ALL INDIA COUNCIL FOR VOCATIONAL AND PARAMEDICAL SCIENCE

SYLLABUS

OF

DIPLOMA IN OPTOMETRY TECHNOLOGY – DOT12

REGULAR PROGRAMME

DIPLOMA IN OPTOMETRY TECHNOLOGY – DOT12

Eligibility	:	10+2 PCB/PCM
Programme Duration	:	2 Years
Programme Objectives	:	The scope of Optometry includes the detection of common eye diseases, the management of binocular vision problems such as squints and lazy eyes and the prescription of spectacles and contact lenses. The Diplomain Optometry is a programme that aims to produce professionally competent optometrists serving as primary eye care health practitioners. NIMS University is one of the few premium institutions in India that offers a Diplomain Optometry.
Job Prospects	:	After the completion of DOT, you will find challenging career opportunities with Optician shops, eye doctors, and Contact Lens companies, Ophthalmic lens industry and hospital eye departments. A technician can work for eye testing, Contact lenses, squint exercises, etc. Common job profiles of students after completing DOT include: Optometry Assistants, ophthalmic assistants and ophthalmic nurses.

YEAR I

Course Code	Course Title	Theory/ Practical	Continuous Assessment (Internals)	Credits
CSC13107	Fundamentals of Computer Science	70	30	4
OPT13101	Physical and Geometrical optics	70	30	5
PHM13102	Basic Pharmacology	70	30	5
OPH13101	Basic Ocular Anatomy	70	30	5
PSY13101	Basic Physiology and Biochemistry	70	30	5
OPT13101P	Physical and Geometrical optics	35	15	1
PHM13102P	Basic Pharmacology	35	15	1
OPH13101	Basic Ocular Anatomy	35	15	1
TRN13101	Hospital Training-I	200		1
			TOTAL	28

YEAR II

Course Code	Course Title	Theory/ Practical	Continuous Assessment (Internals)	Credits
WCM13201	Environmental & Bio Medical Waste Management	70	30	4
OPH13201	Basic Diseases of Eye	70	30	5
OPH13202	Basic Mechanical & Dispensing Optics.	70	30	5
OPH13203	Public Health & Community Ophthalmology	70	30	5
OPT13204	Visual Optics	70	30	5
OPT13204P	Visual Optics Practical	35	15	1
OPH13202P	Basic Mechanical & Dispensing Optics.	35	15	1
OPH13201P	Basic Diseases of Eye	35	15	1
TRN13201	Hospital Training-II	200		1
			TOTAL	28

DETAILED SYLLABUS

INSTRUCTIONAL METHOD: Personal contact programmes, Lectures (virtual and in-person), Assignments, Labs and Discussions, Learning projects, Industrial Training Programmes and Dissertation.

YEAR I

FUNDAMENTALS OF COMPUTER SCIENCE- CSC13107

UNIT	CONTENTS
1.	**Computer Application:** Characteristic of computers, Input, output, storage units, CPU, Computers system.
2.	**Computers Organization:** Central Processing Unit, Control Unit, Arithmetic Unit, Instruction Set, Register, Processor Speed.
3.	**Memory:** Main Memory, Storage Evaluation Criteria, Memory Organization, Memory Capacity, Random Access Memories, Read Only Memory, Secondary Storage Devices, Magnetic Disk, Floppy and Hard Disk, Optical Disks CD-ROM, Mass Storages Devices.
4.	**Input Devices:** Keyboard, Mouse, Trackball, Joystick, Scanner, Optical Mark Reader, Bar-code reader, Magnetic ink character reader, Digitizer, Card reader, Voice recognition, Web cam, Video Cameras.
5.	**Output Devices:** Monitors, Printers, Dot Matrix Printers, Inkjet Printers, Laser Printers, Plotters, Computers Output Micro Files (Com), Multimedia Projector.
6.	**Operating System:** Microsoft Windows, An overview of different version of windows, Basic windows elements, File managements through windows, Using essential accessories: System tools Disk cleanup Disk defragmenter, Entertainments, Games, Calculator, Imagine-Fax, Notepad, paint, Word Pad, Recycle bin, windows Explorer, Creating folders icons.
7.	**Word Processing:** Word processing concepts, Saving, closing opening and existing documents, Selecting text, edition text, Finding and replacing text, Printing documents, Creating and printing merged documents, Mail merge, Character and paragraph formatting, Page designs and Layout, Editing and proofing tools checking and correcting spelling, Handling graphics, Creating tables and charts, Documents templates and wizards.
8.	**Presentation Package:** Creating opening and saving presentations, Creating the look of your presentation, Working in different views working with slides, Adding and formatting text, formatting paragraphs, Checking spelling and correcting typing mistakes, Making notes pages and handouts, Drawing and working with objectives, Adding clip art and other pictures, Designing slides shows, Running and controlling a slid show, Printing Presentations.
9.	**Internet and Email:** Use of Internet and Email, Internet, Websites (Internet Sites), The Mail protocol suite.
10.	**Hospital Management System:** Types and Uses, Hospital Management & System Package, Advanced Hospital Management System, X O Hospital Management System, LCS Hospital Management Information System, NVISH Hospital Management System, CSPM-Hospital Management System.

