

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****OPHTHALMOLOGY**

These guidelines are based on MCI recommendations.

Teaching has to be done keeping in mind the goals and objectives to be achieved by medical student

(i) GOAL

The broad goal of the teaching of students in ophthalmology is to provide such knowledge and skills to the student that shall enable him/her to practice as a clinical and as a primary eye care physician and also to function effectively as a community health leader to assist in the implementation of National Programme for the prevention of blindness and rehabilitation of the visually impaired.

(II) OBJECTIVES**(a) KNOWLEDGE**

At the end of the course, student shall have the knowledge of

1. Common problems affecting the eye,
2. Principles of management of major ophthalmic emergencies,
3. main systemic diseases affecting the eye;
4. Effects of local and systemic diseases on patient's vision and the necessary action required to minimize the sequelae of such diseases;
5. Adverse drug reactions with special reference to ophthalmic manifestations;
- 6, Magnitude of blindness in India and its main causes;
7. National programme for control of blindness and its implementation at various levels.
8. Eye care education for prevention of eye problems
9. Role of primary health center in organization of eye camps;
10. organization of primary health care and the functioning of the ophthalmic assistant;
11. Integration of the national programme for control of blindness with the other national health Programmes.
12. Eye bank organization

(b) SKILLS

At the end of the course, the student shall be able to:

1. elicit a history pertinent to general health and ocular status;
2. Assist in diagnostic procedures such as visual acuity testing, examination of eye, Schiotz tonometry, Staining of Corneal pathology, confrontation perimetry,

Subjective refraction including correction of presbyopia and aphakia, direct ophthalmoscopy and conjunctival smear examination and Cover test;

3. Diagnose and treat common problems affecting the eye;
4. Interpret ophthalmic signs in relation to common systemic disorders,
5. Assist/observe therapeutic procedures such as subconjunctival injection, corneal conjunctival foreign body removal, carbolic cautery for corneal ulcers, Nasolacrimal duct syringing and tarsorrhaphy;
6. Provide first aid in major ophthalmic emergencies;
7. Assist to organize community surveys for visual check up;
8. Assist to organize primary eye care service through primary health centers.
9. Use effective means of communication with the public and individual to motivate for surgery in cataract and for eye donation.
10. Establish rapport with his seniors, colleagues and paramedical workers, so as to effectively function as a member of the eye care team.

INTEGRATION

The undergraduate training in Ophthalmology will provide an integrated approach towards other disciplines especially Neuro-sciences, ENT, General Surgery and Medicine.

LEARNING METHODS

- Total teaching hours: 100
- Theory lectures: 70(4th,6th,7th term.)
- Tutorials :30(7th term)
- Clinical Postings Two clinical postings of 4weeks

First in 4th semester and second in 6th semester and 3rd posting of 2 weeks in 7th term
Bedside clinics 10 weeks of three hours per day 180 hours

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OPHTHALMOLOGY

INTRODUCTION ANATOMY & PHYSIOLOGY OF THE EYE COMMON DISEASE OF EYE.

A) Conjunctiva.

Symptomatic conditions: - Hyperemia, Sub conjunctival Haemorrhage.

- Diseases:
- Classification of Conjunctivitis
 - :- Mucopurulent Conjunctivitis
 - :- Membranous Conjunctivitis Spring Catarrh.
 - :- Degenerations :- Pinguecula and Pterigium

- B) Cornea :**
- Corneal Ulcers: Bacterial, Fungal, Viral, Hypopyon.
 - :- Interstitial Keratitis.
 - :- Keratoconus.

- :- Pannus
- :- Corneal Opacities.
- :- Keratoplasty.

- C) Sclera :**
- :- Episcleritis.
 - :- Scleritis.
 - :- Staphyloma.

- D) Uvea :**
- :- Classification of Uveitis
 - :- Gen. Etiology, Investigation and Principles Management of Uveitis.
 - :- Acute & Chronic Iridocyclitis.
 - :- Panophthalmitis.
 - :- End Ophthalmitis.
 - :- Choroiditis.

E) Lens :

- I) Cataract – Classification & surgical management of cataract.
- :- Including Preoperative Investigation.
 - :- Anaesthesia.
 - :- Aphakia.
 - :- IOL Implant

F) Glaucoma :

- : - Aqueous Humor Dynamics.
- : - Tonometry.
- : - Factors controlling Normal I.O.P.
- : - Provocative Tests.
- : - Classifications of Glaucoma.
- : - Congenital Glaucoma.
- : - Angle closure Glaucoma.
- : - Open Angle Glaucoma.
- : - Secondary Glaucoma

G) Vitreous :

- : - Vitreous. Opacities.
- : - Vitreous. Haemorrhage.

H) Intraocular Tumours :

- : - Retinoblastoma.
- : - Malignant Melanoma

I) Retina :

- : - Retinopathies : Diabetic, Hypertensive Toxaemia of Pregnancy.
- : - Retinal Detachment.
- : - Retinitis Pigmentosa, Retinoblastoma

J) Optic nerve :

- : - Optic Neuritis.
- : - Papilloedema.
- : - Optic Atrophy.

