



Curriculum for 4th Year MBBS

Department of Ophthalmology

Department of Ophthalmology
Nishtar Medical University and Hospital Multan.



Prof. Dr. Muhammad Rashad Qamar Rao
Head of Ophthalmology Department

Message

“Don’t wait for opportunity Create it.”

It gives me immense pleasure to be part of Nishtar Medical University Multan. Nishtar is one of the historical and prestigious institution established after the creation of Pakistan in 1951/1952. Ophthalmology is for vision and vision is life. My aim is to increase national and international visibility of Medical faculty with respect to educational research and evidence based curricular development and provision of the quality of education and keep them up to date with the advance knowledge and skills. The Ultimate goal is to develop culture of standardized patient care.

Faculty of Department of Ophthalmology **Nishtar Medical University, Multan**

Professor

Dr. M. Rashad Qamar Rao

MBBS, MCPS, FCPS, FRCS (Glasgow)
Fellowship Vitreo-Retina (UK/Germany)
MCPS (Medical Education)

Head, Department of Ophthalmology

Professor

Dr. Syed Ahmar Hussain

MBBS, FCPS, FRCS (UK)

Associate Professor

Dr. Shahbaz Aslam

MBBS, DOMS, FCPS

Assistant Professor

Dr. Muhammad Ismail

MBBS, DOMS, FCPS

Assistant Professor

Dr. Majid Hussain

MBBS, DOMS, FCPS

Fellow Paediatric Ophthalmology

Senior Registrar

Dr. Noshawan Aadil

MBBS, FCPS

Senior Registrar

Dr. Mehak Fatima

MBBS, FCPS

INTRODUCTION TO OPHTHALMOLOGY:

Ophthalmology is graduate programme in clinical sciences, integrated with the curriculum of Fourth year MBBS. It comprises ophthalmic anatomy, physiology, pathology biochemistry and clinical ophthalmology. The Bachelor of Medicine and Bachelor of Surgery (MBBS) under graduate Ophthalmology Curriculum is concerned with the study of nature and function of Ophthalmic and orbital tissues along with the application of basic scientific knowledge in health and diseased state. By its nature, Ophthalmology overlaps The Basic Medical sciences and Clinical Ophthalmic sciences

SCOPE & VISION

Ophthalmology is for vision. And vision is Life. Ophthalmology is concerned with one of the five senses of human being. All faculty members under the supervision of Prof. Dr. Rashad Qamar Rao, the Head of ophthalmology department are endeavoring day and night to get this LIFE on. To achieve this goal, main stakeholders are students. Students are advised to work hard along with their facilitators to achieve this goal.

LEARNING OUTCOMES 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. Explain medical ethics and its application pertaining to ophthalmology
And maintaining confidentiality of the patient.
5. Elaborate the prevalence and prevention of the common public health
Problems related to ophthalmology.
6. Describes the principles of Medical Research including fundamentals of
Information technology.

SCHEME OF STUDIES

ALLOCATION OF CONTACT HOURS AS PER PMDC RULES

Subject	year	theory	practical	total
Ophthalmology	MBBS 4 TH YEAR	50	50	100

DISTRIBUTION OF MARKS AS PER NMU RULES

Internal assessment	theory	OSPE	TOTAL
20	90	90	200

Subject examination will be conducted by the Nishtar medical university rules at the end of the academic year.....

COURSE ORGANISATION

INSTRUCTIONAL STRATEGIES

- Problem-based Learning
- Tutorials/ Practical sessions/Skills
- Full length class lectures
- Opd visits and classes
- Videos and OSPE Practice
- Operation Theatres visits
- Clinical rotations and ward visit
- Evening round attendances and evening classes

At the end of entire academic year, students would be able to;

Deliver Lectures using modern audio visual techniques,

Distant learning using electronic devices and current Information

Technology facilities.

LECTURES

There will be two full length lectures per week, one hour each on Monday and Wednesday.

