoma	Congenital glaucoma Acquired Glaucoma	Explain various types of glaucoma. Discuss congenital glaucoma and their management.	Group Discussion	2 Hours	OSCE
		Primary Glaucoma Secondary Glaucoma	Discuss the differences between Primary and Secondary glaucoma.	Lecture	1 Hour	MCQs
		Normal tension glaucoma Ocular Hypertension	Describe ocular hypertension and it's causes.	Lecture	1 Hour	MCQs
		Open Angle Glaucoma Closed Angle Glaucoma	Discuss the etiology of open angle glaucoma. Describe the pathophysiology an	Group Discussion	1 Hour	MCQs

Faisalabad Medical University

			management of closed angle glaucoma.			
4	Drugs used in Glaucoma Management	Intravenous drugs for Intraocular pressure measurement are used. Beta Blockers Alpha Agonists Prostaglandin analogues Miotics Hyperosmotic agents	Discuss the side effects of anti-glaucoma drugs.	Lecture	1 Hour	MCQs
		Endophthalmitis Posterior capsular opacification Pan ophthalmritis Posterior Uveitis Toxic Anterior Segment Syndrome (TASS) Wound leak Posterior Synechie Anterior capsular phimosi	Describe the mechanism of action of anti-glaucoma drugs.	Lecture	1 Hour	MCQs
5	Laser treatment in Glaucoma	Laser Iridotomy	Describe the procedure of laser iridotomy.	Lecture	1 Hour	MCQs
		Selective Laser Trabeculoplasty Argon Laser Trabeculoplasty	Discuss the indications for trabeculectomy and trabeculotomy.	Lecture	1 Hour	MCQs
		Trabeculotomy Trabeculectomy	Discuss the indications for trabeculectomy and trabeculotomy.	Group Discussion	1 Hour	OSCE
6	Glaucoma Valves	Drainage valves Recent Advances Minimally invasive	Discuss about Glaucoma valves	Group discussion	2 Hours	VIVA

Faisalabad Medical University

		glaucoma surgery (MIGS)				
7	Optic Nerve	Optic Nerve	Discuss the Optic Nerve head cupping. How does Myopia affect it ?	Lecture	1 Hour	MCQs
		Papilledema	Discuss Papilledema & it's causes	Lecture	1 Hour	MCQs
		Optic Atrophy	Discuss Optic atrophy and it's causes	Lecture	1 Hour	MCQs
		Optic Nerve Glioma	Describe optic nerve glioma and it's management	Lecture	1 Hour	OSCE
		Optic Nerve Meningioma	Discuss Optic Nerve Meningioma and it's management	Lecture	1 Hour	MCQs

Theme 3 (Diseases of Cornea & Conjunctiva)

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Durati on/Ti me Alloca tion	Assess ment Tool
1	Corneal Refractive Power	Refractive index of cornea Refractive layers of cornea Corneal Endothelium and It's role in maintaining the Transparency Corneal refractive power changes Corneal ectasias, Astigmatism and it's types	Describe the various types of corneal ectasias and their management. Discuss Astigmatism and it's types.	Lecture	1 Hour	MCQs
2	Keratitis	Bacterial Keratitis	Describe the causes of Bacterial keratitis and it's management	Lecture	1 Hour	MCQs
		Fungal Keratitis	Discuss the causes and management of Fungal Keratitis.	Group Discussion	2 Hours	OSCE
		Acanthoemeba Keratitis	Describe the signs and symptoms of acanthoemebaba keratitis and it's management	Lecture	1 Hour	MCQs
		Interstitial Keratitis	Discuss the causes and management of Intersitial keratitis.	Lecture	1 Hour	MCQs
		Herpes Simplex Keratitis Dendritic Ulcer Disciform Ulcer	Discuss about the Herpes Simplex Keratitis.	Group Discussion	1 Hour	MCQs