K) Optics :

- : - Principles : V.A. testing Retinoscopy, Ophthalmoscopy.
- : - Ref. Errors.
- : - Refractive Keratoplasty.
- : - Contact lens, Spectacles

L) Orbit :

- : - Proptosis – Aetiology, Clinical Evaluation, Investigations & Principles of Management
- : - Endocrinal Exophthalmos.
- : - Orbital Haemorrhage.

M) Lids :

- : - Inflammations of Glands.
- : - Blepharitis.
- : - Trichiasis, Entropion.
- : - Ectropion.
- : - Symblepharon.
- : - Ptosis.

N) Lacrimal System :

- : - Wet Eye.
- : - Dry Eye
- : - Naso Lacrimal Duct Obstruction
- : - Dacryocystitis

O) Ocular Mobility :

- :- Extrinsic Muscles.
- :- Movements of Eye Ball.
- :- Squint : Gen. Aetiology, Diagnosis and principles of Management.
- :- Paralytic and Non Paralytic Squint.
- :- Heterophoria.
- :- Diplopia.

P) Miscellaneous :

- :- Colour Blindness.
- :- Lasers in Ophthalmology – Principles.

Q) Ocular Trauma :

- Blunt Trauma.
- :- Perforating Trauma
- :- Chemical Burns
- :- Sympathetic Ophthalmitis

2) Principles of Management of Major Ophthalmic Emergencies :

- :- Acute Congestive Glaucoma.
- :- C. Ulcer.
- :- Intraocular Trauma.
- :- Chemical Burns.
- :- Sudden Loss of vision
- :- Acute Iridocyclitis.
- :- Secondary Glaucomas

3) Main Systemic Diseases Affecting the Eye :

- :- Tuberculosis.
- :- Syphilis.
- :- Leprosy.
- :- Aids.
- :- Diabetes.
- :- Hypertension

4) Drugs :

- :- Antibiotics
- :- Steroids.
- :- Glaucoma Drugs.
- :- Mydriatics.
- :- Visco elastics.
- :- Fluoresceine.

5) Community Ophthalmology :

- :- Blindness : Definition Causes & Magnitude
- N.P.C.B. – Integration of N.P.C.B. with other health
- :- Preventable Blindness.
- :- Eye care.
- :- Role of PHC's in Eye Camps.
- :- Eye Banking.

6) Nutritional

- :- Vit. A. Deficiency.

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Clinical Ophthalmology cases To Be Covered MBBS

History taking & Eye examination

Assessment of visual function.

Conjunctiva

- : - Pterigium.
- : - Pinguecula
- : - Conjunctivitis.
- : - Sub Conj. Haemorrhage.

Cornea

- : - Corneal Opacity .
- : - Corneal Ulcer.
- : - Corneal Abscess.
- : - Corneal Transplant

Sclera

- : - Scleritis, Epi Scleritis.
- : - Staphyloma.

Uvea

- : - Iridocyclitis.

Lens

- : - Cataract.
- : - Aphakia
- : - IOLs
- : - Complications

Glaucoma – Types, Signs, Symptoms & Management Squint

Lids

- : - Entropion
- : - Ectropion
- : - Ptosis.

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OPHTHALMOLOGY - MBBS

TUTORIALS	TOPICS	(Total 30 Hours)
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SURGICAL TECHNIQUES

Cataract :- ECCE
 :- ICCE
 :- IOL Implantation
 :- Phaco-emulsification.
 - Pterigium
 - Chalazion
 - Glaucoma
 - Foreign Body Removal
 - Enucleation
 - Keratoplasty
 - Basic of squint, L 10

Instruments

- OPD
- Operative
- Basic Examination and Diagnostic instruments
 Tonometer, Sac Syringing, Slip Lamp.

Optics

- Lenses – Spheres, Cylinders, Prisms, Pinhole, Slit, Maddox Rod & Maddox wing, Red & Green Glasses.
- IOLs
- Ophthalmoscopy
- Retinoscopy
- Contact Lenses
- Colour Vision

Drugs

Miotics	Antibiotics	Antiglaucoma
Mydriatics	Steroids	Anti virals
NSAIDS	Anti Fungal	
Viscoflastics	Pre-Op. & Post – Op.	

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Lecture held each term for VII and VIII term : Topics	Under graduate Theory Lectures: (No.of)
1. Anatomy & Physiology	4
2. Optics	6
3. Conjunctiva	4
4. Cornea	6
5. Sclera	1
6. Uvea	4
7. Cataract	6
8. Glaucoma	6
9. Optic Nerve	4
10. Retina	1
11. Vitreous	4
12. Squint	4
13. Community Ophthalmology	2
14. Lids	4
15. Orbit	2
16. Lacrimal Appartus and Dry Eye	4
17. Miscellaneous & Others	2
Total Lectures	70
Tutorials	30
	100