Timings of these lectures will be as follows:

MONDAY 1.30 TO 2.30 PM

WEDNESDAY 8.00 AM TO 9.00 AM

Above Lectures will be interactive types, some lectures will be delivered by students themselves, using audio/visual facilities. Topics and Contents of lectures already submitted on line to students both hard copy and on WhatsApp group.

OPD CLINICS/

Whole sessions of students is divided into 5/6 equal badges (50-60 students per badge)

These badges are rotated in ophthalmology for 40 days each

Contact hours for these badges are three hours/day six day a week

Timings of these Badges are from 11.00 am to 2.30 pm

This badge of 50-60 students is divided further in six badges in different OPD CLINICS (Vitreoretina, Glaucoma, Cataract, Paed, Orbit and Oculoplastic, Refraction Clinics)

Students learn History taking/ocular examination, clinical methods, problem based learning and decision making and different competencies at different levels

Tutorials:

In evening classes small group discussions, clinical methods rehearsal, OSPE discussion

DISTANT LEARNING

EVALUATION AND FEEDBACK

INTERNAL ASSESMENT (20 MARKS)

Will be based on written test (60%) OSPE&VIVA (40%)

Following will be the methods of internal assessment

- Whole session of students will be evaluated in three formative assessment at the end of each terms. This will consists of 45 MCQs and 9 SAQs.(90marks)
- Students will also be evaluated at the end of each badge rotation of 40 days in ward. This will consist of OSPE , Table viva, instruments, Pharmacology, Clinical methods, History taking and examining the patients as short cases
- At the end of Academic calendar students will be evaluated by SEND-UP examination consisting of 45 MCQs and 9 SAQs covering whole syllabus(90 marks)

All of above marks will be averaged as 20 marks for internal assessment

FINAL PROFESSIONAL NMU EXAMINATION: 200 MARKS

Internal assessment: 20 marks

Theory: 90 marks

(MCQs 45; one mark each (45 marks) SAQs 9; 5 mark each (45 marks)

OSPE:90 MARKS

- | | |
|--|----|
| A) 10 stations unobserved/non interactive five mark each | 50 |
| B) 4 stations observed/interactive , ten marks each | 40 |

TOTAL	200
-------	-----

COURSE REQUIREMENTS

Each student will spend a total of 36 weeks in department of Ophthalmology

Each students will be required to:

- 1- Attend a minimum of 75% of lectures and OPD clinics/wards

- 2- Attend the OSPE Classes, Operation theatres,
- 3- Attend evening tutorials/ clinical skill learning

COURSE CONTENTS

- Basic Anatomy and the functions of the Eyeball and Orbit
- **Orbit:** Orbital Cellulitis, Proptosis
- **Lids:** Blepharitis, Styte, Chalazion, Trichiasis, Entropion, Ectropion, Ptosis, and Common Tumors.
- **Conjunctiva:** Infective and Allergic Conjunctivitis, Pterygium.
- **Cornea:** Corneal Ulcers, risk factors, complications and its management.
- **Sclera:** Episcleritis and Scleritis
- **Pupil:** Pupillary reflexes and their common abnormalities
- **Lacrimal Apparatus:** Composition and function of Tear film, Dry Eye
- Excessive watering (Epiphora), Dacryocystitis (Acute & chronic).
- **Therapeutics:** Drugs used in common ophthalmic conditions
- **Vitamin "A":** Ocular manifestation of vitamin A deficiency and its management.
- **Uveal Tract:** Uveitis, and its differential diagnosis from other causes of the Red Eye.
- **Lens:** Classification of cataract,
- 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).