Faisalabad Medical University

3	Corneal Ectasias	Keratoconua Keratoglobus	Discuss about Keratoconus, it's signs and symptoms and management.	Lecture	1 Hour	MCQs
4	Keratoplasty	Keratoplasty	Describe the indication of Keratoplasty and it's types.	Lecture	1 Hour	MCQs
5	Keratopathies	Exposure Keratopathy Neurotrophic Keratopathy Recurrent corneal erosion Syndrome Metabolic Keratopathies	Describe the causes and management od exposure keratopathy. Discuss the causes of recurrent corneal erosions and it's management.	Lecture	1 Hour	MCQs
6	Corneal size anomalies	Megalocornea	Discuss the signs and symptoms of Megalocornea	Lecture	1 Hour	MCQs
		Microcornea	Differentiate between Keratoglobus and Keratoconus. Discuss the syndromes and signs associated with microcornea.	Group Discussion	1 Hour	OSCE
7	Contact lens	Indications for contact lens usage Complications of contact lens wearing	Discuss the indications of contact lens use and it's complications.	Group discussion	1 Hour	VIVA
8	Refractive Surgery	PRK LASIK	Discuss the contraindications of Refractive Surgeries. Describe the detailed procedure of LASIK.	Lecture	1 Hour	MCQs
		Collagen-Cross-Linking	Discuss the indication and procedure of Collagen-Cross-Linking.	Lecture	1 Hour	MCQs

Faisalabad Medical University

9	Pingecula Pterygium	Pingecula Pterygium	Discuss the signs and symptoms of Pterygium and it's management.	Lecture	1 Hour	MCQs
10	Conjunctivitis	Bacterial Conjunctivitis	Simple Bacterial Conjunctivitis Neonatal Gonococcal Conjunctivitis	Lecture	1 Hour	OSCE
		Viral Conjunctivitis	Adenoviral Conjunctivitis Molluscum Contagiosum Conjunctivitis	Lecture	1 Hour	MCQs
		Vernal Keratoconjunctivitis Allergic Conjunctivitis	Describe VKC and it's management Discuss the sign and symptoms of Allergic Conjunctivitis and it's management	Lecture	1 Hour	MCQs
11	Conjunctival Neoplasms	Conjunctival Ocular Melanosis Conjunctival Naevus Conjunctival Melanoma	Discuss the benign and malignant lesions of conjunctiva. Describe how do you differentiate between Naevus and Melanoma.	Group discussion	1 Hour	MCQs

Theme 4 : Diseases of Visual Pathways & Squint

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Duration/Time Allocation	Assessment Tool
1	Optic Tract	Clinical features of optic tract lesion Lesions of optic radiations Lesions of Striate calcarine cortex	Describe the various visual field defects and the pathologies associated with it.	Group Discussion	2 Hours	MCQs
2	Visual Field Defects	Homonymous and Heteronymous Visual field defects	Discuss the lesions of visual pathways. Explain Relative Afferent Pupillary defect.	Lecture	1 Hour	MCQs
3	Types of Squint	Congenital and Acquired Accomodative, Non-Accomodative squint Paralytic and Non-Paralytic Squint		Lecture	1 Hour	MCQs
4	Management of Squint	Management of squint	Squint correction by surgery Sutures used in surgery Surgical Techniques for Squint correction Ocular Muscle weakening procedures Ocular Muscle Strengthening procedures	Group Discussion	2 Hours	MCQs
5	Squint surgery complications	Post-Operative Complications of Squint	Discuss the post-operative	Lecture	1 Hour	MCQs

Faisalabad Medical University

			complications of squint surgery.			
6	Amblyopia	Amblyopia management in Squint	Describe the amblyopia therapy and causes of decreased vision in Squint.	Group Discussion	2 Hours	VIVA
7	Sensory Tests for Squint	Tests for stereopsis Mobility tests Refraction & Fundoscopy Diplopia assessment	Describe various sensory tests for squint.	Group Discussion	2 Hours	VIVA
8	Motility tests for Squint	Cover test Cover-Uncover test Alternating cover test	Describe various motility tests for squint. Explain the procedure of Cover-uncover test in Squint.	Group Discussion	2 Hours	VIVA
9	Cranial Nerve Paralysis	3 rd Cranial Nerve Paralysis	Describe 3 rd Cranial nerve paralysis.	Lecture	1 Hour	MCQs
		6 th Cranial Nerve Paralysis	Discuss 6 th Cranial nerve paralysis.	Lecture	1 Hour	MCQs
		Facial Palsy	Describe ocular symptoms of facial palsy.	Group Discussion	2 Hours	OSCE
10	White Pupil	Causes of White Pupil Management of White Pupil (Leucocoria)	Describe the management and causes of Leucocoria.	Lecture	1 Hour	MCQs
11	Retinoblastoma	Retinoblastoma Stages of Retinoblastoma	Describe the management of Retinoblastoma. Explain various stages of	Group Discussion	2 Hours	MCQs