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Foundations of computing first edition, 2002 : P.K. Sinha and P. Sinha.

Microsoft office 2000 for window, second Indian Print, person education S. Sagman

PHYSICAL AND GEOMETRICAL OPTICS- OPT13101

UNIT	CONTENTS
1.	**Properties Of Light:** Properties of Light Propagation of Light- Types of Waves Measurable Parameters of Waves Electromagnetic Spectrum Photobiology- Photon Ray Law of Inverse Squares Formation of Image. Interference- Huygens' Principle Uses of Interference Laser Interferometer. Polarization- Clinical Applications of Polarization.
2.	**Principle of Reflection and Refraction:** Laws of Reflection, Reflection through Plane Mirrors. Reflection through Spherical Mirrors-General Aspects of Reflection Sign Convention of Rays Images- Position of Image, Images in Concave Mirrors, Images in Convex Mirrors. Refraction of Light- Factors Affecting the Bending of Light, General Aspects of Refraction. Laws of Refraction-Refractive Index, Critical Angle, Total Internal Reflection. Refraction through Various Surfaces- Refraction through Glass Plate , Refraction at Curved Surfaces Prisms- Refraction through Prisms, Polychromatic Effects, Nomenclature of Prisms, Rotating Prisms, Uses of Prisms.
3.	**Lenses:** Types of Lenses, Formation of Convex Lenses, Formation of Concave Lenses.

	Geometrical Construction of Images- Principal Axis or Optical Axis, Focal Length, Dioptre. Determination of Optical Centre of the Lens Image Formed by Various Lenses- Image Formation by Convex Lenses, Image Formation by Concave Lenses. Size and Position of Image. Cylindrical Lenses- Convex Cylinder, Concave Cylinder, Sturm's Conoid. Combination of Lenses- Gauss Theorem, Combination of Cylindrical Lenses
4.	**Visual Angle:** Visual Acuity- Components of Visual Acuity, Factors Affecting Visual Acuity. Measurement of Visual Acuity Test types used in Adults Test types used in Children Objective Assessment of Vision Assessment of Near Vision.
5.	**Axes of the Eye-** Optical Axis, Visual Axis, Fixation Axis Visual Angles- Angle Alpha, Angle Gamma, Angle Kappa The Dioptric Notation of Lenses (Vergence)- The Advantages of the Dioptric Notation Vergence, The Notation of' Cylinders, The Detection Measurement of Lenses Optical Systems- Refraction by Combination of Lenses, Compound Homocentric Systems, Thick Lenses.
6.	**Optical Aberrations:** Optical Aberrations of Lenses, Aberrations Depending Upon the Light, Monochromatic Aberrations. Optical Aberrations of the Eye- Aberrations Depending Upon the Light, Monochromatic Aberrations. Anomalies as a Dioptric Apparatus.

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Geometrical And Physical Optics By R.S. Longhurst-Orient Longman Limited