- **Glaucoma:** Physiology of Aqueous humor formation and its circulation.
- Measurement of IOP
- Definition & classification of glaucoma
- Primary open angle and closed angle glaucoma
- Secondary glaucoma due to hyper-mature cataract and uveitis. Principles of Medical and surgical management of glaucoma.
- **Vitro-Retina:** Posterior vitreous detachment, primary retinal detachment (Common presentation and principle of management)
- Diabetic Retinopathy, Hypertensive Retinopathy,
- Retinitis Pigmentosa, Retinoblastoma.
- **Optic Nerve:** Papilledema, Optic Neuritis (Papillitis and Retro bulbar Neuritis), Optic Atrophy
- **Visual Pathway:** Introduction to Visual Field defects in the lesions of Chiasma And visual Pathway.
- **Injuries:** Extraocular Foreign Bodies, Closed globe injuries, Open globe injuries With or without retained Intra ocular foreign bodies

- Burns and Chemical Injuries
- Sympathetic Ophthalmitis.
- **Squint and Amblyopia:** Definition, Classification and Principle of Management.
- **Errors of Refraction:** Introduction to Optical System of Normal Eye
- Emmetropia, Myopia, Hypermetropia, Astigmatism, Presbyopia, Aphakia,
- Pseudophakia, Anisometropia and Amblyopia.

Levels of Clinical and Practical Competence:

- Level-1 Observer status
- Level-2 Assistant status
- Level-3 Perform under supervision
- Level-4 Perform Independently
- LEVEL 4 (Competencies)

History Taking

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

Examination

- Visual Acuity, for distance and near
- Use of a pinhole
- Examination of Adnexa and anterior segment of the eye.
- Eversion of the upper Eye Lid and Lacrimal regurgitation Test
- Detection of the Deviated Eye
- Ocular Movement
- Pupillary Reflexes (Afferent Pupillary defects)
- Measurement of Intra ocular pressure.
- Palpation Assessment
- Distant Direct Ophthalmoscopy for Identification of defects in Ocular Media
- Direct Ophthalmoscopy with emphasis on disc and its abnormalities
- Swollen disc, cup disc and pale disc.
- Confrontation test for field of vision
- Familiarization with Retinoscopy

- Indirect Ophthalmoscopy,
- Slit Lamp and its Uses
- Visual Fields and Use of Laser in Ophthalmology

Procedures

- Irrigation of eye
- Instillation of eye drops
- Staining for corneal ulcer
- Removal of superficial foreign bodies
- Rational use of topical anaesthesia
- Preparation for operation and post-operative management
- Explain medical ethics and maintain the confidentiality of the patient

Assessment Level of Competence:

- Diagnosis, treatment and prevention of certain common eye conditions e.g.

Blepharitis

- Sty and Chalazion
- Dacryocystitis
- Conjunctivitis
- Trachoma
- Ocular Trauma (Corneal Foreign Body / Abrasion)
- Ocular Allergies
- Diagnosis certain eye disease, initiate first aid treatment and refer them in time e.g.
 - Corneal Ulcer
 - Uveitis
 - Acute Congestive Glaucoma
 - Open or closed globe injuries
 - Red Eye
- Enable them to diagnose other eye conditions and refer them to secondary or

Tertiary eye care centers for further management (Medical / Surgical) e.g.

- Cataract
- Squint and Amblyopia
- Refractive Errors
- Tumors (Leukocoria-white Pupil)

- Serious Ocular Trauma
 - Painful or painless loss of vision.
-
- Explain the importance of prevention in Ocular Diseases
 - Deficiency Diseases resulting in ocular problems(Thyroid, Vit.A")
 - Early Detection of Glaucoma
 - Diabetic Retinopathy

RECOMMENDED BOOKS

- 1. Parson's Diseases of the Eye** by Ramanjit Sihala and Radhika Tandor. 3rd Ed
- 2. Ophthalmology** by Reno 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.**

LECTURES OUTLINE

Topics	No. Of lectures	Facilitators
1 Lid **	3	
2 Lacrimal System **	2	
3 Conjunctiva **	2	
4 Episclera/Sclera **	1	
5 Cornea ***	3	
6 Uvea ***	4	
7- Vit A deficiencies *	1	
8 Glaucoma***	4	
9 Lens***	5	
10 Vitreo-Retina**	5	
11 Strabismus*	3	
12 Optic Nerve**	2	
13 Errors of Refraction ***	2	
15 Ocular Injuries***	2	
16 Orbit**	3	
17 Ocular tumors/ Leukocoria*	2	
18 REFRACTIVE SURGERY	1	
19 visual pathway	1	
20 visual field**	1	
21 Pharmacology **	1	