Faisalabad Medical University

			retinoblastoma and it's prognosis.			
12	Nystagmus	Types of Nystagmus	Describe the types of Nystagmus.	Lecture	1 Hour	MCQs
		Causes of Nystagmus	Discuss the causes of Nystagmus.	Lecture	1 Hour	MCQs
		Treatment for Nystagmus	Sim Discuss different treatment modalities available to manage Nystagmus.	Group Discussion	2 Hours	OSCE
13	Recent advances in Retinoblastoma management	Recent advances in Management of Leucocoria in Children	Describe the various recent advances in management of leucocoria in children	Group Discussion	2 Hours	VIVA
14	Pituitry adenoma	Pituitry adenoma	Discuss visual fields defects associated with pituitary adenoma and it's signs and symptoms	Lecture	1 Hour	MCQs
15	Craniopharyngioma	Craniopharyngioma	Discuss about craniopharyngioma and visual field defects associated with it	Lecture	1 Hour	MCQs
16	Diplopia	Diplopia Refractive & Paralytic causes Diplopia Charting	Discuss diplopia and it's management Perform Diplopia tests and discuss diplopia charting.	Group discussion	2 Hours	VIVA

Theme 5 (Diseases of Eyelids and Orbit)

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Durati on/Tim e Allocat ion	Assess ment Tool
1	Ptosis	Droopy Eyelid Causes of ptosis	Describe Ptosis and Bell's Phenomenon. Classify causes of ptosis and explain key differences between congenital and acquired ptosis.	Group Discussion	2 Hours	MCQs
		Ptosis Management	Ptosis management Amblyopia Surgical correction Levator resection and disinsertion procedures Fascia lata sling procedure Other materials for Frontalis suspension	Lecture	1 Hour	MCQs
2	Eyelid Malposition	Entropion Ectropion Types of entropion and ectropion and signs and symptoms	Discuss the pathophysiology of ectropion and entropion.	Group Discussion	1 Hour	OSCE
		Management for Eyelid Malposition's	Describe the management of cicatricial ectropion.	Lecture	1 Hour	MCQs
		Cicatricial Ectropion	Describe the management of cicatricial ectropion.	Lecture	1 Hour	MCQs
3	Eyelash Malposition	Distichiasis Trichiasis Epiblephron	Explain Trichiasis and it's management. Discuss the differences between Distichiasis and Trichiasis.	Group Discussion	1 Hour	OSCE
4	Eyelid Malignancies	Basal Cell Carcinoma	Discuss the differences between Basal cell and Squamous cell CA.	Lecture	1 Hour	MCQs

Faisalabad Medical University

		Squamous Cell Carcinoma	Discuss Squamous cell Carcinoma of eyelid and it's management.	Lecture	1 Hour	MCQs
		Sebaceous gland carcinoma	Explain the most frequent locations of Sebaceous gland CA.	Lecture	1 Hour	MCQs
		Kaposi's sarcoma Merkel Cell Carcinoma Most common locations of Eyelid malignancies	Describe the predisposed locations for eyelid malignancies and their management. Discuss the Clinical appearance and examination of Various kinds of eyelid carcinomas.	Lecture	1 Hour	MCQs
		Management of Eyelid Malignancies	Discuss Moh's micrographic surgery techniques and Frozen section biopsy.	Lecture	1 Hour	MCQs
5	Orbital Infections	Orbital cellulitis	Describe orbital cellulitis, and explain it's management.	Group discussion	1 Hour	MCQs
		Pre-Septal cellulitis	Describe Pre-septal cellulitis, and explain it's management	Lecture	1 Hour	MCQs
		Cavernous sinus thrombosis Myositis Optic Neuritis Inflammatory Orbital Disease	Discuss cavernous sinus thrombosis and it's prognosis. Explain inflammatory orbital disease and discuss it's management.	Lecture	1 Hour	MCQs
6	Benign tumors of Orbit	Capillary hemangioma Cavernous Hemangioma Carotido-cavernous fistula	Discuss about capillary hemangioma and cavernous hemangioma and it's management	Lecture	1 Hour	MCQs
7	Thyroid Eye Disease	Thyroid eye disease Pathophysiology Mechanism of vision loss EUGOGO classification Medical Management	Describe the eye signs in Thyroid eye disease and Investigations to make up the diagnosis. Discuss the management of Thyroid eye disease.	Lecture	1 Hour	MCQs

