



**DIPLOMA IN OPHTHALMOLOGY**

**CHAIRMAN**

**OPHTHALMOLOGY DEPARTMENT**

*Peoples University of Medical & Health Sciences Hospital  
Nawabshah, (Distt: Shaheed Benazir Abad)*

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## Diploma in Ophthalmology (DO)

- Duration : Two academic years

### Aims of the program

1. To produce competent basic ophthalmologist having strong knowledge, skill and attitude in ophthalmology, fit for giving consultancy service independently even in the periphery.
2. It provides the professional with enhanced skills and a sub-specialty interest.
3. It provides a route for improving standards of clinical care.
4. It enhances their professional standing, linking with Clinical Governance and continuing professional development
5. The program rests on a set of explicit values and beliefs about the student, the nature and the context of clinical practice and the facilitation of learning necessary to enable enhanced professional practice in primary care.
6. Clinical practice is a highly skilled and valued activity into which each practitioner brings a personal and professional contribution that is enhanced by reflection on, and in practice, critical appraisal and evidence based enquiry.

### Objectives

- The clinical postgraduate training program is intended at developing in a student a blend of qualities of a clinical specialist, a teacher and a researcher and they are organized such that a postgraduate should possess knowledge and skills.
- The student should possess basic knowledge of the structure, function and development of the human body as related to Ophthalmology, of the factors which may disturb these mechanisms of such disturbances and the disorders of structure and function.
- He should recognize the limitations of his own clinical knowledge and know when to seek further help.
- The student should understand the effect of environment on health and be familiar with the epidemiology of at least the more common disease in Ophthalmology.
- He should be able to integrate preventive and promotive methods with the curative and rehabilitative measures in the treatment of disease.
- The student should be Ophthalmologist at the door step of community. He should be familiar with common eye problems occurring in rural areas and be able to deal with them effectively.
- The student should be familiar with the current developments in Ophthalmic Sciences.

- Contribute as an individual / group towards the fulfillment of national eye care objectives with regard to prevention of blindness

**Summative Examination:**

Summative or exit examination will be at the end of the course and then twice a year, in October and May of each year the date determined by the controller of examination of university.

**DO Theory:**

Paper 1 BCQ's

Paper 2 Long and short Essay

**DO VIVA:(One internal and one external in each case)**

**TOACS:**

- 7 static and 3 interactive stations(50 marks)
- Long case.one( 50 marks)
- Short case: Five (50 marks)
- Optics and Refraction(50 marks)

## **CURRICULUM:**

### **Anatomy**

#### **Orbital and ocular anatomy**

- i. Gross anatomy of the eye and ocular adnexa
- ii. Anatomy of motor mechanisms
- iii. Histology
- iv. Embryology of the eye and adnexa

### **Physiology**

#### **Ocular Physiology**

The visual pathways

The visual pathways

- ii. Physiology of motor mechanisms
- iii. Physiology of vision, colour vision and accommodation
- iv. Binocular vision and its development
- v. Maintenance of intra ocular pressure
- vi. The Neurology of vision (Visual pathway, pupillary pathways and reaction) dark adaptation.
- vii. Physiology of aqueous humour and its circulation and maintenance of intraocular pressure.
- viii. Maintenance of corneal transparency.
- ix. Tear circulation
- x. Blood aqueous barrier.

### **Biochemistry**

- i. General biochemistry, Biochemistry applicable to ocular function
- ii. Vitamin A and its metabolism
- iii. Glucose metabolism
- iv. Aqueous composition
- v. Biochemical aspects of cataract (Senile and diabetic)
- vi. Thyroid function tests
- vii. Tear film and its composition.

## **Pathology**

### **Ocular pathology**

- i. Gross pathology,
- ii. Histopathology,
- iii. Basics of general pathology
- iv. Pathology of ocular and adnexal lesions

### **Microbiology**

- i. General Microbiology,
- ii. Specific microbiology applicable to the eye

## **Pharmacology**

### **Pharmacology of drugs used in Ophthalmology**

- i. Autonomic drugs - Sympathomimetic, Sympatholytics, cholinergic, anticholinergic agents
- ii. Antibiotics and chemotherapeutic agents used in ophthalmology.
- iii. Anti-inflammatory agent - steroid and non-steroidal agents
- iv. Anti virals and antifungals used in ophthalmology
- v. Local anaesthetics
- vi. Dyes used in ophthalmology - fluorescein, rose Bengal, ICG, Alissamin Green etc.
- vii. Tear Substitutes
- viii. Antiglaucoma medication
- ix. Ocular penetration of systemically administered drugs and topical agents.

### **Optics & Refraction**

- i. Basic physics of optics
- ii. Applied ophthalmic optics
- iii. Applied optics including optical devices
- iv. Disorders of Refraction

### **Ophthalmic Medicine**

- i. Disorders of the lids
- ii. Disorders of the lacrimal system
- iii. Disorders of the Conjunctiva
- iv. Disorders of the Sclera
- v. Disorders of the Cornea

- vi. Disorders of the Uveal Tract
- vii. Disorders of the Lens
- viii. Disorders of the Retina
- ix. Disorders of the Optic Nerve & Visual Pathway
- x. Disorders of the Orbit
- xi. Glaucoma
- xii. Neuro ophthalmology
- xiii. Paediatric ophthalmology
- xiv. Ocular involvement in systemic disease
- xv. Immune ocular disorders
- xvi. Strabismus & Amblyopia

## **Diagnostic evaluation**

### **1. Slit lamp Examination**

- i) Diffuse Examination
- ii) Focal Examination
- iii) Retrolumination-direct & indirect
- iv) Sclerotic scatter
- v) Specular reflection
- vi) Staining modalities and interpretation

### **2. Fundus evaluation**

- Direct & Indirect ophthalmoscopy
- Fundus Drawing
- 3-mirror Examination of the fundus
- 78-D/90-D/60-D Examination
- Evaluation of Amsler's chart

3. Perimetry and visual field interpretation

4. OCT interpretation

5. Radiological imaging in eye

6. A/B scan interpretation

7. Laboratory investigations interpretation

Surgical techniques and procedures:

(Observation, surgical assistance, independent surgeries)

1. Cataract surgeries
2. Glaucoma surgeries
3. Lid surgeries
4. DCR surgeries
5. Squint surgeries
6. Paediatric surgeries

### **Integrated program for PG's Training:**

1. Postgraduate case presentations twice a week
2. Classes for undergraduates mandatory for postgraduates at university
3. Assisted and independent OPD cases presentation
4. Assisted and independent maneuvers during Rotation in laser section
5. Observation, Assistance and independent ocular surgeries
6. Patient management at ward during rotation