

Study Guide
OF EYE



QUAID-E-AZAM MEDICAL COLLEGE, BAHAWALPUR

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WHAT IS A STUDY GUIDE?

- a. Inform students how student learning program has been organized according to their learning objectives.
- b. Help students organize and manage their studies throughout the course.
- c. Guide students on assessment methods, rules and regulations

THE STUDY GUIDE:

- Communicates information on organization and management of the course. This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the course.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial and case-based learning that will be implemented to achieve the course objectives.
- Provides a list of learning resources such as books, computer assisted learning programs, web- links, journals, for students to consult in order to maximize their learning.

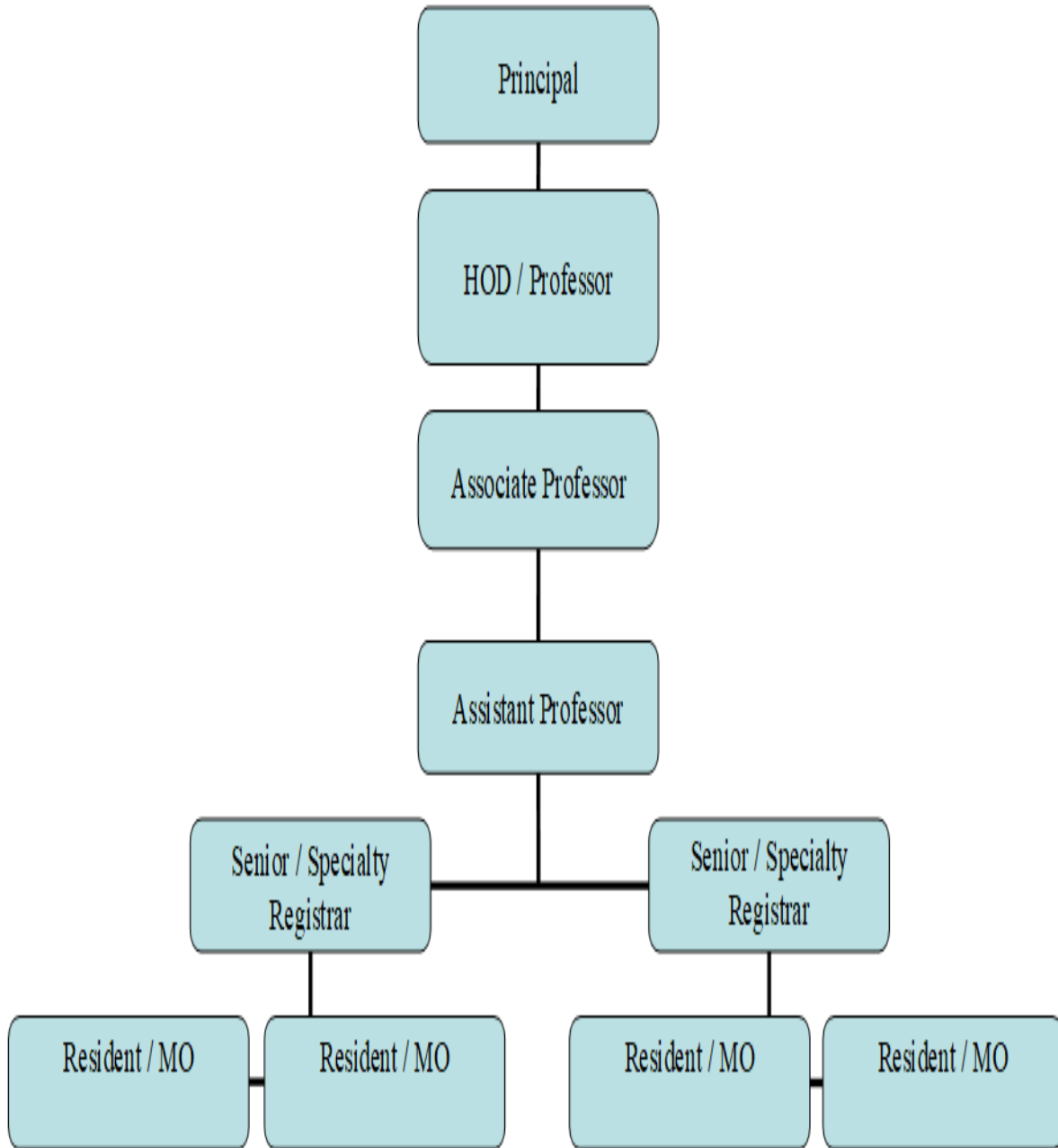
STUDENT'S OVERALL PERFORMANCE:

Includes information on the assessment methods that will be held to determine every student's performance

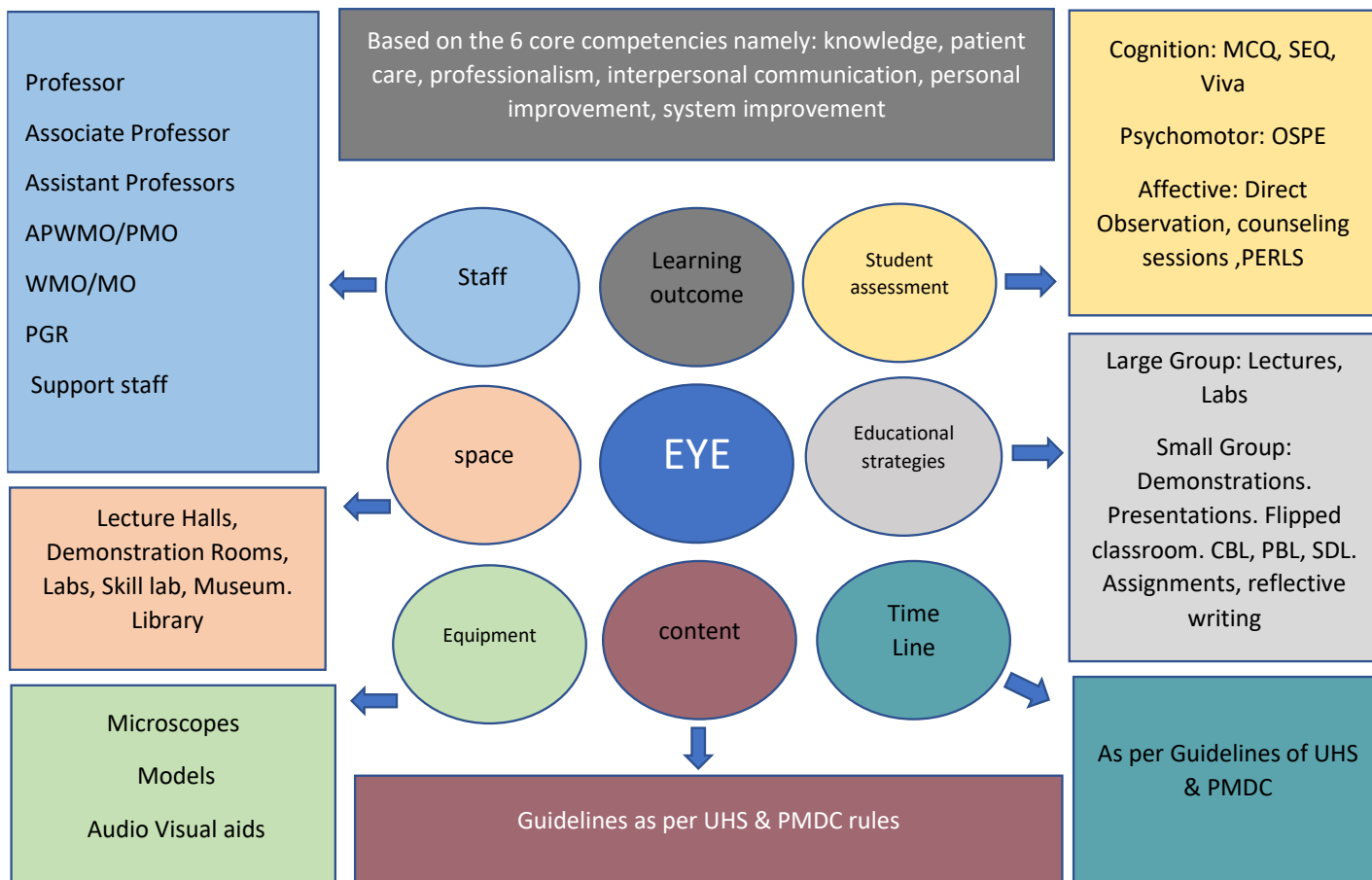
ACHIEVEMENT OF OBJECTIVES:

Focuses on information pertaining to examination policy, rules and regulations.

DEPARTMENT OF OPHTHALMOLOGY



Curriculum map of Department of Ophthalmology



Time table

TIME TABLE FOR FOURTH YEAR MBBS CLASS FOR THE SESSION 2022-2023
QUAID-E-AZAM MEDICAL COLLEGE BAHAWALPUR
WITH EFFECT FROM AFTER EID.

DAYS	08:00 to 08:50 AM	08:50 to 09:40 AM	09:40 to 10:20 AM	10:20 to 10:50 AM	10:50 TO 12:50 PM	12:50 to 02:00 PM
MONDAY	Pathology	Community Medicine	Surgery Urology 10 lec, Radiology 04 lec, Paeds surgery 4 lec, Neurosurgery 4 lec, Oncology 4 lec	Recess	Clinical Rotation	Pathology
TUESDAY	E.N.T	Ophthalmology	Surgery Orthopedics 10 lec, Anesthesia 4 lec, Plastic surgery 4 lec, Cardiac surgery 4 lec, Maxillofacial surgery 4 lec		Clinical Rotation	Community Medicine
WEDNESDAY	Community Medicine	Paeds Medicine 1st half Gynae & Obst 2nd half	Pathology		Clinical Rotation	E.N.T
THURSDAY	CPC	08:50 to 10:40 AM		10:40 to 10:50 AM	10:50 TO 12:50 PM	12:50 to 02:00 PM
		Community Medicine Practical-A & Special Pathology Practical-B		Recess	Clinical Rotation	Medicine Psychiatry 1st Half Cardiology 2nd Half
FRIDAY	Pathology	08:50 to 09:40 AM	09:40 to 10:00 AM	10:00 to 12:00 Noon		FRIDAY
		Medicine Pulmonology 1st Half Dermatology 2nd Half	Recess	Clinical Rotation		
SATURDAY	Ophthalmology	08:50 to 10:40 AM		10:40 to 11:00 AM	11:00 TO 12:00 PM	12:00 to 02:00 PM
		Special Pathology Practical-A & Community Medicine Practical-B		Recess	Community Medicine	Self Study

NOTE: Paediatrics Medicine will avail 1st half and Gynae & Obst will avail 2nd half

Psychiatry Unit will avail 1st half and Cardiology Unit will avail 2nd half

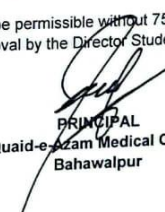
Each Unit sub specialty of Medicine and Surgery should inform the next Unit 1 week before completing its lectures.

There will be a joint CPC for 3rd, 4th & Final Year.

75% attendance is mandatory in lectures, Practicals & Ward attendance. No scholarship or other benefits would be permissible without 75% attendance. 25% margin in attendance is only reserved for sick leaves or genuine problems with proper application and approval by the Director Students Affairs.

A copy is forwarded for information and necessary action to:-
 No. 2586-96 /QAMC/SS/23 Dated: 16.3.2023.

1. The Director Medical Education (DME) Department QAMC, Bahawalpur.
2. The Head of Basic & Clinical Departments (Concerned) QAMC, Bahawalpur.
3. College & Hostel Notice Boards, QAMC, Bahawalpur.


 PRINCIPAL
 Quaid-e-Azam Medical College
 Bahawalpur


REVISED WARD TEACHING PROGRAMME FOURTH YEAR MBBS CLASS FOR THE SESSION 2022-2023
QUAID-E-AZAM MEDICAL COLLEGE BAHAWALPUR
WITH EFFECT FROM 14-10-2023.

WARD	BATCH A TO R (7-DAYS)																	
	27-03-23 to 09-04-23	10-04-23 to 04-05-23 including 8-days spring vacations	05-05-23 to 18-05-23	19-05-23 to 01-06-23	02-06-23 to 15-06-23	16-06-23 to 04-08-23 including 30-days summer vacations	05-08-23 to 18-08-23	19-08-23 to 01-09-23	02-09-23 to 15-09-23	16-09-23 to 29-09-23	30-09-23 to 13-10-23	14-10-23 to 27-10-23	28-10-23 to 03-11-23	04-11-23 to 10-11-23	11-11-23 to 17-11-23	18-11-23 to 24-11-23	25-11-23 to 01-12-23	
Gynae-I	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Gynae-II	B	C	A	E	F	D	H	I	G	K	L	J	N	O	M	Q	R	P
C.C.U	C	A	B	F	D	E	I	G	H	L	J	K	O	M	N	R	P	Q
T.B & Chest	P	Q	R	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Dermatology	Q	R	P	B	C	A	E	F	D	H	I	G	K	L	J	N	O	M
Psychiatry	R	P	Q	C	A	B	F	D	E	I	G	H	L	J	K	O	M	N
Orthopaedic	M	N	O	P	Q	R	A	B	C	D	E	F	G	H	I	J	K	L
Neurosurgery	N	O	M	Q	R	P	B	C	A	E	F	D	H	I	G	K	L	J
Urology	O	M	N	R	P	Q	C	A	B	F	D	E	I	G	H	L	J	K
Anaesthesia	J	K	L	M	N	O	P	Q	R	A	B	C	D	E	F	G	H	I
Radiology	K	L	J	N	O	M	Q	R	P	B	C	A	E	F	D	H	I	G
BINO	L	J	K	O	M	N	R	P	Q	C	A	B	F	D	E	I	G	H
E.N.T	G,H,I		J,K,L			M,N,O			P,Q,R			A,B,C			D,E,F			
E.N.T	G,H,I		J,K,L			M,N,O			P,Q,R			A,B,C			D,E,F			
E.N.T	G,H,I		J,K,L			M,N,O			P,Q,R			A,B,C			D,E,F			
Ophth-I	D,E,F		G,H,I			J,K,L			M,N,O			P,Q,R			A,B,C			
Ophth-I	D,E,F		G,H,I			J,K,L			M,N,O			P,Q,R			A,B,C			
Ophth-II	D,E,F		G,H,I			J,K,L			M,N,O			P,Q,R			A,B,C			
Ophth-II	D,E,F		G,H,I			J,K,L			M,N,O			P,Q,R			A,B,C			