Faisalabad Medical University

		Surgical Management				
8	Orbital Injuries	Orbital blow-out fractures Raccoon eyes Management of Orbital Floor Fracture Other injuries to Orbital rim,orbital apex and intraorbital content Globe Luxation Perorated Globe Intraocular Foreign body Intraorbital Foreign body Prosthesis and Cosmetic improvement after traumatic Damage to eyeball & orbit	Describe the blow out fracture and it's management. Describe the Intraorbital & Intraocular foreign bodies. Discuss various types of ocular and orbital implants. Discuss about the indications of Evisceration, Enucleation and Exentration.	Lecture	1 Hour	MCQs
9	Proptosis	Causes of Proptosis Dystopia Evaluation of Proptosis	Discuss proptosis and it's causes. Discuss the differences between proptosis and dystopia.	Lecture	1 Hour	MCQs
10	Malignant tumors of Orbit	Lymphangioma a Lacrimal Gland Carcinoma Rhabdomyosarcoma Metastatic tumors	Describe various benign and malignant carcinomas of Orbit and their management.	Lecture	1 Hour	MCQs

Theme 6: Diseases of Retina and Vitreous

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Duration/Time Allocation	Assessment Tool
1	Structure of Retina	Basic anatomy and Physiology	Describe the Functions of all retinal layers. Discuss the functions of Retinal Pigment Epithelial membrane. Discuss the Anatomy of optic nerve head. Describe the structure of Central retinal artery and vein. Discuss the structure of Macula.	Group discussion	2 Hours	MCQs
2	Myopia	Lattice degeneration Snail track degeneration Retinal Holes Barrage Laser Retinal detachment in high myopia Risk factors for retinal detachment in Myopia Chorioretinal atrophy and Myopic Crescent Tilted discs	Describe various retinal degenerations in High myopia. Discuss about the optic disc appearance in Myopia. Discuss the type of retinal detachment in High Myopia	Group Discussion	2 Hours	MCQs
3	Hereditary Retinal Disorders	Congenital Hereditary Retinal Pigment Epithelium hypertrophy (CHRPE)	Describe the CHRPE and it's management.	Group Discussion	2 Hours	OSCE
		Retinitis Pigmentosa	Discuss in detail about Retinitis Pigmentosa and it's types.	Lecture	1 Hour	MCQs

Faisalabad Medical University

4	Low Vision Aids	Telescopes Magnifiers LED devices for Low vision aid Spectacles Tyopsopes Video-Magnifier system	Discuss the various types of low vision aids and their use in hereditary retinal diseases.	Group Discussions	2 Hours	OSCE
5	Diabetic Retinopathy	Diabetic control and Retinal changes Pathophysiology of Diabetic retinopathy ETDRS Classification of diabetic retinopathy	Describe the pathophysiology of diabetic retinopathy	Group Discussion	2 Hours	MCQs
		ETDRS Classification of diabetic retinopathy	Discuss about the ETRDS classification of diabetic retinopathy	Lecture	1 Hour	MCQs
		Clinically significant Macular Oedema (CSME)	Define clinically significant Diabetic macular oedema and describe it's pathophysiology.	Lecture	1 Hour	MCQs
		Treatment for Diabetic Macular Oedema	Discuss the management of Diabetic macular oedema	Lecture	1 Hour	MCQs
		Anti-Vascular Endothelial Growth Factor inhibitors used in Ophthalmology and their mode of delivery in eye	Discuss about the method of injecting Anti-VEGF injections into eye. Discuss various types of Anti-VEFG and their mechanism of action.	Group Discussion	2 Hours	MCQs
		Focal/ Grid Laser in Diabetic Macular Oedema	Discuss Focal and Grid laser treatment for Diabetic macular oedema	Group Discussion	2 Hours	OSCE
6	Retinal Detachment	Types of retinal detachment and causes	Describe various types of retinal detachment	Lecture	1 Hour	MCQs

Faisalabad Medical University

			<p>and their most common causes.</p> <p>Enumerate the differences between Rhegmatogenous, Tractional and Serious retinal detachment.</p> <p>Explain the sign and symptoms of retinal detachment.</p>			
		Management	<p>Discuss management of retinal detachment.</p> <p>Enlist the steps of Pars-Plana Vitrectomy.</p>	Lecture	1 Hour	MCQs

Theme 7: Red Eye

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Duration/ Time Allocation	Assessment Tool
1	Subconjunctival Haemorrhage	Subconjunctival Haemorrhage	Discuss the causes of Subconjunctival haemorrhage and it's management	Group discussion	1 Hour	OSCE
2	Painful Red Eye	Causes of Painful red eye Acute Anterior Uveitis Acute Congestive Glaucoma	Discuss the causes of Painful red eye. Describe Acute Anterior Uveitis. Discuss Acute Congestive Glaucoma.	Group Discussion	2 Hours	MCQs
3	Corneal Causes of Red eye	Corneal Erosions Corneal Epithelial Damage	Discuss the corneal epithelial defect and it's causes. Discuss the management of corneal foreign bodies.	Group Discussion	2 Hours	OSCE
		Corneal Ulceration	Discuss the causes of corneal ulceration and it's management.	Lecture	1 Hour	MCQs
		Corneal Abscess	Describe corneal abscess and it's management.	Group Discussion	2 Hours	OSCE
		Dry Eye Disease	Discuss Severe Dry Eye and it's management	Lecture	1 Hour	MCQs
4	Conjunctival infections	Viral and Bacterial Conjunctivitis	Discuss the red eye caused by adenoviral conjunctivitis. Explain Pink Eye and it's management,	Lecture	1 Hour	MCQs