BASIC PHARMACOLOGY- PHM13102

UNIT	CONTENTS
1.	**Basic Concepts of Drugs:** Drug Terminology, characteristics of drugs, Drug forms, Drug Components Sources of Drugs Clinical trials of the Drug, Drug Interactions Legal Terms Referring to Drugs Routes of Administration of Drugs- Oral Route, Injection Routes, Through the Skin, Intravenous Route, Sublingual Route, Rectal Route, Vaginal Route, Ocular Route, Nasal Route, Inhalation, Cutaneous Route Drug Processing in the Body(Pharmacokinetics)- Absorption, Distribution, Metabolism, Excretion
2.	**Divisions of Nervous System:** Central Nervous System, Peripheral Nervous System Drugs Affecting Parasympathetic Nervous System- Adrenergic Drugs.
3.	**Drugs Affecting the Cardiovascular System:** Cardiac Glycosides, Anti Anginal Drugs, Anti Hypertensives Drugs Affecting the Respiratory System- Cough Bronchial Asthma Drugs Affecting the Digestive System- Ulcers, Emetics, Anti-emetics and Prokinetic Agents, Purgatives (Laxatives, Cathartics, Evacoants), Diarrhoea, Drugs Used in Other Intestinal Diseases Drugs Affecting the Excretory System- Diuretics
4.	**Antiallergic Drugs:** Common Allergens, Causes of Allergic Reaction, Symptoms of Allergic Reaction, Diagnosis of Allergic Reaction Anti-allergic Drugs for the Treatment of Allergy
5.	**Antibiotics:** Antibacterial Agents, Classification of Antibacterial, Description of Different Antibacterials Antifungal Drugs- Introduction Classification of Antifungal Agents Description of Commonly Used Antifungals.
6.	**Antiviral Drugs:** Introduction to Antiviral Drugs Classifications of Antiviral Agents Description of Commonly Used Antivirals.
7.	**General and Local Anaesthetics:** Introduction Mode of Action Classification of Local Anesthetics Drugs for Local Anesthetics Adverse Effects

	General Anesthetics
8.	**Sedatives and Hypnotics:** Classification- Barbiturates, Benzodiazepines (BZPs)

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class-By Janet Stringer-The McGraw Hill Companies

BASIC OCULAR ANATOMY- OPH13101

UNIT	CONTENTS
1.	**Gross Anatomy And Embryology Of Eye:** Introduction Gross Anatomy of Eyeball and Orbit- General Anatomy of the Eyeball and Orbit General Shape of the Eyeball Layers of the Eyeball General Concepts of the Structures within the Eyeball Embryology of Eyeball- Specific Embryological Stages of Eyeball Embryology of Specific Ocular Structures Growth and Development of Eye.
2.	**Anatomy Of The Outer Coat Of The Eyeball:** Introduction Anatomy Of The Outer Coat Of The Eyeball- Anatomy of Conjunctiva Coat of Eyeball Anatomy of Cornea Anatomy of Sclera
3.	**Anatomy Of The Middle Coat of The Eyeball:** Introduction, Anatomy of Uveal Tract- Anatomy of Iris Anatomy of Ciliary Body Anatomy of Choroid Anatomy of Anterior and Posterior Chambers
4.	**Anatomy Of Lens:** Introduction Anatomy of Lens
5.	**Anatomy Of The Inner Coat Of The Eyeball And Anatomy Of Vitreous:** Introduction Anatomy of Retina and its Special Regions- Anatomy of Retina

	Special Regions of the Retina Anatomy of Vitreous
6.	**Anatomy Of Optic Nerve And The Visual Pathway:** Introduction Parts of Visual Pathways Optic Nerve Optic Chiasma Optic Tract Lateral Geniculate Nucleus Optic Radiation Visual Cortex Arrangement of Fibres in Visual Pathway
7.	**Anatomy Of Lids And Lacrimal System:** Introduction Description of Eye Lids and Lacrimal System

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Ocular Anatomy and Physiology-By Al Lens, Comt Comt, Sheila Coyne Nemeth, Janice K. Ledford-Slack incorporated

BASIC PHYSIOLOGY AND BIOCHEMISTRY- PSY13101

UNIT	CONTENTS
1.	**Eyelids, Lacrimal Apparatus And Tear Film Dynamics:** Introduction Structure and Functions of the Eyelids- Functions of the Eyelids Physiology of Eyelid Movements Blinking and Peering Functions of the Lacrimal Apparatus- Tear Secretion Control of Tear Production Tear Drainage Tear Film Dynamics- Functions of Tear Film Physical Properties of Tear Film Tear Dynamics Tear Film Dysfunction Treatment of Dry Eye
2.	**Aqueous Humour And Intra Ocular Pressure:** Introduction Structure and Functions of Aqueous Humour- Formation of Aqueous Humour Aqueous Movement and Outflow Aqueous Composition Physio-chemical Properties of Aqueous

