

Department of Para Medical
Syllabus of Optometry, SRV Ballia

DIPLOMA IN OPTOMETRY -[TWO YEAR]		Syllabus Home
1	Anatomy & Physiology of Eye	FIRST YEAR
2	Basic Microbiology & Pharmacology and Clinical Pathology	FIRST YEAR
3	Physiological optics & Principle of Refraction	FIRST YEAR
4	Optometric Instruments	FIRST YEAR
5	Basic Computer Operation	FIRST YEAR
6	Clinical ophthalmology	SECOND YEAR
7	Practice of Refraction	SECOND YEAR
8	Optometry Workshop	SECOND YEAR
9	Community Optometry	SECOND YEAR
10	Optometry Nursing	SECOND YEAR
11	PRACTICAL	FIRST YEAR
12	PRACTICAL	SECOND YEAR

DIPLOMA IN OPTOMETRY -[TWO YEAR]	
Anatomy & Physiology of Eye	TOP
<p>ANATOMY & PHYSIOLOGY OF EYE</p> <p>Unit I Basic Human anatomy & Physiology. Basic human anatomy - Basic Physiology.</p> <p>Unit II Anatomy of Eye Lids- lacrimal apparatus - conjunctiva - cornea - sclera - Uvea - lens- vitreous - Retina - Optic nerve - Glaucoma - Orbit.</p> <p>Unit III Physiology of eye. Tear secretion - Maintenance of IOP - Visual pathway - Color vision / Blindness - Visual acuity - Macular function - Movements of the Eye - Pupil - Accommodation - Binocular vision.</p>	
Basic Microbiology & Pharmacology and Clinical Pathology	TOP
<p>UNIT I PHARMACOLOGY</p> <p>Various methods of administration of Drugs in ophthalmology- Topical Drugs - used for mydriasis/ miotics - Antiviotics -Fortified Drops - Anaesthetics - Systemic drugs - in Glaucoma.- Miscellaneous drugs- Lubricants steroids.</p> <p>UNIT II MICROBIOLOGY</p> <p>Introduction to various organisms - Bacteria - Virus - Fungi. - Routs of infection - Asepsis / Antisepsis. - Common Infections of Eye.</p> <p>UNIT III CLINICAL PATHOLOGY</p> <p>Examination of urine for Albumin sugar - Corneal scrapings & Staining.</p>	

Physiological optics & Principle of Refraction

TOP

UNIT I PHYSICAL OPTICS

Properties of light-Principals of Reflection of light. - Principals of Reflection of light. - Lenses and their combination.

UNIT II PHYSIOLOGICAL OPTICS OF REFRACTION

General concepts of eye as refracting Apparatus - The corneal and lenticular system - Optical resolution of the eye. - Visual angles / visual Acquity & visual axis. - Optical aberrations of eye.

Optometric Instruments

TOP

OPTOMETRIC INSTRUMENTS

UNIT I

Test charts - visual acuity - Trial case lenses - Trial frame designs - Retinoscope - Types & special features. Autorefractometer, kerkometer.

UNIT II

Opd - Pneunptometer. - Schiotytonometer. - Specular Microscope - Colour Vision Charts. - Fields - A-Scan /B-Scan.

UNIT III SQUINT CLINIC (ORTHOPTIC INSTRUMENTS)

Synoptophore- Maddox Wing /Rod/Tangent Scale.-Raf Ruler - Prsm Bar Cover / Uncover Testing.

UNIT IV LASERS

Red Lasers - Green Laser - Yag Laser.

UNIT V LASIK - SPECIAL POSTING

UNIT VI ELECTRODING

UNIT VII OTHER SPECIAL INVESTIGATIVE PROCEDURE

Found Camera - Ultrasonography - A -Scan. -B-Scan.

UNIT VIII GENERAL INVESTIGATION.

Ecg- Xray.

Basic Computer Operation

TOP

BASIC COMPUTER OPERATIONS

Parts & functions of computer . - Using the key board typing lower - Ms- Word- Power point - Tally.