Theme 8 : Ocular Trauma

Sr No	Subject	Topics	Learning Objectives	Teaching Strategy	Duration/Time Allocation	Assessment Tool
1	Chemical trauma	Acid Injuries to eye Alkali Injuries to eye	Describe the management of Acid and alkali burns to eyes.	Group discussion	1 Hour	VIVA
2	Penetrating ocular injuries	Perforating eyeball injuries	Discuss the causes of penetrating injury to eyeball and it's management.	Lecture	1 Hour	MCQs
3	Blunt trauma to eyeball	Blunt trauma to eyeball Hyphemia Iridodesis Crystalline lens dislocation into anterior or posterior chamber Vitreous Hemorrhage	Discuss the sequel of Blunt trauma to eye ball and it's management.	Group Discussion	2 Hours	VIVA
4	Eyelid Lacerations	Eyelid injury Eyelid laceration repair	Discuss the management of eyelid lacerations.	Lecture	1 Hour	MCQs
		Canalicular damage	Describe the management of canalicular laceration	Group Discussions	1 Hour	OSCE
4	Blow-Out Fracture	Orbital Floor damage Globe Luxation	Blow-Out Fracture Lateral Orbital Wall Fracture Globe Luxation	Lecture	1 Hour	MCQs

PRIME

Conflict Management	Conflict Management	Raving and acting concerns	Group Discussion and roleplay	01 Hour	SAQ Formative
Emotional Intelligence	Emotional Intelligence	Practice in an emotionally intelligent manner in different situations	Practical / Bedside	02 Hours	Formative

Learning Resources

References Textbooks

S#	Subjects	Resources
1.	EYE	<ol style="list-style-type: none">1. The Wills Eye Manual: Office and Emergency Room Diagnosis and treatment of eye disease: by Christopher J. Rapuano. 9th Edition.2. Kanski's Clinical Ophthalmology- A systemic approach: By John.F.Solmon. 10th Edition3. Parson <p>Reference Books:</p> <ol style="list-style-type: none">1. American Academy of Ophthalmology (AAO): San Francisco, California.

Faisalabad Medical University

Theory	Modules	Theory marks	Internal assessment theory	OSPE/VIVA	Internal assessment OSPE/OSPE	TOTAL MARKS
Paper M 2	EYE	90	10	75	8	183

- Each MCQ carries 01 mark.
- Each OSPE/VIVA station carries 05 marks

Assessment Blueprint

MCQs Distribution

Subject	MCQs
Diseases of Lens	10
Disease of Optic nerve & Glaucoma	10
Diseases of Cornea & Conjunctiva	15
Diseases of Visual Pathways and Squint	10
Diseases of Eyelids & Orbit	15
Diseases of Retina & Vitreous	15
Red Eye	10
Ocular Trauma	5

OSCE Distribution

	OSCE stations
Unobserved	
Cataract	1
Optic Nerve and Glaucoma	1
Cornea and Conjunctiva	1
Visual Pathways and Squint	1
Eyelids and Orbit	1
Retina and Vitreous	1
Ocular Trauma	1
Radiology	1

Faisalabad Medical University

Instruments	1
Observed	
Internal Examiner	1
External examiner	1
History Taking	1
Eye Examination	1
Eye Movements	1
Visual Field Assessment	1

Internal Assessment

Sr. No.	Criteria	Numbers
Theory:		
1.	Attendance (>90%=3,80-89%=2,70-79%=1,<70%=0)	3
2.	Creative work/assignments/Task	1
3.	Continuous Assessment throughout block (Formative assessments, Viva Voce, departmental activities)	2
4.	Block examination theory	2
5.	Pre prof Examination of block	2
	Total	10
OSPE:		
1.	Attendance (>90%=3, 80-89%=2, 70-79%=1,<70%=0)	3
2.	Log Book/practical copy	3
3.	Discipline, Responsibility and team work	1
4.	Block examination OSPE	1
	Total	08