	Intra-ocular Pressure- Diurnal Variation of intra-ocular Pressure Measurement of Intra-ocular Pressure Increase in Intra-ocular Pressure Lowering Intra-ocular Pressure Factors Affecting intra-ocular pressure
3.	**Pupil And Pupillary Reflexes:** Introduction Pupillary Reflexes Pupil- Appearance of the Pupi1 Accommodation Neuronal Pathways Pupillary Defects- Marcus Gunn Pupil (RAPD) Argyll Robertson Pupil (ARP) Adie's (Tonic) Pupil Homer's Pupil Iris Coloboma
4.	**Muscles and Movements of the Eye:** Extra-ocular Muscles- Recti and Oblique Muscles Planes of Muscles Intra-ocular Muscles Uni-ocular Movements Binocular Movements- Laws Governing Ocular Movements Abnormalities of Gaze- Latent Squint (Anisophoria or Heterophoria) Manifest Squint (Heterotropia) Pseudosquint (Pseudo-false)
5.	**Vision: Light Sense, Night Vision And Colour Vision:** Introduction Visual Impulse and Perception- Initiation of Visual Impulse Transmission of Visual Sensation Analysis of Visual Perception Colour Vision- Young's Trichromatic Theory Details of Colour Vision, Defective Colour Vision Light Sense- Adaptation Dark Adaptation Contrast Sense
6.	**Visual Pathway, Fields And Visual Cortex:** Introduction Retina, Optic Nerve, Optic Chiasma, Optic Tract, Lateral Geniculate Body, Optic Radiations

	Visual Cortex- Physiological Aspects Visual Fields- Perimetry Methods of Visual Field Examination
7.	**Visual Acuity, Uni-Ocular And Binocular Vision:** Measurement of Visual Acuity- Test Types Snellen's and Landolt's Binocular Vision- Advantages of Binocular Vision Retinal Correspondence Horopter (Horizon of Vision) Pannum's Area Tests for Binocular Single Vision
8.	**Accommodation And Convergence:** Introduction Accommodation- Mechanisms Theories of' Accommodation Convergence
9.	**Electro-Physiology Of The Eye:** Introduction Electro-retinogram Visual Evolved Response Electro-oculogram
10.	**Biochemistry Of The Eye:** Introduction Vascular Circulation of the Eye Metabolism of Cornea Corneal Transparency Metabolism of Lens Physio-chemical Properties of Vitreous

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Ophth Assistant Vol-V (Community Ophth) - Dr. L.P. Agarwal

HOSPITAL TRAINING-I-TRN13101

ENVIRONMENTAL & BIO MEDICAL WASTE MANAGEMENT-WCM13201

UNIT	CONTENTS
1.	**Environment Introduction:** Biotic and Abiotic environment, Adverse effects of Environmental Pollution, Control Strategies, Various Acts and Regulation.
2.	**Water Pollution:** Water Quality Standards for potable water, Surface and underground water sources, Impurities in water and their removal, Denomination, Adverse effects of domestic waste water and industrial effluent to surface water sources, Eutrophication of lakes, Self purification of steams.
3.	**Air Pollution:** Sources of air contaminations, Adverse effects on human health, Measurement of air quality standards and their permissible limits, Measure to check air pollution, Greenhouse effect, Global warming, Acid rain, Ozone depletion.
4.	**Bio Medical Waste:** Bio Medical Waste Management, Introduction to bio medical waste, Types of bio medical waste, Collection of bio medical waste.
5.	**Land Pollution:** Land Pollution, Soil conservation, Land erosion, Afforestation.
6.	**Ecology:** Ecology, Basics of species, Population dynamics, Energy flow, Ecosystems, Social Issues and the Environment, Sustainable development and Life Styles, Urban problems related to energy, Resettlement and Rehabilitation of people, Energy flow, Consumerism and waste products **Water Harvesting and Rural Sanitation**- Water harvesting techniques, Different schemes of Rural Water Supply in Rajasthan, Rural Sanitation, Septic Tank, Collection and disposal of wastes, Bio-gas, Community Awareness and participation.
7.	**Renewable Sources of Energy:** Non-Conventional (Renewable) source of energy, Solar Energy, Wind energy, Bio mass energy and Hydrogen energy.

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Environmental science-Coming ham Saigo.