No. 25576-82 /QAMC/SS/23 Dated: 13-10-2023

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2. The Head of Basic & Clinical Departments (Concerned) QAMC, Bahawalpur.
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PRINCIPAL
 Quaid-e-Azam Medical College
 Bahawalpur

Subject: Ophthalmology - 4th Yr MBBS																
TABLE OF SPECIFICATION																
PMDC Requirement = 150											Curriculum Hours = 150					
Sr. No.	Topic	LEARNING OBJECTIVES	KNOWLEDGE			SKILL	ATTITUDE	TOTAL	Mode of information transfer				TOTAL HOURS	Lecture Topics	References	Practicals
			Cognitive Domain			Psychomotor Domain	Effective Domain	%	MIT				Hour			
			C1	C2	C3	P	A	Lecture	Tutorial	Practical	Clinical Rotation					
1	Diseases of the Conjunctiva	<p>Students should be able to:</p> <p>1. Recognize and recall the anatomy of the conjunctiva</p> <p>2. Classify and differentiate types of Conjunctivitis into Bacterial conjunctivitis, Viral conjunctivitis/follicular, Chlamydial conjunctivitis/Trachoma, Neonatal conjunctivitis, Allergic conjunctivitis/ VKC, Membranous conjunctivitis, Giant papillary conjunctivitis, Angular conjunctivitis, Phlyctenular conjunctivitis</p> <p>3. Classify and differentiate conjunctival degenerations (Pinguecula, Pterygium)</p> <p>4. Summarize their pathogenesis, investigations and treatments</p>	1%	3%	2%			6%	7			2	9	1. Anatomy and classification	Parson's Diseases of the Eye	
														2. Bacterial conjunctivitis		
														3. Viral Conjunctivitis		
														4. Chlamydial conjunctivitis/Trachoma	161 - 186	
														5. Neonatal conjunctivitis		
														6. VKC, Membranous conjunctivitis		
														7. Phlyctenular conjunctivitis, Conjunctival degenerations (Pinguecula Pterygium)		

	Students should be able to:	1%	3%	2%			6%	7		2	2	11			
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Diseases of the Lids	1. Recognize and recall the applied anatomy of the eye lids											1. Anatomy of the eyelids	Parson's Diseases of the Eye	1. Lid eversion 2. Assessment of Ptosis	
	2. Summarize the functions of the lids											2. Oedema and Inflammation			
	3. Explain congenital abnormalities, oedema, Blepharitis, Stye, Internal hordeolum, Chalazion											3. Inflammation of the glands of the lids			439 - 460
	4. Explain the anomalies of position, Ptosis, Types, investigations, Pseudoptosis, Treatment Blepharospasm, Trichiasis, Entropion, Ectropion, Symblepharon, Ankyloblepharon, Lagophthalmos											4. Anomalies in the position of the lashes and lids			
	5. Summarize and differentiate the tumours of the lid and their treatment modalities.											5. Tumours and Injuries of the lids			
	6. Classify lid Injuries.											6. Congenital Abnormalities			
	7. Evert and examine the lids											7. Age-related changes			
Ocular Therapeutics	Students should be able to:												Parson's Diseases of the Eye	141 - 160	
	1. Describe routes of administration of ophthalmic drugs											1. Routes of administration, Absorption of topical drugs			
	2. State the factors responsible for the absorption of topical drugs.											2. Mydriatics and Cycloplegics, Anti-glaucoma, Antiinflammatory, Corticosteroids			
	3. Classify Mydriatics & Cycloplegics	1%	2%	3%								3. Anti-allergics, Topical immunomodulators, Dry eye, Antibiotics, Antivirals, Antifungal			
	4. Describe the Anti Glaucoma drugs and their modes of action, interpret their uses in clinical cases					6.00%	3				3	6			
	5. Describe Anti-inflammatory drugs and corticosteroids and their uses														
	6. Describe Anti-allergic drugs, Topical immunomodulators and their uses in clinical cases														
7. Describe the treatment and management of Dry eye,															
8. Describe the mode of action of Antibiotics, Antiviral, Antifungal and there uses in clinical scenarios.															
The Lens	Students should be able to:												Parson's Diseases of the Eye	156 - 269	
	1. Define and discuss the crystalline lens											1. Lens - Introduction and Classification			1. Differentiate between Mature ad
	2. Describe and discuss acquired Cataract – Age related, Congenital & Secondary Cataract.	1%	3%	3%			7%	7		2	3	12			2. Acquired Cataract - Age related
3. Discuss the management of Cataract												3. Congenital Cataract			

		5. Describe and discuss Scleromalacia Perforans															
		6. Describe and discuss Staphylomas, , its causes, pathogenesis, investigations and treatment modalities.															
		7. Describe and discuss Blue Sclera															
		8. Describe and discuss Scleral Tumours and their management.															

7	The Glaucom	Students should be able to:	1%	3%	3%	7%	6	3	2	11			
		1. Define Glaucoma									1. Glaucoma: Introduction and classification	Parson's Diseases of the Eye	1. Types of Glaucoma
		2. Classify Glaucoma									2. Angle closure glaucoma		2. Perimetry
		3. Describe and discuss Angle Closure Glaucoma, its causes, pathogenesis, investigations and treatment modalities.									3. POAG		3. Tonometry
		4. Describe and discuss POAG, its causes, pathogenesis, investigations and treatment modalities.									4. Childhood Glaucoma	280 - 300	
		5. Describe and discuss Childhood Glaucoma, its causes, pathogenesis, investigations and treatment modalities.									5. Gonioscopy, Perimetry		
		6. Define and discuss Gonioscopy & Perimetry									6. Glaucoma surgery		
		7. Discuss Glaucoma Surgery, the different modalities.											
8. Measure intra-ocular pressure manually.													
8	Diseases of the Uveal Tre	Students should be able to:	1%	2%	3%	6%	7	3	10				
		1. Define and discuss the anatomy of the Uveal Tract.								1. Introduction to Uveitis			
		2. Classify Uveitis, and describe its types								2. Clinical Anatomy and applied Physiology of Uvea	Parson's Diseases of the Eye		
		3. Discuss the etiology, Pathogenesis.								3. Classification			
4. Describe Anterior Uveitis, Its types, its causes, pathogenesis, investigations and treatment modalities.	4. Etiology and Pathogenesis of Uveitis	225 - 255											

10. Describe and discuss Exotropia													
11. Describe and discuss Intermittent & Constant													
12. Define and discuss Measurement and Assessment of squint													
13. Enumerate and discuss the different Treatment modalities.													
14. Describe and discuss Paralytic Squint, its signs, etiology,													
15. Define and discuss Diplopia, Primary & secondary Deviation, its investigations and treatment													
16. Describe and discuss Hypertropia.													
17. Describe and discuss the Special Syndromes, A&V pattern, Duane's, Brown's, Mobius, Strabismus fixus, Kinetic Strabismus, Restrictive Strabismus. Ocular palsies, Amblyopia, Therapy.													