22. laser*	1	
TOTAL	46	
Note: Essential topics*** Important topics** Complimentary topics *		

Self-learning topics

Anatomy and physiology of eyeball and orbit

Retinitis pigmentosa

Visual pathways

Pupillary abnormalities

Topics to be taught in ward/OPD

Vision and visual acuity

Pupil

Communicable diseases

Instruments

Pharmacology

Research methodology workshop

SPSS system workshop

Evening Class activities (Competencies learning in batches)

History taking

Visual acuity

Pinhole

Ocular movements

Cover tests

Pupillary reflexes

Measurement of intraocular pressure

Distant direct ophthalmoscopy

Confrontation visual field testing

Familiarization with retinoscopy

Familiarization with indirect ophthalmoscopy

1st term planner

4th Year MBBS (N – 70) Ophthalmology Class Lectures (1st Term)

20-02-2024 to 01-06-2024

Venue: Mustafa Kamal Pasha Lecture Theater Complex

Sr. No.	Date	Day	Time	Competencies	Facilitator
1	21/02/24	Wednesday	8:00 am To 9:00 am	Introduction	Prof. Dr. Rashad Qamar Rao
2	26/02/24	Monday	10:00 am To 11:00 am	(Lid - I) • Positional abnormalities of eyelids • Entropion/Ectropion, Trichiasis	Dr. Shahbaz Aslam
3	28/02/24	Wednesday	8:00 am To 9:00 am	(Uvea - I) Pathophysiology of Uveitis	Prof. Dr. Rashad Qamar Rao / Dr Mehak
4	04/03/24	Monday	10:00 am To 11:00 am	(Lid - II) Introduction and diagnosis ptosis Treatment option of ptosis	Dr. Shahbaz Aslam

5	06/03/24	Wednesday	8:00 am To 9:00 am	(Uvea - II) Clinical work up of Uveitis	Prof. Dr. Rashad Qamar Rao / Dr Mehak
6	11/03/24	Monday	10:00 am To 11:00 am	(Lid - III) • Benign and Malignant eye lid lesions • External hordeolum, Internal hordeolum, Chalazion	Dr. Shahbaz Aslam
7	13/03/24	Wednesday	8:00 am To 9:00 am	Uvea – III Acute Anterior Uveitis Intermediate + post. Uveitis	Prof. Dr. Rashad Qamar Rao / Dr Mehak
8	18/03/24	Monday	10:00 am To 11:00 am	Lid –IV Keratocanthoma, Strawberry nevus Miscellaneous lesion	Dr. Shahbaz Aslam
9	20/03/24	Wednesday	8:00 am To 9:00 am	Uvea - IV Complications of Uveitis Treatment modalities of Uveitis	Prof. Dr. Rashad Qamar Rao / Dr Mehak
10	25/03/24	Monday	10:00 am To 11:00 am	Lid - V Basal Cell Carcinoma Squamous Cell Carcinoma Sebaceous Gland Carcinoma, Malignant Melanoma	Dr. Shahbaz Aslam
11	27/03/24	Wednesday	8:00 am To 9:00 am	Lens I Anatomy and Physiology	Prof. Dr. Rashad Qamar Rao / Dr Mehak