B. Solid waste management-C.L. men tall.

C. Environmental Technologies for Sustainable Development Dr. Upendra Pnadel, DR M.P. Poonia.

BASIC DISEASES OF EYE- OPH13201

UNIT	CONTENTS
1.	**Common Eye Diseases:** Disease of Eyelids, Disease of Orbit, Diseases of Adnexa, Disease of Conjunctiva, Diseases of Cornea, Disease of Sclera, Disease of Uvea, Disease of Lens, Glaucoma, Disease of Retina Injuries- Injuries of Eye, Optic Nerve, Sclera Episclera: Ectasia and staphyloma, Scleritis and episcleritis Orbit- Orbital anatomy, Incidence of orbital abnormalities, Methods of orbital examination, Congenital and development anomalies of the orbit, Orbital tumors, Orbital inflammation, Sinus disorders affecting the orbit, Orbital trauma.
2.	**Conjunctiva And Cornea:** Inflammation Therapeutic principles Specific inflammatory diseases Tumors- Tumor of epithelial origin Glandular and adnexal tumors Tumors of neuroectodermal origin Vascular Tumors, Xanthomatous origin, Inflammatory tumors, Metastatic lesions Degeneration and dystrophies- Definition Degeneration's , Dystrophies Miscellaneous Conditions Kerato conjunctivitis Sicca (K-Sicca) Tear function tests Steven Johnson syndrome Ocular Rosacea A topic eye disorders Benign mucosal pemphigoid (BMP) ocular pemphigold Vitamin A deficiency Metabolic diseases associated with corneal changes.
3.	**Iris, Ciliary Body And Pupil:** Congenital anomalies Primary and secondary diseases of the iris and ciliary body Tumors Anomalies of papillary reaction Choroid: Congenital anomalies of the choroid, Diseases of the choroid, Tumors.
4.	**Ocular Diseases I:** Eyelid anatomy B Congenital and developmental anomalies Blepharospasm, Ectropion, Entropion, Trichiasis and symblepharon Eyelid inflammations, Eyelid tumors, Ptosis, Eyelid retraction, Eyelid trauma

	Lacrimal System, Lacrimal, anatomy, Lacrimal pump, Methods of lacrimal evaluation, Congenital and development anomalies of the lacrimal system, Lacrimal obstruction, Lacrimal Sac tumors, Lacrimal Trauma.

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Common Eye Diseases and their Management-Nicholas R. Galloway, Winfried M. K. Amoaku, Peter H. Galloway, Andrew C Browning

BASIC MECHANICAL & DISPENSING OPTICS- OPH13202

UNIT	CONTENTS
1	**Lens-Form and Analysis:** Spherical Lenses, Standard Lens Form, Astigmatic Lense, Cylindrical Lenses, Toric Lense, Base Curve
2	**Writing Prescription and Transposition:** Writing Prescription, Simple Transposition, Simple Transposition, Rule of Simple Transposition, Toric Transposition, Steps of Toric Transposition.
3	**Power Specification and Measurement:** Lens Power, Power Specification, Surface Power, Approximate Power, Vertex power, Effective Power, Power Measurement Hand Neutralization, Lensometer, Geneva Lens Measure.
4	**Optical Prisms-Uses and Decentration:** Terminology, Properties of Prisms, Units for Specifying Power of Prism, Effect of Prism on movement of Eye, Prentice Rule, Use of Prism in Spectacle, Other Type of Prisms, Risly Prism, Slab Off prism, Fresnel Press on Prism.
5	**Ophthalmic Raw Materials and Manufacturing:** Glass lens Materials Manufacturing of Glass Plastic Lens Materials, Manufacturing of Plastic Lenses Impact Resistance Lenses, Heat Tempering process, Chemical Tempering Lenses.
6	**Lens Surfacing and Glazing:** Surfacing Step of Lens Surfacing Glazing, Laying off, Lens Cutting and Edging Formers, Edge Form.
7	**Lens Quality and Inspection:** Faults, Defects Occurring during Manufacturing Process, Surface Faults, Errors in Power of Lens.

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Ophthalmic Lenses & Dispensing By Mo Jalie