10	Diseases of Lacrimal Apparatus	Students should be able to:													
		1. Define and discuss the anatomy & Physiology of the tear film,										1. Anatomy and Physiology of the Tear film	Parson's Diseases of the Eye	1. Location of Puncta, Lacrimal ducts	
		2. Classify dry eye, its causes, pathogenesis, investigations and treatment modalities.,										2. Classification of dry eye, Sjogren Syndrome		2. Probing Syringing	
		3. Describe and discuss Sjogren Syndrome.										3. Investigation of dry eye, Schirmer test	461 - 469		
		4. Describe and enumerate the Investigation of dry eye	1%	3%	2%		6%	5		2	1	8	4. Lacrimal Drainage system, Evaluation of epiphora		
		5. Define Schirmer test, Treatment											5. Congenital NLD obstruction, Acute dacryocystitis, Chronic dacryocystitis		
		6. Define and discuss the Lacrimal Drainage system											6. Conventional DCR, EDCR, Lacrimal gland tumours		
		7. Describe the Causes of watery eyes, and evaluation of epiphora.													
8. Describe and discuss Congenital NLD obstruction,															

		9. Describe and discuss Acute dacryocystitis, its causes, pathogenesis, investigations and treatment modalities.																
		10. Describe and discuss Chronic dacryocystitis, its causes, pathogenesis, investigations and treatment modalities.																
		11. Discuss Conventional DCR, EDCR																
		12. Describe and discuss Lacrimal gland tumours.																
11	Refraction	Students should be able to: 1. Define Optics 2. Define and discuss Myopia, its Clinical Features & management, Refractive Surgery 3. Define and discuss Hypermetropia, its types, Clinical features, management. 4. Define and discuss Astigmatism, its types, Clinical Features, Management, 5. Define and discuss Aphakia and its management. 6. Define and discuss Accommodation 7. Define and discuss Presbyopia 8. Define and discuss Cycloplegic Refraction, AC-A Ratio.	1%	3%	3%		7%	6		4		10		1. Clinical Optics 2. Myopia 3. Hypermetropia 4. Astigmatism, Aphakia 5. Accommodation, Presbyopia, Cycloplegic Refraction, AC-A Ratio 6. Refractive surgery	Parson's Diseases of the Eye 41 - 88	1. Ammetropia 2. Emmetropia 3. Refraction 4. Retinoscopy		

12	Diseases of the Retina	Students should be able to: 1. Define and discuss the Anatomy of the retina 2. Describe and discuss Retinopathies of DM and HT; Eale's, its causes, pathogenesis, investigations and treatment modalities. 3. Describe and discuss Vascular Disorders of the Retina – CRAO, CRVO; ROP 4. Define and discuss Retinal Detachment and its treatment and management.	1%	3%	2%		6%	7		5		12		1. Anatomy and Physiology of the Retina 2. Retinopathies of Diabetes Mellitus and Hypertension; Eale's 3. Vascular disorders of the Retina - CRAO, CRVO; ROP 4. Retinal Detachment and Dystrophies	Parson's Diseases of the Eye 301 - 332	1. Normal Retina 2. Abnormal Retina - 1 3. Abnormal Retina - 2 4. Abnormal Retina - 3
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		5. Describe and discuss Retinal Dystrophies and their management.										5. RP and Retinoblastoma		5. Abnormal Retina - 4	
		6. Describe and discuss RP & Retinoblastoma, its causes, pathogenesis, investigations and treatment modalities.													
13	Diseases of the Vitreous	Students should be able to:													
		1. Define the anatomy of the vitreous													
		2. Describe and discuss Vitreous Haemorrhage, its causes, pathogenesis, investigations and treatment modalities.	1%	3%	2%		6%	4		1		5	1. Vireous Haemorrhage	Parson's Diseases of the Eye	1. Normal and Abnormal vitreous
		3. Describe and discuss Vitreous Detachment, and vitreous opacities											2. Vitreous Detachment, Opacities		
		4. Describe and discuss PHPV											3. PHPV and Vitreous Surgeries	333 - 339	
		5. Describe and discuss Vitreous surgeries													
14	Diseases of the Optic Nerve and Neuro-Optic	Students should be able to:													
		1. Define and discuss the anatomy of the Optic Nerve											1. Applied Anatomy		1. Visual Pathway
		2. Describe and discuss its Diseases, congenital, inflammations, vascular, degenerative, tumours.											2. Congenital, inflammations, Vascular, Degenerative Diseases, Optic Neuritis, Papillitis, Retrobulbar Optic Neuritis.	Parson's Diseases of the Eye	2. Convergency Pathway
		3. Describe and discuss Optic Neuritis & Papillitis, its causes, pathogenesis, investigations and treatment modalities.											3. Papilledema, Papillitis		3. Accommodati on
		4. Describe and discuss Retrobulbar Optic Neuritis, its causes, pathogenesis, investigations and treatment modalities.	1%	3%	2%		6%	8		5		13	4. Tumours, Optic Atrophy	340 - 364 29 - 39	4. Lesions of the Optic Tract
		5. Describe and discuss Pappiloedema, its etiology, pathogenesis, signs & symptoms, Differential Diagnosis, treatment.											5. The Visual Pathway and Neurological Disorders		5. Lesions of the Midbrain
		6. Describe and discuss Tumors											6. Vascular disorders		
		7. Describe and discuss Optic Atrophy											7. Optic Neuritis and Intracranial Tumours		
15		Students should be able to:													
		1. Define and discuss the Anatomy of the orbit	1%	2%	3%		6%	6		2		8	1. Proptosis, Exophthalmos	Parson's Diseases of the Eye	1. Exophthalmo s

	Diseases of the Orbit	2. Describe and discuss Proptosis & Exophthalmos its causes, pathogenesis, investigations and treatment modalities.											2. Orbital Cellulitis 3. Orbital Tumours 4. Blow out fracture	370 - 388	2. Ocular Cellulitis
		3. Describe and discuss Orbital Cellulitis its causes, pathogenesis, investigations and treatment modalities.													
		4. Describe and discuss Cavernous Sinus Thrombosis, its causes, pathogenesis, investigations and treatment modalities.													
		5. Describe and discuss Tumours & Injuries													
16	Ocular Injuries	Students should be able to:													
		1. Describe and discuss Eyelid trauma, its causes and treatment modalities											1. Eyelid trauma	Parson's Diseases of the Eye	1. Various Injuries
		2. Describe and discuss Orbital trauma, causes and treatment modalities	1%	3%	2%			6%	5		2	7	2. Orbital trauma	373 - 392	
		3. Describe and discuss Trauma to the globe, causes and treatment modalities											3. Trauma to the globe		
		4. Describe and discuss Chemical injuries, causes and treatment modalities											4. Chemical Injuries		
		Total	16%	45%	39%	0%	0%	100%	94	0	35	21	150		