12	01/04/24	Monday	10:00 am To 11:00 am	(Lacrimal Sys. - I) • Function of tears • Composition of tears Watering of eyes • Lacrimation • Epiphora • Congenital NLD block	Dr. Shahbaz Aslam
13	03/04/24	Wednesday	8:00 am To 9:00 am	Lens II Cataract and its Pathophysiology	Prof. Dr. Rashad Qamar Rao / Dr Mehak
15	17/04/24	Wednesday	8:00 am To 9:00 am	Lens - III Congenital Cataract	Prof. Dr. Rashad Qamar Rao / Dr Mehak
16	22/04/24	Monday	10:00 am To 11:00 am	(Lacrimal Sys. - II) Dry eye Etiology, Diagnosis, Complication and treatment	Dr. Shahbaz Aslam
17	24/04/24	Wednesday	8:00 am To 9:00 am	Lens IV Management and treatment of Cataract	Prof. Dr. Rashad Qamar Rao / Dr Mehak
18	29/04/24	Monday	10:00 am To 11:00 am	Strabismus I • Introduction Types of Strabismus • History	Dr. Majid Hussain
19	06/05/24	Monday	10:00 am To 11:00 am	Strabismus II • Amblyopia • Medical Treatment	Dr. Majid Hussain

20	08/05/24	Wednesday	8:00 am To 9:00 am	Vitreo Retina I • Diabetic Retinopathy • Hypertensive Retinopathy	Prof. Dr. Rashad Qamar Rao / Dr Mehak
21	13/05/24	Monday	10:00 am To 11:00 am	Strabismus III Work up of strabismus	Dr. Majid Hussain
22	15/05/24	Wednesday	8:00 am To 9:00 am	Vitreo Retina II • Central retinal vein occlusion • Central retinal artery occlusion	Prof. Dr. Rashad Qamar Rao / Dr Mehak
23	20/05/24	Monday	10:00 am To 11:00 am	Strabismus IV Surgical treatment	Dr. Majid Hussain
24	22/05/24	Wednesday	8:00 am To 9:00 am	Vitreo Retina III • Vitreous Pathalogy • Persistent hyperplastic primary vitreous • Eales disease	Prof. Dr. Rashad Qamar Rao / Dr Mehak
25	27/05/24	Monday	10:00 am To 11:00 am	Leukocoria	Dr. Majid Hussain
26	29/05/24	Wednesday	8:00 am To 9:00 am	Vitreo Retina IV Peripheral Retinal degeneration	Prof. Dr. Rashad Qamar Rao / Dr Mehak

2nd term planner**Nishtar Medical University Multan**4th Year MBBS (N – 70) Ophthalmology Class Lectures (2nd Term)

10 -06-2024 to 05/10/2024

Venue: MK PASHA Auditorium

Sr. No.	Date	Day	Time	Competencies	Facilitator
1	10/6/24	Monday	10:00 am To 11:00 am	Conjunctiva I Conjunctivitis(Bac/viral Chlamydial)	Prof. Dr. Syed Ahmer Hussain
2	12/6/24	Wednesday	8:00 am To 9:00 am	Glaucoma I Types of Glaucoma	Prof. Dr. Rashad Qamar Rao
3	22/7/24	Monday	10:00 am To 11:00 am	Cornea I Keratitis	Dr. Ismail
4	24/7/24	Wednesday	8:00 am To 9:00 am	Glaucoma II - POAG - Treatment Modalities	Prof. Dr. Rashad Qamar Rao
5	29/7/24	Monday	10:00 am To 11:00 am	Cornea II - Corneal Degeneration - Corneal Dystrophies	Dr. Ismail
6	31/7/24	Wednesday	8:00 am To 9:00 am	Glaucoma III - PACG - Treatment Modalities	Prof. Dr. Rashad Qamar Rao
7	5/8/24	Monday	10:00 am To 11:00 am	Cornea III - Keratoconus - Keratoplasty	Dr. Ismail
8	7/8/24	Wednesday	8:00 am To 9:00 am	Glaucoma IV Cong. Glaucoma	Prof. Dr. Rashad Qamar Rao
9	12/8/24	Monday	10:00 am To	Cornea IV Refractive Surgery Procedures	Dr. Ismail

