

**Attachment 6-IER2021**

<b>Day</b>	<b>Time</b>	<b>Title</b>
<b>Saturday</b>	7:00am- 3.45pm	Optics
1. Explain the refraction of light and the use of prisms to deviate light rays and displace images. 2. Describe the use of vergence in understanding ophthalmic lenses 3. Describe the optical models of the human eye. 4. Describe refractive errors, from the far point concept, and their optical correction. 5. Describe accommodation, including the far point, near point, and range of accommodation. 6. Explain astigmatism and its correction with spectacle lenses and contact lenses. 7. Discuss the various forms of magnification and how they are used. 8. Explain the prescribing of cylinders and how to manage the Bag of Glasses Syndrome.		
	4:00-5:30pm	Optics-Problems
1. Apply the basic optic principles to solving basic problems of ophthalmic optics relating to refraction and reflection of light. 2. Provide a rational approach to solving problems of ophthalmic optics and reinforce the concepts learned in Optics.		
	6.00-8.00pm	Refractive Surgery
1. Explain the basic concepts of refractive surgery. 2. Categorize refractive surgery procedures. 3. Explain the considerations for use of the different refractive procedures. 4. Recognize the risk factors, clinical picture and early signs of surgically-induced corneal 5. Evaluate clinical indications for corneal crosslinking as the treatment for naturally-occurring and surgically-induced corneal ectasia.		
<b>Sunday</b>	7.00-9.30am	Lens Factual
1. Describe the basic concepts regarding the lens. 2. Explain the process of cataract surgery. 3. Describe potential complications of cataract surgery 4. Evaluate the procedures, guidelines, considerations, and the complications of strabismus surgery.		
	9:45am-1:15pm	Ocular Embryology and Anatomy
1. Describe the anatomy of orbit, cranial nerve pathways and distribution of arterial and venous circulation of the orbit and optic nerve. 2. Delineate the events early embryogenesis pertinent to development of the eye and orbit.		

- Evaluate the stages in the development of the eye and correlate congenital ocular disorders with time of embryonic insult.
- Describe the anatomy of the limbus, choroid, retina and vitreous.

1.15-4:15pm

Ocular Pathology

- Describe the histological features of ophthalmic conditions of particular interest to the audience.
- Delineate how to correlate clinical and pathological findings.
- Evaluate differential diagnostic techniques for ocular pathology.
- Summarize the key histopathologic features of common ocular conditions utilizing clinical pathologic correlations.

4:15pm-6:15pm

Ocular Pathology: Cases

- Review factual information related to you in the previous session of this course (factual ocular pathology) in the context of problem solving

8:30-9:30am

Anterior Segment Imaging

- Explain the benefits and disadvantages of anterior segment imaging for corneal procedures.

**Monday**

7.00am-11.45am

Pediatric Ophthalmology

- Diagnose craniofacial and orbital dysmorphologies in children.
- Be able to identify the different systemic and ocular findings of the different phakomatoses.
- Be able to describe the pattern of growth and development of the eye.
- Explain the classification, diagnosis, and treatment options for amblyopia.
- Describe the features of the various forms of nystagmus and understand their significance.
- Identify and manage common types of childhood cataracts and other lens disorders
- Describe the diagnostic findings and treatment options for childhood glaucoma.
- Diagnose and manage various causes of congenital and acquired ocular infections in children.
- Describe the characteristic findings of accidental and nonaccidental childhood trauma
- Describe and assess strabismus as well as its effect on sensory and motor functions.
- Evaluate the procedures, guidelines, considerations, and the complications of strabismus surgery.

12:15pm-2.00pm

Pediatric Ophthalmology:Cases

- Describe the fundamentals of strabismus as well as the ocular deviations.
- Identify when surgery is indicated.
- Evaluate the procedures, guidelines, considerations, and the complications of strabismus surgery.
- Explain the management of ophthalmological disorders most often found among children.

2.00pm-5.45pm

Orbits and Plastics

- Describe the basics of orbital anatomy
- Describe the basics of the orbit, including infectious and inflammatory disorders of the orbit and thyroid eye disease.
- Describe the basics of eyelid anatomy
- Describe basic eyelid malpositions
- Discuss the management of eyelid trauma
- Identify orbital neoplasms.
- Explain the anatomy of the lacrimal system and causes of epiphora
- Describe, diagnose and treatment of diseases of the eyelid, orbit, lacrimal gland and thyroid.

5.45pm-7.15pm

Cases:Orbits and Plastics

- Evaluation and management of eyelid reconstruction.

2. Evaluation of the tearing patient.
3. Evaluation and management of eyelid malignancy.

<b>Tuesday</b>	7.00-10.45am	Glaucoma
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1. Identify the different types of open-angle glaucoma's.
2. Identify the different types of angle-closure glaucoma's.
3. Utilize glaucoma clinical trial information to formulate treatment plans for patients.
4. Identify conditions that medical therapy of glaucoma can be used and the expected outcomes.
5. Appraise the surgical approaches to the treatment of glaucoma.
6. Explain basic concepts of glaucoma diagnosis, clinical assessment including optic nerve and visual field evaluation, aqueous dynamics
7. Recognize different types of secondary glaucoma.

10.45am-12.30pm Cases: Glaucoma

1. Describe the basic concepts of glaucoma such as classification and heredity factors.
2. Describe intraocular pressure and aqueous humor dynamics.
3. Illustrate the clinical evaluation of glaucoma.