CURRICULUM AND LEARNING OBJECTIVES

Sr. #	Topic	Learning Objectives	Teaching Methodology
1.	Basic Anatomy &	Knows the anatomy of the eye and orbit	Lectures, Tutorials & videos
2.	Applied Physiology Of Eye	Knows the physiology of each structure	Lectures, Tutorials & videos
3.	Orbit: Orbital Cellulitis Proptosis Injuries: Extra Ocular Foreign Body, Open And Close Globe Injuries With Or Without IOFB, Blowout fractures, Burns Or Chemical Injury Sympathetic Ophthalmia	Will be able to recognize symptoms & signs and knows the differential diagnosis & investigations of proptosis	Lectures, Tutorials Discussion in OPD & Ward
4.	Lids: Blephritis, Stye, Chalazion, Trichiasis, Entropion, Ectropion, Ptosis & Common Tumors	To know the differential diagnosis of lid swellings. Is able to identify Blephritis, Stye, Chalazion, Trichiasis, Entropion, Ectropion, Ptosis & Common Tumors	Lectures, Tutorials Case Discussion in OPD & Wards Operation Theater

5.	Conjunctiva:	Is able to differentiate and treat allergic conjunctivitis & infective conjunctivitis,	Lectures, Tutorials Case Discussion in OPD & Wards Operation Theater
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	<p>Infective and allergic conjunctivitis pterygium</p> <p>Sclera: Episcleritis and Scleritis</p> <p>Vitamin A: Ocular manifestation of Vitamin A deficiency and its management.</p>	Is able to identify pterygium & Bitots spots	
6.	Cornea: Corneal ulcer, Risk factors, Complications, and Management	To know symptoms and signs of corneal ulcer is able to stain the corneal ulcer and write the treatment	Lectures, Tutorials Case Discussion in OPD & Wards
7.	Lacrimal Apparatus: Composition and Function of tear film, Dry eye, Epiphora, Dacryocystitis and Regurgitation test	Knows the signs and symptoms of dry eye is able to perform regurgitation test	Lectures, Tutorials Case Discussion in OPD & Wards
8.	Uveal Tract: Uveitis, DD of other causes of red eye	Knows signs and symptoms uveitis is able to refer the patient to ophthalmologist	Lectures, Tutorials Case Discussion in OPD & Wards

<p>9.</p>	<p>Lens: Cataract classification signs & Symptoms management rubella syndrome congenital and acquired</p>	<p>Is able to perform distant direct ophthalmoscopy</p>	<p>Lectures, Tutorials Case Discussion in OPD & Wards Operation Theater</p>
	<p>cataract associated with systemic disease, DD of white pupil</p>	<p>Knows the causes of gradual visual loss Knows uses of topical anesthetic and mydriatic eye drops.</p>	
<p>10.</p>	<p>Glaucoma: Aqueous Formation Physiology Circulation IOP Measurement Classification & Definition, Open And Close Angle Glaucoma, Secondary Glaucoma Due to Hyper Mature Cataract And Uveitis, Surgical And Medical Management</p>	<p>Knows the signs and symptoms of acute congestive glaucoma Know the DD of acute red eye Is able to perform direct ophthalmoscopy for optic disc evaluation</p>	<p>Lectures, Tutorials Case Discussion in OPD & Wards</p>

<p>11.</p>	<p>Vitreo Retina:</p> <p>Primary Retinal Detachment Its Presentation & Principals Of Management PVD Diabetic Retinopathy, Hypertensive Retinopathy, Retinitis Pigmentosa, Retinoblastoma</p>	<p>Knows the causes of sudden loss of vision</p> <p>Knows the importance of eye examination in systemic diseases</p> <p>Is able to perform direct ophthalmoscopy</p>	<p>Lectures, Tutorials Case Discussion in OPD & Wards, videos</p>
<p>12.</p>	<p>Optic Nerve:</p> <p>Papilloedema, Optic Neuritis (Papillitis And Retrobulbar Optic Neuritis), Optic Atrophy</p> <p>Pupil:</p> <p>Pupil reflex and Abnormalities</p> <p>Visual Pathway:</p> <p>Visual Field defects in lesions of chiasma and Visual Pathway, Visual Field Assessment</p>	<p>To know & evaluate the optic nerve functions, vision, colour vision, V/F confrontation method, perform pupil light reflex</p> <p>Is able to draw and label the visual pathway and able to identify its lesions at different levels</p>	<p>Lectures, Tutorials Case Discussion in OPD & Wards</p>

13.	Errors of Refraction: Normal Eye Optical System, Errors Of Refraction, Presbyopia, Aphakia, Pseudo Phakia, Anisometropia, Amblyopia Squint & Amblyopia: Definition & Classification & Principles Of Management	Is able to perform and interpret the results of retinoscopy Knows the treatment of refractive errors Is able to perform EOM movement and evaluate different types of squints	C1 C2 P1 A0	Lectures, Tutorials Case Discussion in OPD & Wards	SEQ, MCQ, OSCE	50% MCQ , 25% SEQ , 25% OSCE	MCQ, 2 , SEQ, 1 , OSCE, 1	SEQ 11.11 % MCQ 4.44% Avg % 13.33
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UHS SYLLABUS

OPHTHALMOLOGY

The course outline is as follows :

General Learning Objectives of the Ophthalmology Course:

To equip doctors with essential knowledge, skill and attitude in order to enable them to:

1. Identify ophthalmic diseases including emergencies, provide primary eye care, refer to the appropriate center and provide follow up to the patients.
2. Perform essential minor surgical procedures
3. Communicate effectively with the patient, the family and the community regarding eye diseases and its related issues
4. Understand medical ethics and its application pertaining to ophthalmology and maintaining confidentiality of the patient.
5. To understand the prevalence and prevention of the common public health problems related to ophthalmology.
6. Understand the principles of Medical Research including fundamentals of information technology.

INSTRUCTIONAL STRATEGY

③ METHODOLOGY

- Problem-based Learning
- Tutorials/ Practical sessions/Skills Lab practice
- Clinical rotations and ward visits
- Lectures/Seminars/CPC's – using modern audio visual techniques, ③ Distant learning using electronic devices and current Information ③ Technology facilities.

COURSE CONTENTS

- ③ Basic Anatomy and the functions of the Eyeball and Orbit

- ③ **Orbit:** Orbital Cellulitis, Proptosis
- ③ **Lids:** Blepharitis, Stye, Chalazion, Trichiasis, Entropion, Ectropion, Ptosis, and Common Tumors.
- ③ **Conjunctiva:** Infective and Allergic Conjunctivitis, Pterygium.
- ③ **Cornea:** Corneal Ulcers, risk factors, complications and its management.
- ③ **Sclera:** Episcleritis and Scleritis
- ③ **Pupil:** Pupillary reflexes and their common abnormalities
- ③ **Lacrimal Apparatus:** Composition and function of Tear film, Dry Eye ③ Excessive watering (Epiphora), Dacryocystitis (Acute & chronic).
- ③ **Therapeutics:** Drugs used in common ophthalmic conditions
- ③ **Vitamin "A":** Ocular manifestation of vitamin A deficiency and its management.
- ③ **Uveal Tract:** Uveitis, and its differential diagnosis from other causes of the Red Eye.
- ③ **Lens:** Classification of cataract,
- ③ Congenital Cataract (lamellar, signs and symptoms and management), Rubella syndrome, Acquired Cataract (senile, traumatic, drug induced), cataract due to systemic diseases (clinical picture and management including visual rehabilitation).
- ③ **Glaucoma:** Physiology of Aqueous humor formation and its circulation.
- ③ Measurement of IOP
- ③ Definition & classification of glaucoma
- ③ Primary open angle and closed angle glaucoma
- ③ Secondary glaucoma due to hyper-mature cataract and uveitis. Principles of medical and surgical management of glaucoma.
- ③ **Vitro-Retina:** Posterior vitreous detachment, primary retinal detachment (common presentation and principle of management) ③ Diabetic Retinopathy, Hypertensive Retinopathy, ③ Retinitis Pigmentosa, Retinoblastoma.
- ③ **Optic Nerve:** Papilloedema, Optic Neuritis (Papillitis and Retrobulbar Neuritis), Optic Atrophy
- Visual Pathway:** Introduction to Visual Field defects in the lesions of Chiasma and visual Pathway.