			11:00 am		
10	19/8/24	Monday	10:00 am To 11:00 am	Conjunctiva II • Trachoma • Pterygium • Pinguecula	Prof. Dr. Syed Ahmer Hussain
11	21/8/24	Wednesday	8:00 am To 9:00 am	Glaucoma V • Neo Vascular Disease	Prof. Dr. Rashad Qamar Rao
12	26/8/24	Monday	10:00 am To 11:00 am	Sclera • Scleritis • Episcleritis	Prof. Dr. Syed Ahmer Hussain
13	28/8/24	Wednesday	8:00 am To 9:00 am	Glaucoma VI • PXT +PDG	Prof. Dr. Rashad Qamar Rao
14	2/9/24	Monday	10:00 am To 11:00 am	Ocular Injuries I • Classification • Blunt trauma • Penetrating injuries	Prof. Dr. Syed Ahmer Hussain
15	4/9/24	Wednesday	8:00 am To 9:00 am	Orbit I • Infection + inflammation	Prof. Dr. Rashad Qamar Rao
16	9/9/24	Monday	10:00 am To 11:00 am	Ocular Injuries II • Intra ocular foreign body • Siderosis Bulbi	Prof. Dr. Syed Ahmer Hussain
17	11/9/24	Wednesday	8:00 am To 9:00 am	Orbit II • Thyroid eye diseases	Prof. Dr. Rashad Qamar Rao
18	16/9/24	Monday	10:00 am To 11:00 am	Ocular Injuries III • Chemical injuries • Sympathetic Ophthalmitis	Prof. Dr. Syed Ahmer Hussain
19	23/9/24	Monday	10:00 am To 11:00 am	Optic Nerve I • Papilitis • Optic Neuritis • Papilloedema	Prof. Dr. Syed Ahmer Hussain

20	25/9/24	Wednesday	8:00 am To 9:00 am	Orbit III • Orbital Tumors	Prof. Dr. Rashad Qamar Rao
21	30/9/24	Monday	10:00 am To 11:00 am	Optic Nerve II Atrophy	Prof. Dr. Syed Ahmer Hussain
22	2/10/24	Wednesday	8:00 am To 9:00 am	Red Eye	Prof. Dr. Rashad Qamar Rao

3rd term planner

Nishtar Medical University Multan

4th Year MBBS (N – 70) Ophthalmology Class Lectures (3rd Term)

14-10-2024 to 09-11-2024

Venue: M.K Pasha Auditorium

Sr. No.	Date	Day	Time	Competencies	Facilitator
1	14/10/24	Monday	10:00 am To 11:00 am	Visual Field	Dr. Shahbaz Aslam
2	16/10/24	Wednesday	8:00 am To 9:00 am	Errors of Refraction I • Emmetropia • Ametropia • Retinoscopy • Aphakia • Pseudophakia • Presbyopia	Prof. Dr. Rashad Qamar Rao/Dr. Mehak
3	21/10/24	Monday	10:00 am To 11:00 am	• Ocular Pharmacology	Dr. Mehak
4	28/10/24	Monday	10:00 am To 11:00 am	• Red Eye PAL I	Dr. Shahbaz Aslam
5	30/10/24	Wednesday	08:00 am To 09:00 am	• Refractive Surgery	Prof. Dr. Rashad Qamar Rao/Dr. Mehak

6	4/11/24	Monday	10:00 am To 11:00 am	Red Eye PAL II	Dr. Shahbaz Aslam
7	6/11/24	Wednesday	08:00 am To 09:00 am	Laser	Prof. Dr. Rashad Qamar Rao/Dr. Mehak

WARD LECTURES SHEDULE (IN BATCHES) 30-40 DAYS ROATATION

4th Year MBBS Ophthalmology OPD/ Ward Lectures.