B. Optics by Ajoy Ghatak, Tata McGraw-Hill Education (2012)

PUBLIC HEALTH & COMMUNITY OPHTHALMOLOGY- OPH13203

UNIT	CONTENTS
1	**Concepts In Community Health:** Natural History of Disease Interaction of Agent Host and Environmental Factors Spectrum of Disease Determinants of Health Levels of Prevention, Primary Prevention, Secondary Prevention, Tertiary Prevention Indicators of Health Mortality Indicators Morbidity indicators Disability Indicators Nutritional Status Indicators Utilisation Rates Indicators Indicators of social and Mental Health Environmental Indicators Socio-economic Indicators Health Care Delivery Indicators HFA Indicators, Indices Epidemiological Surveillance, Definition of Surveillance, Purpose/ Use of Surveillance, Methods of Surveillance, Epidemiological Surveillance System, Limitations of Surveillance
2	**Health for all and Primary Health Care:** Concept, Scope and Vision of HFA, Primary Health Care and Components, Principles of Primary Health Care New Course of Action for Health Implications of the Primary Health Care Approach Distribution of Primary Health Care Centres Role of Hospitals in Primary Health Care Hospitals versus Primary Health Care: A False Antithesis The Need for Hospital Involvement, Role and Functions of the Hospital at the First Referral Level, Issues in Role of Hospital in Primary Health Care Health for All in the Twenty-first Century, Targets, Primary Health Care Infrastructure.
3	**Basics Of Epidemiology And Biostatistics:** Concept of Epidemiology Important Epidemiological principles and Concepts Natural History of Disease, Epidemiological Triad, Levels of Prevention/Intervention Risk Approach in Health Care Measurement Epidemiological Methods Descriptive Epidemiological Studies Analytical Epidemiological Studies Epidemic Management Patterns of Epidemics Epidemic Forecasting and Management Screening, Biostatistics, Sampling, Measures of central Tendency, Correlation, Regression, Standard Error of Sampling Distribution, Significance Testing Tests of Significance

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Community Ophthalmology by P. J. Graham , The Author, 1983
B. Textbook of Ophthalmology by H V Nema

VISUAL OPTICS- OPT13204

UNIT	CONTENTS
1	**Myopia:** Emmetropization, Myopia, Etiology of Myopia, Classification of Myopia, By Clinical Appearance, On the Basis of Degree, On the Basis of age of Onset, Clinical Features of Myopia, Visual Acuity and Magnitude of Myopia, Signs and Symptoms of Myopia, Degenerative Myopia, Correction of Myopia, Prescription Guidelines.
2	**Hypermetropia:** Classification of Hypermetropia, On the Basis of Etiology, By Clinical Appearance, By Degree of hypermetropia, By Accommodative Status, Clinical Feature Hypermetropia, Management of Hypermetropia Aphakia- Cause of Aphakia, Sign and Symptoms of Aphakia, Optics of Aphaka, Refraction. Correction Options for Aphakia
3	**Astigmatism:** Astigmatism- Causes of Astigmatism, Signs and Symptoms of Astigmatism, Diagnosis of Astigmatism, Classification of Astigmatism, Type of Astigmatism Classification According to Focus, Treatment of Astigmatism, Prescription Guidelines.
4	**Presbyopia:** Presbyopia Cause of Presbyopia, Presbyopia and Different Refractive Condition Reading Addition, Different Types of Presbyopic Correction Reading Glasses, Bifocals, Progressive Addition Lenses, Monovision.
5	**Anisometropia and Aniseikonia:** Anisometropia Classification of Anisometropia Sign and Symptoms of Anisometropia Management of Anisometropia Aniseikonia, Etiology, Classification, Features of Aniseikonia Clinical Measurement of Aniseikonia, Knapp's law. Spectacle Magnification, Relative Spectacle Magnification.
6	**Visual Acuity:** Factors Affecting Visual Acuity Components of Visual Acuity Log Mar Charts Clinical Testing of Visual Acuity, Chart Illumination, Testing Distance, Testing Procedures, Clinical Significance of Visual Acuity Assessment, Pediatrics Visual Acuity Testing, Preschool Children, Visual Acuity Testing for Infants and Toddlers, Near Visual Acuity.
7	**Contrast Sensitivity and Glare Testing:** Contrast, Contrast Sensitivity Tests, Arden Plates, Vistech Charts, Cambridge Low Contrast Grating Test, Pelli Robson Letter Chart, Regan's Law Contrast Acuity Chart, Clinical Significance of Testing Contrast, Glare, Disability Glare, Discomfort Glare, Reflected Glare, Management of Glare.
8	**Color Vision:** Color Vision Defect

	Color Vision Testing Pseudo Isochromatic Plate Tests Arrangement Tests Anomaloscopes Management of Patients with color defects.
9	**Accommodation:** Range and Amplitude of Accommodation, Amplitude of Accommodation, Methods of Measurement, Relative Accommodation.
10	**Convergence:** Measurement of Convergence Range and Amplitude of Convergence Measurement of Convergence Components of Convergence Relative Convergence Accommodative Convergence/Accommodation Ratio Clinical Measurement of AC/A Ratio.

LEARNING SOURCE: Self Learning Materials

ADDITIONAL READINGS:

A. Optics by M. H. (Michael Harold) Freeman, C. C. Hull, Ph.D., W. N. Charman-Elsevier Health Sciences

HOSPITAL TRAINING-II-TRN13201