- ③ **Injuries:** Extraocular Foreign Bodies, Closed globe injuries, Open globe injuries with or without retained Intra ocular foreign bodies ③ Burns and Chemical Injuries ③ Sympathetic Ophthalmitis.
- ③ **Squint and Amblyopia:** Definition, Classification and Principle of Management.
- ③ **Errors of Refraction:** Introduction to Optical System of Normal Eye
- ③ Emmetropia, Myopia, Hypermetropia, Astigmatism, Presbyopia, Aphakia, Pseudophakia, Anisometropia and Amblyopia.

Details of Clinical and Practical Competence:

- ③ Level of Learning:
- ③ Level-1 Observer status
- ③ Level-2 Assistant status
- ③ Level-3 Perform under supervision
- ③ Level-4 Perform Independently
- ③ LEVEL 4

History Taking

- Defects in Vision
- Pain in and around the Eye
- Discharging Eye
- Abnormal appearance of the Eye and Orbit

Examination

- ③ Visual Acuity, for distance and near
- ③ Use of a pinhole
- ③ Examination of Adnexa and anterior segment of the eye.
- ③ Eversion of the upper Eye Lid and Lacrimal regurgitation Test ③ Detection of the Deviated Eye
- ③ Ocular Movement
- ③ Pupillary Reflexes (Afferent Pupillary defects) ③ Measurement of Intra ocular pressure.
- ③ Palpation Assessment
- ③ Schiotz Tonometer 1

- ③ Distant Direct Ophthalmoscopy for Identification of defects in Ocular Media ③ Direct Ophthalmoscopy with emphasis on disc and its abnormalities ③ Swollen disc, cup disc and pale disc.
- ③ Confrontation test for field of vision
- ③ Familiarization with Retinoscopy
- ③ Indirect Ophthalmoscopy,
- ③ Slit Lamp and its Uses
- ③ Visual Fields and Use of Laser in Ophthalmology

Procedures

- ③ Irrigation of eye
- ③ Instillation of eye drops
- ③ Staining for corneal ulcer
- ③ Removal of superficial foreign bodies
- ③ Rational use of topical anaesthesia
- ③ Preparation for operation and post operative management
- ③ Understand medical ethics and maintain the confidentiality of the patient *Assessment of Level of Competence:*

③ To Diagnose, treat and prevent certain common eye conditions e.g.

- ③ Blepharitis
- ③ Sty and Chalazion
- ③ Dacryocystitis
- ③ Conjunctivitis
- ③ Trachoma
- ③ Ocular Trauma (Corneal Foreign Body / Abrasion)
- ③ Ocular Allergies

To diagnose certain eye disease, initiate first aid treatment and refer them in time e.g.

- ③ Corneal Ulcer
- ③ Uveitis
- ③ Acute Congestive Glaucoma

- ③ Open or closed globe injuries
- ③ Red Eye
- ③ To enable them to diagnose other eye conditions and refer them to secondary or tertiary eye care centers for further management(Medical / Surgical) e.g.
- ③ Cataract
- ③ Squint and Amblyopia
- ③ Refractive Errors
- ③ Tumours (Leucocoria-white Pupil)
- ③ Serious Ocular Trauma
- ③ Painful or painless loss of vision.
- ③ To understand the importance of prevention in Ocular Diseases
- ③ Deficiency Diseases resulting in ocular problems (Thyroid, Vit“A”)
- ③ Early Detection of Glaucoma
- ③ Diabetic Retinopathy

SOURCE OF KNOWLEDGE

RECOMMENDED BOOKS

1. **Parson's Diseases of the Eye** by Ramanjit Sihala and Radhika Tandor. Latest Ed.
2. **Ophthalmology** by Renu Jogi
3. **Clinical Textbook of Ophthalmology** by Dr. Saleem Akhter
4. **Kanski's Ophthalmology**
5. **Ophthalmology Principles and Concepts** Newill F. W.
6. **Online Journals and Reading Materials through HEC Digital Library Facility.**

POLICY & GUIDELINES OF **LEARNING STRATEGIES & STUDY SKILLS FOR MEDICAL** **STUDENTS**

This document is a Summary written for the purpose of the study guides. For details refer to the document "A HANDBOOK OF POLICY & GUIDELINES OF LEARNING STRATEGIES & STUDY SKILLS FOR MEDICAL STUDENTS" available for the students at website, Bookshop and the Department of Medical Education.

STEPS TO STRATEGIC LEARNING:

1. Set realistic learning goals.

These goals serve as the driving force to generate and maintain the motivation, thoughts, and behaviour necessary to succeed. Set and use long-term occupational goals (you want to be a doctor) and short-term learning goals (you want to understand this new material).

2. Types of knowledge needed to be a strategic learner:

- Know yourself as a learner (learning preferences, talents, best times of day to study, ability to match study skills to learning task) this knowledge helps you set realistic yet challenging learning goals.
- Knowing the nature and requirements of different types of educational tasks.
- Knowing a variety of study skills and learning strategies and how to use them.
- Knowing the contexts in which what is being learned can be used now or in the future.

3. Use a variety of learning strategies:

- Manage your study environment,
- Coordinate study and learning activities,
- Keep your motivation for learning clear,
- Generate positive behaviours toward learning,
- Make new information meaningful to you,
- Organize and integrate new information with existing knowledge, or Re-organize existing knowledge to fit the new understanding and information.