Clinical ophthalmology

TOP

CLINICAL OPHTHALMOLOGY - DISEASES OF EYE

UNIT I EXAMINATION OF EYE.

History Taking - causes of redness - Pupil - Dilation reaction.

UNIT II ANTERIOR SEGMENTNS

Diseases of lids - Diseases of conjunctiva - Diseases of Cornea - Diseases of Sclera - Diseases of Uvea - Diseases of Lens - Diseases of Orbit - Squint.

UNIT III DISEASES OF POSTERIOR SEGMENT

Diseases of vitreous - Diseases of Retina - Diseases of optic nerve - Intra ocular tumours.

UNIT IV OCULAR EMERGENCIES

Injuries of Eye - Chemical - Thermal - Mechanical

UNIT V OCULAR MAIFESTATION OF SYSTEMIC DISEASES
Diabetes - Hypertension.

Practice of Refraction

TOP

PRACTICE OF REFRACTON

UNIT 1 PRINCIPLES OF REFRACTION

Retinoscopy - Subjective Examination - Duocharome - WFDT - Cross Cylinder - Phoropter.

UNIT II ERRORS OF REFRACTION

Hypermetropia- Myopia - Astigmatism - Ansiometropia - Anisokeinia

UNIT III ACCOMMODATION / CONVERGENCE

Accommodation / Presbyopia - convergence.

UNIT IV CONTACT LENS

Types of contact lens indications - Fittings of contact lenses - K- ready /manual / Automatic - K-reading - Manual - Automated - Compliments of contact lenses. - Maintenance of contact lenses.

UNIT V LOW VISUAL AIDS

Indication for low visual aids - Types of low visual aids & uses.

UNIT VI SQUINT

Anatomy & physiology of binocular function.- Diagnosis of muscle Imbalance - Heterotropia - principle of therapy in squint - Treatment of amblophia - cherioscope - cam stimulation.

Optometry Workshop

TOP

OPTOMETRY WORKSHOP

UNIT I OPHTHALMIC LENSES

Types Of Lenses - Giendery Of Lenses.

UNIT II FITTING OF SPECTACLES

Measurement - Bifocal / Mulltifocal .

UNIT II MANUFACTURING OF CONTACT LENSES

Word Shop At Manufacturing Unit.

UNIT IV MANUFACTURING OF SPECIAL ORTHOPTIC APPLIANCES

Low Visual Aids.

Community Optometry

COMMUNITY OPTOMETRY

UNIT I CAUSES AND PREVENTION OF BLINDNESS

Vitamin A Deficiency - Treatment. - Role of WHO / DBCS.

UNIT II SCHOOL SCREENING CAMPS

Early Detection of refractive error. - Amblyopia and treatment - Squint detection.

UNIT III CATARACT SCREENING CAMPS

Registration of patients - Pre and Post op case.

UNIT IVEYE BANK

Collection of donor eye. Preservation of corneal graft.

NURSING

UNIT I

OPD - Assisting during ophthalmic procedures - maintenance of ophthalmic Instruments - FFA/ Fundus photograph / slit lamp photography.- F.B. Removal - Ocular Emergencies.

UNIT II PERFORMING SPECIAL INVESTIGATIONS

Tonometry - Evaluation of fields - Color vision - Amslers chart - Schirmers test. Syringing .

UNIT III WARDS

Preparation of patient for surgery - Care of post operative patient - dressing - Maintenance of records. - pre & Post operative counseling for patients.

UNIT IV OPERATION THEATRE

Block room - Blocking , massaging. Assisting for minor procedures - Epilation, I & C - Chalilsion, FB Removal, Suturing, Suture removal, Injection around eye.

UNIT V ASSISTING FOR MAJOR PROCEDURE

Cataract surgery - phaco - non phaco - AG Surgery, RD surgery, Kertoplasty, Lid surgeries, Evisceration, Enucleation, Decrocystorhinostomy/ Dacrocystectomy, Orbit surgeries.

UNIT VI EMERGENCY RESUSCITATION PROCEDURES

GA, Iv sedation.