Group: E1, E2(Part I)

Date:

Sr. No.	Date	Day	OPD/Clinical 10:30am to 11:45am	Lecture/Topic 11:45am to 01:15pm	Facilitators
1.		Saturday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Introduction	
2.		Monday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Visual Acuity Near Vision, Color Vision, Visual Field, V.A., PH.	
3.		Tuesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Refractive Errors Myopia Hypermetropia/ Aphakia Presbyopia/ Accommodation Astigmatism Refractive Surgery	
4.		Wednesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Conjunctiva Conjunctivitis, Pterygium	
5.		Thursday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Lens Cataract, Aphakia, Pseudophakia, Complications	
6.		Friday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Ocular History/ Examination Torch Examination	
7.		Saturday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Cornea Keratitis, Corneal Ulcer, Keratoconus	
8.		Sunday	Summer Vacations		
9.		Thursday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Cornea	
10.		Saturday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Lens I Senile Cataract ,Developmental Cataract , Symptoms Cataract	
11.		Monday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Lens II Surgery , Procedures , Complications	
12.		Tuesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Lid	
13.		Wednesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Glaucoma I	
14.		Thursday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Lacrimal System Tear Film, Lacrimal Drainage System, Lacrimation, Epiphora Dry Eye, Dacryocystitis, DCR, Regurgitation test,	
15.		Saturday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Glaucoma II	
16.		Monday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Medical Retina I Diabetic Retinopathy	

				Hypertensive Retinopathy	
17.		Tuesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Refractive Errors Myopia Hypermetropia, Aphakia Presbyopia, Accommodation Astigmatism Refractive Surgery	
18.		Wednesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Medical Retina II Central Retinal Artery Occlusion Central Retinal Vain Occlusion Branches Retinal Vain Occlusion	
19.		Thursday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Uvea	
20.		Saturday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Surgical Retina	
21.		Monday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Squint Types , Problems, EOM, Cover test, Bell's, Phenomena, Hirshberg test	
22.		Tuesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Instruments	
23.		Wednesday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	OSPE	
24.		Thursday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Pharmacology	
25.		Saturday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Test	
26.		Monday	Room 6-A, 6-B, 6-C, 6-D, 6-E, 6-F	Appraisal	

NOTE: Above Topics are repeated in every batch and at the end formative assessment is done

RATIONALE OF EVENING CLASSES

Following table shows the competencies to be learned in evening classes

Ward batch is further subdivided in small groups for further rotations on daily basis

week	Group	Competencies	Facilitator
Week 1		History taking Visual acuity testing, EOM	
Week 2		Cover tests, pupil reaction, Digital tonometry	
Week 3		Gonioscopy , visual field (confrontation) Familiarization with retinoscopy Distant Direct Ophthalmoscopy	

OPERATION THEATRE ROTATIONS

4th Year MBBSO.T Roster

Group: E1, E2(Part 1) to G1, G2 (Part 2)

Date: 00/00/23 to 00/00/23

Sr. No.	Day	Date	Group
1.	Tuesday		
2.	Wednesday		
3.	Thursday		
4.	Saturday		
5.	Tuesday		
6.	Wednesday		
7.	Thursday		
8.	Saturday		
9.	Tuesday		
10.	Wednesday		
11.	Thursday		
12.	Saturday		

Assessment schedule of Ophthalmology

Assessment week	Topics	Dates	Number of lectures	Venue
1	1 Lid 2 Lacrimal System 3 Uvea 4 lens 5 leukocoria	12-6-23 to 17-6-23	14	Examination Hall
2	Vitreo-Retina Conjunctiva Cornea Sclera Ocular Injuries Glaucoma	19-7-23 to 23-9-23	17	
3	Optic nerve Orbit Errors of refraction Strabismus Refractive surgery Visual pathway Visual field Pharmacology laser	2-10-23 to 15-12-23	15	

Distribution of the question according to the table of specification, Intellectual level, level of clinical knowledge and difficulty level.