1.00pm-4.45pm Neuro-Ophthalmology

1. Identify and appropriately manage inflammatory, ischemic, compressive and hereditary optic neuropathies.
2. Assess vision loss due to chiasmal and brain lesions.
3. Distinguish supranuclear ocular motor disorders including various forms of nystagmus.
4. Differentiate between muscular, neuro-muscular junction, cranial nerve and brain etiologies of diplopia and formulate a clinical management plan.
5. Diagnose and appropriately triage pupil abnormalities.

4.45pm-6.30pm Cases:Neuro-Ophthalmology

1. Differentiate anterior ischemic optic neuropathy from idiopathic demyelinating optic neuritis.
2. Manage optic neuropathies, ischemic, demyelinating, hereditary and related to elevated intracranial pressure.
3. Manage third cranial nerve palsies.

**Wednesday**

7.00-11.00am

Uveitis

1. Classify the different types of uveitis.
2. Describe and appraise clinical approaches to uveitis (including diagnosis), evaluation techniques, and medical and surgical management.
3. Differentially diagnose anterior, intermediate, and posterior uveitis, as well as pan-uveitis and endophthalmitis.
4. Describe the mechanisms and processes involved in uveitis and other ocular inflammatory disorders.
5. Determine differential diagnosis and the decision-making processes in choosing examination methods, treatments, and surgical interventions.

11.00a-12.00pm Cases: Uveitis

1. Describe the mechanisms and processes involved in uveitis and other ocular inflammatory disorders.
2. Determine differential diagnosis and the decision-making processes in choosing examination methods, treatments, and surgical interventions.

12.30-6.00pm Retina

1. Describe the fundamentals of the anatomy and physiology of the retina and vitreous.
2. Classify diseases affecting the macula, retinal vascular diseases, choroidal diseases and inflammatory disorders.
3. Explicate an approach to the diagnosis of congenital, stationary, and hereditary diseases primarily affecting the retina and vitreous.
4. Describe the classification, diagnosis and treatment of a subset of acquired diseases of the macula.
5. Describe vitreous degeneration, peripheral retinal abnormalities, and the diagnosis and treatment of retinal detachment
6. Describe the common indications for and methodology of vitreoretinal surgery.

6.00-7.30pm Cases:Retina

1. Analyze the pathological processes that affect the retina and the vitreous.
2. Evaluate the best diagnostic methods for vitreoretinal disorders.

3. Evaluate the best treatments, and surgical interventions in the treatment of vitreoretinal disorders.

**Thursday** | 7.00am-1.30pm | Cornea

1. Identify the structure and function of the external eye and the cornea.
2. Describe the basic and clinical concepts of the cornea and infectious diseases.
3. Determine how to diagnose immune- mediated disorders.
4. Describe congenital anomalies, dystrophies and degenerations of the cornea.
5. Describe potential infectious diseases and their treatment.
6. Describe the effects of neoplastic and traumatic injuries.
7. Describe the various types of artificial corneas
8. Describe differential surgical options for the ocular surface.

1:30-3:15pm | Cornea Cases

1. Describe the pathogenesis of common disorders affecting the eyelid margin, conjunctiva, cornea and sclera.
2. Explicate the steps in an ocular examination for corneal or external eye disease and evaluate the appropriate laboratory and other diagnostic tests.
3. Describe the developmental and metabolic alterations that lead to structural changes of the cornea.

3.15-7.15pm | Ocular Oncology

1. Describe retinoblastoma and lymphomatous tumors as well as secondary tumors of the eye.
2. Delineate the differential treatment and intervention options and appraise their differential utility and indications.

### Conceptual Objectives

**Friday** | 7.00-8.00am | Angiogenesis and Gene Therapy

1. Describe current antiangiogenic therapies.
2. Describe gene therapy strategies for ophthalmological diseases.
3. Describe the various surgical approaches to gene delivery.
4. Evaluate the clinical trials on gene therapy.

8.00-10.00am | Retina

Describe the causes, clinical characteristics, imaging findings, differential diagnoses, and treatment of various "white dot" syndromes" including:

- a) birdshot chorioretinopathy and acute posterior multifocal placoid pigment epitheliopathy (APMPPE)
- b) serpiginous choroiditis and relentless chorioretinitis
- c) persistent placoid maculopathy and multifocal choroiditis
- d) punctate inner choroidopathy and acute macular neuroretinopathy.
- e) acute zonal occult outer retinopathy and multiple evanescent white dot syndrome.

10.15am-12.00pm | Pediatric Ophthalmology/Strabismus

1. Appraise the issues in the treatment of childhood strabismus.
2. Describe the normal visual development including binocular vision.
3. Analyze how to formulate the best treatment plans for childhood and adult strabismus.

12:30-1:30pm | Ocular Genetics

1. Describe common ophthalmic genetic diseases, and the development of treatment

1.30pm-3.15pm

Neuro-ophthalmology

1. Delineate a symptom-focused approach to diagnosis, and how to use that same approach to determine the best testing and imaging techniques.
2. Describe specific neuro-ophthalmic eye movement disorders and ocular motor pathology along with their corresponding neuroimaging findings.
3. Identify how systemic disorders might deleteriously affect the visual and ocular motor systems and specific distinctive radiographic findings.

3.15-5.00pm

Cornea

1. Describe the options in modern selective ( layer-specific) keratoplasty.
2. Provide the indications and describe the techniques for deep anterior lamellar and endothelial keratoplasty.
3. Delineate the surgical approach to ocular surface reconstruction with conjunctival autograft and amniotic membrane transplantation.