ACADEMIC HOURS BREAKDOWN AS PER PMDC REGULATIONS

TABLE OF SPACING AND HOURS OF SUBJECTS IN MBBS COURSE

SUBJECT	1 st year	2 nd year	3 rd year	4 th year	5 th year	Total Hours
BEHAVIOURAL SCIENCES	5 Hrs.	5 Hrs. 5 Hrs.		5 Hrs.	5 Hrs.	25 Hrs.
ISLAMIC & PAKISTAN STUDIES	15 Hrs.	15 Hrs. 10 Hrs.		10 Hrs.	-	50 Hrs.
ANATOMY	250 Hrs.	250 Hrs.	-	-	-	500 Hrs.
PHYSIOLOGY	250 Hrs.	250 Hrs.	-	-	-	500 Hrs.
BIOCHEMISTRY	100 Hrs.	100 Hrs.	-	-	-	200 Hrs.
PHARMACOLOGY	-	-	300 Hrs.	-	-	300 Hrs.
PATHOLOGY	15 Hrs.	25Hrs.	260 Hrs	200 Hrs	-	500 Hrs.
* FORENSIC MEDICINE	-	-	100 Hrs	-	-	100 Hrs.
** COMMUNITY MEDICINE	25 Hrs	25 Hrs	50 Hrs	150 Hrs	-	250 Hrs.
MEDICINE & Allied NUCLEAR MEDICINE	25 Hrs.	30 Hrs. 10 Hrs.	120 Hrs	265 Hrs. 10 Hrs	360Hrs	800 Hrs. 20 Hrs.
{ EMERGENCY MEDICINE, MEDICINE ELECTIVE, *** PSYCHIATRY, DERMATOLOGY AND GENERAL PRACTICE	-	-	-	-	-	
PAEDIATRIC MEDICINE	5 Hrs.	10 Hrs.	15 Hrs	50 Hrs	70 Hrs	150 Hrs.
SURGERY & ALLIED	25 Hrs.	30 Hrs.	120 Hrs	265 Hrs	360 Hrs	800 Hrs.
{ **** RADIOLOGY, ORTHOPAEDICS, PAED.SURGERY, NEUROSURGERY, SURGERY ELECTIVE, EMERGENCY SURGERY & ANAESTHESIA	5 Hrs.	10 Hrs.	-	10 Hrs	15 Hrs	40 Hrs.
OBSTETRICS & GYNAECOLOGY	10 Hrs.	10 Hrs.	50 Hrs	100 Hrs	130 Hrs.	300 Hrs.
OPHTHALMOLOGY	5 Hrs.	10 Hrs.	15 Hrs	70 Hrs	-	100 Hrs.
OTORHINOLARYNGOLOGY(E.N.T.)	5 Hrs.	10 Hrs.	15 Hrs	70 Hrs	-	100 Hrs.
CLINICO-PATHOLOGICAL CONFERENCE	-	-	-	60 Hrs	-	60 Hrs.
Total	740 Hrs	790 Hrs	1060 Hrs	1265Hrs	940Hrs	4795Hrs

- * Bioethics will be taught in the Forensic Medicine.
- ** Biostatistics will be taught in Community Medicine.
- *** Behavioral Sciences will be taught in Psychiatry.
- **** Biophysics will be taught in Radiology.

Distribution of subjects Instructional contents into Theory and Practical learning.

Type of subject	Theory Content	Practical Skills Content
All Basic Sciences	50%	50%
Pre-Clinical Sciences (Pharmacology and Therapeutics, Forensic Medicine, Community Medicine, Pathology)	40%	60%
Clinical Sciences	30%	70%
Internship/House Job	0%	100%

Time Allocation To Curriculum Content= 7493 hours

Subject specified competencies	General competencies
80% 5994	20% 1499

Time Allocation To the Study Design(5184)

Instructions	Self Study
80% 4795	20% 1198

Time Allocation to Site of Study(4147)

Institution Based	Community Oriented
80% 3836	20% 959

Distribution of Marks in Evaluation

University Examination	Internal Assessments
90%	10%

Examination of Subject Based MBBS Curriculum

Total 100%

Internal Assessment 20%

University Examination 80%

Internal Assessment Theory	Internal Assessment Practical	University Assessment Theory	University Assessment Practical	Total
10%	10%	40%	40%	100%

Generic Competencies

Total Hours = 1499

Compulsory

- Pakistan Studies
- Islamiyat

INTERNAL ASSESMENT POLICY

The assessment policy of Quaid-e-Azam Medical College clearly reflect that the assessment must covers knowledge, skills and attitude to be acquired by a medical student at the end of the each Professional Year and the entire MBBS Course.

- Theoretical knowledge is assessed by means of MCQs, SEQs, Structured Viva,.
- Professional and Clinical Skills are assessed through OSPE, OSCE, Practical Exams and Long and Short Cases.
- Attitudes are assessed through OSPE, OSCE, Practical Exams, Long Cases, Short Cases and Vivas

Assessment Procedures

Performance of students will be assessed as follows:

a. Programmatic Assessment During Academic Year: Grand Tests and Revision Test It will incorporate both formative and summative assessment for all academic years.

1) Formative Assessments:

These are Conducted throughout the academic year. These are low stake examinations with feedback to improve student learning, leading to better performance in summative assessments and the UHS Professional Examinations. Here formative assessment is in the form of Grand Tests, Revision Tests, Research, Tutorials, Assignments, Long Cases and Short Cases presentations etc.

2) Summative Assessments:

These are conducted at the end of each term, consisting of Session Examinations conducted on the pattern of UHS annual Prof Exams. These consist of One best type of MCQs and SEQs which has two to three parts require written short essay responses from the students. The MCQs, the SEQs are mostly clinical and scenario based and designed to test the concepts.

b. End of Term Assessment

This will be summative carried out at the end of each academic year.

Assessment Tools:

Various tools selected are as follows according to UHS guidelines.

a. Written Assessment

1) Multiple Choice Question (MCQ)

MCQs are extensively used for in both formative and summative assessment owing to their ability to offer a broad range of examination items that incorporate several subject areas. They are the one best type of MCQs and designed to test factual knowledge, understanding and clinical reasoning.

A multiple choice item consists of a problem, known as the stem, and a list of suggested solutions, known as the choices. The choices consist of one correct or best choice, which is the answer, and incorrect or alternatives, known as distractors. Each MCQ carries one mark. The number of MCQs vary in the Grand Tests, Revision Test and the Session Exams as needed.

2) Short Essay Questions (SEQs)

Written assessment formats are the most widely used assessment methods in medical education. Learning outcomes which are mainly based on cognitive domains (knowledge) can be assessed by them.

The SEQs have a statement or clinical scenario followed by two to three questions, which require application of concepts and are thought provoking.

b. Assignments and Presentations

Every month in various departments, topics of clinical significance are given to the students for assignment and presentations for small group discussions (SGD) sessions. These will be a part of formative assessment. Clinico- Basic and Clinico-Pathological Conferences (CPC) are held for preclinical and clinical years, respectively.

c. Practical/Clinical Assessment

1) Objective Structured Practical Exam (OSPE)

A formative OSPE will be held during terms and summative at the end of year. It will consist of laboratory-based and practical questions related to the learning objectives covered in the course. The students will be given feedback after formative assessment.

2) Objective Structured Clinical Exam (OSCE):

A formative OSCE will be held during the term and summative at the end of year. It will consist of clinical and practical questions related to the learning objectives covered in the course. The students will be given feedback after formative assessment.

3) Long Case

At the end of fourth and final year each subject will be assessed by a long case. Daily encountered problems will be the case scenarios for which students will be trained during formative assessment in clinics.

4) Structured Viva

At the end of examination an integrated viva will be taken in which relevant specialists will sit and ask questions. There will be guidelines for examiners to follow.

5) Log Books

In case of log books, required entries will be countersigned by observer. It will be criterion referenced whereas the students will have to fulfill the following criteria: for example assignments, case presentations in wards, departmental log books.

6) Observation Internal Assessment

The progress report from teachers will have separate column about behavior and attitude of students in each term in addition to academic record with minimum pass of 50%.