Short Essay Questions

<u>Question Number</u>	<u>Topic Covered</u>	<u>Intellect Level</u>	<u>Level of Knowledge</u>	<u>Difficulty Level(1-5)</u>
1	Conjunctiva	Application	C-2	3
2	Cornea	Application	C-2	3
3	Retina/Vessels	Application	C-2	3
4	Retina/Hereditary	App/Analysis	C-1	3
5	Orbit	App/Analysis	C-2	3
6	Lids & Adnexa	Application	C-1	2
7	Squint	App/Analysis	C-1	4
8	Cataract	App/Analysis	C-2/C-3	3
9	Neuro-Ophthalmology	App/Analysis	C-2/C-3	3

Topics covered in the short essay questions

1. Lids, Adnexa and Conjunctiva
2. Orbit
3. Conjunctiva
4. Cornea
5. Cataract
6. Retina/Systemic diseases
7. Retina/Hereditary diseases
8. Squint
9. NeuroOphthalmology

Multiple Choice Questions

<u>Question Number</u>	<u>Topic Covered</u>	<u>Intellect Level</u>	<u>Level of Knowledge</u>	<u>Difficulty Level (1-5)</u>
1	Anatomy of eye-1	Application	C-1	3
2	Physiology-1	App/Analysis	C-1	2
3	Anatomy of eye-2	App/Analysis	C-1	2
4	Physiology-2	Application	C-1	3
5	Physiology-3	Application	C-2	3
6	Retina-1	Application	C-1	2
7	Anatomy Muscle-3	App/Analysis	C-1	3
8	Lids & Adnexa-1	App/Analysis	C-2	3
9	Retina-2	App/Analysis	C-2	3
10	Glaucoma -1	Application	C-2	3
11	Glaucoma -2	Application	C-2	3
12	Cornea-1	App/Analysis	C-2	3
13	Cornea-2	App/Analysis	C-2	3
14	Lens -1	App/Analysis	C-2	4
15	Lens -2	App/Analysis	C-1/C-2	3
16	Lens -3	Application	C-2	2
17	Vitreo Retina-3	App/Analysis	C-1/C-2	3
18	Retina-4	Application	C-1	2
19	Retina-5	Application	C-1	2
20	Retina-6	Application	C-1	3
21	Neuro Ophthal-1	Application	C-1	2
22	Lacrimal System-1	App/Analysis	C-1	2
23	Neuro Ophthal-2	Application	C-1	4
24	Lids & Adnexa-2	Application	C-2	2
25	Conjunctiva-1	Application	C-1/C-2	3
26	Conjunctiva-2	Application	C-2/C-3	4
27	Lacrimal System-2	App/Analysis	C-2/C-3	2
28	Glaucoma -3	App/Analysis	C-3	4
29	Cornea-3	App/Analysis	C-3	3
30	Uvea-1	App/Analysis	C-2	3
31	Cornea-4	Analysis	C-2	2
32	Squint -1	Application	C-2	3
33	Squint -2	App/Analysis	C-2	4
34	Squint -3	App/Analysis	C-2	4
35	Refraction-1	App/Analysis	C-2	2
36	Orbit-1	App/Analysis	C-2	3
37	Orbit-2	App/Analysis	C-2	3
38	Uvea-2	App/Analysis	C-2	4
39	Uvea-3	App/Analysis	C-2	4

40	Lens -4	App/Analysis	C-2	4
41	Retina-7	Application	C-2	2
42	Hereditary diseases-1	App/Analysis	C-2	4
43	Ocular Therapeutics-1	Application	C-2	4
44	Visual Pathways-1	App/Analysis	C-3	4
45	Ocular Therapeutics-2	Application	C-2	3

Topics Covered in the Multiple Choice Questions (MCO's)

1. Anatomy Eye	3
2. Physiology	3
3. Ocular Therapeutics	2
4. Hereditary diseases eye	1
5. Orbit	2
6. Lids & Adnexa	2
7. Lacrimal System	2
8. Conjunctiva	2
9. Cornea	4
10. Uvea	3
11. Glaucoma	3
12. Lens	4
13. Vitreo Retina	7
14. Neuro Ophthalmology	2
15. Visual Pathways	1
16. Squint	3
17. Refraction	1
 Total	 45

ACADEMIC CALENDAR 2019-20