Internal Assessment

The progress report from teachers will have separate column about behavior and attitude of students in each term in addition to academic record with minimum pass of 50%.

The question papers are prepared in secrecy and approved by the Principal. The department then gets sufficient copies made in secrecy and submits the same to the directorate of Medical Education 24 hours before the scheduled test / exam. On the day of the examinations these papers along with the answer sheets are collected from the DME and taken straight to the examination hall where they are opened and are distributed to the students for attempting the question.

After the papers have been solved, the MCQs are marked immediately and the SEQs marked and submitted within two days (except for revision tests where the results have to be submitted within 24 hours) from here, the assessment system as envisaged in the earlier paragraphs is applied.

Every test / examination is supported by keys both for MCQs and SEQs. Adequate time is air marked for key discussion in which the member of the faculty explains to the class how in fact they should have attempted the MCQs and SEQs. This gives an opportunity to the class to make the assessment of how they have attempted the paper and what mistakes they have made and how not to repeat them in future.

The college endeavors to implement the assessment system of the UHS subject based curriculum as it is in vogue at present by implementing the curriculum with the basic ingredients of assessment implementation as follows:

- a. Grand Test
- b. Revision Test
- c. Session Examinations
- d. OSPE
- e. OSCE
- f. Viva
- g. Log books / Copies
- h. Assignments
- i. Research work
- j. Tutorials
- k. Long case
- l. Short case

Practical Assessments

The regulations for the preparation and conduct of practical assessments vary between subject areas.

Clinical Assessment

The clinical assessment is carried out in the following forms:

- a. Scenario based Clinical Oriented MCQs
- b. Scenario/Clinical based SEQs/SAQs
- c. On-Patient training viva
- d. Ward tests
- e. OSPE
- f. OSCE

Assessment Framework

The framework for assessment involves the University guideline of:

- a. Pass marks 50%
- b. Equal marks for theory and for practical
- c. Internal Assessment 10% to be awarded by the college
- d. Allocation of marks as under

Grand Test: The syllabus of each subject for which the table of specification has been formulated in detail is divided into various topics and grand tests are held after the topic has been covered in theory, practical and in tutorial classes. The grand test is the first exposure of the students towards assessment of his/her knowledge and skills and is held once only for each topic covered as the syllabus goes along. The grand test has the following ingredients:

- | | |
|----------------|-----------|
| a. MCQs | 45% marks |
| b. SEQs | 45% marks |
| c. Viva / Copy | 10% marks |

Note: The DME maintains a record of all grand tests along with the keys to the MCQs and SEQs and the results. These results are used for the calculation and assessment of each student in terms of their acquisition of knowledge and skills.

Revision Test: The revision tests are designed to precede every session exam and they are aimed at breaking up the syllabus and covering the same in small bits so that the students can have exhaustive study of the portion of the syllabus to be tested upon. The schedule of revision test is decided jointly by the Assessment Committee and the students' class representatives so that the student input is brought into consideration. In this case the students' representatives include the weak students, the average ones and good students. And this mix ensures that adequate time is provided to weak students to do exhaustive studies.

Depending upon the syllabus covered. 8 to 10 revision tests are held in preparation for the session exams. The contents of the revision tests are:

- | | |
|--------------|----------|
| a. MCQs (30) | 30 marks |
| b. SEQs (6) | 30 marks |

Note: The DME maintains a record of all grand tests along with the keys to the MCQs and SEQs and the results. These results are used for the calculation and assessment of each student in terms of their acquisition of knowledge and skills. Four sets of revision tests are held annually. One each before the early session, mid-session, late session and/or send-up examination.

Session Examination: As per the annual planner and schedule, three session exams are held every year and these are generally held in March, June and August each year. The late session examination is held in August and as an extra opportunity for the students to qualify the sendups for the border line cases is only held one month before the prof exam. The following session exams are held:

- | | |
|------------------------------|-------------------|
| a. Early Session Examination | 50% of syllabus |
| b. Mid-Session Examination | 85% syllabus |
| c. Late Session Examination | 100% syllabus |
| d. Send-up Examination | For the very weak |

The details of the session examination are as under

- | | |
|--|---------------------|
| a. Theory - 50% marks divided as under | |
| 1) MCQs | 45% of theory marks |
| 2) SEQs | 45% of theory marks |
| 3) Log book / copy | 10% of theory marks |
| b. OSPE/OSCE/Viva - 50% marks | |

Note: The DME maintains a record of all session exams along with the keys to the MCQs and SEQs and the results. These results are used for the calculation and assessment of each student in terms of their acquisition of knowledge and skills. Four sessions examinations are held annually.

OSPE (Objective Structured Practical Examination): This depicts the scenario based clinical setting and various stations are arranged. The student has to go from one station to the other to answer the question or to display his practical skill. This is aimed at assessing both the knowledge and skills of the student. The format and the standard of the scenario based problems/questions are in line with the standards prescribed by the University of Health Sciences.

Note: The DME maintains a record of all OSPEs along with the keys to the OSPE and the results. These results are used for the calculation and assessment of each student in terms of

their acquisition of knowledge and skills. Sample OSPE paper is attached as **Annexure-B**. Since OSPE is a part of session exams therefore four sessions of OSPE are held each year.

OSCE (Objective Structured Clinical Examination): This depicts the scenario based clinical setting and various stations are arranged. The student has to go from one station to the other to answer the question or to display his clinical skills. This is aimed at assessing both the knowledge and skills of the student. The format and the standard of the scenario based problems/questions are in line with the standards prescribed by the University of Health Sciences.

Note: The DME maintains a record of all OSCEs along with the keys to the OSCE and the results. These results are used for the calculation and assessment of each student in terms of their acquisition of knowledge and skills. Sample OSCE paper is attached as **Annexure-C**. Since OSCE is a part of session exams therefore four sessions of OSCE are held each year.

Viva: This is an oral examination to which the student is subject to be examined by two members of the Faculty one acting as the internal examiner and the other acting as the external examiner. The student is grilled in these oral questioning sessions. The student is asked on various clinical aspects to ascertain his knowledge.

Note: The DME maintains a record of all Viva and the results. These results are used for the calculation and assessment of each student in terms of their acquisition of knowledge and skills. Since Viva is a part of session exams therefore four sessions are held each year.

Research work: The Department of Community Medicine as a part of its Curriculum train the students in carrying out research. These research projects are covered in Standard 12 – Research & Scholarship and research records are available in the Department of Community Medicine. Research works are included as a part of practical assessment and left to the discretion of the Head of Department.

Tutorials: These are held before every grand test to clear the concepts of the students on the subject. The performance of the students in the tutorials is included in the viva assessment.

Long Case and Short Case: This system of OSPE and OSCE is to ascertain the clinical acumen of the student. These are held with the session examinations and form of a part of the practical/clinical assessment.

Notification of Results

The Assessment Committee will display result on notice board as well as the results are sent through SMS to the father of the student.

Results as hard copy will also be sent to parents after each term.

Conducting Examinations and Assessments

Conducting Examinations and Assessments According to University of Health Sciences Guidelines. In all examinations and assessments, the conditions underpinning the examination or assessment shall be displayed on concerned department notice boards to students prior to the examination or assessment taking place.