



Dr. D. Y. PATIL VIDYAPEETH, PIMPRI, PUNE
(DEEMED UNIVERSITY)
(Re-Accredited by NAAC with CGPA of 3.62 on a 4 point scale at 'A' grade)

Dr. D.Y.PATIL INSTITUTE OF OPTOMETRY
&
VISUAL SCIENCES
PIMPRI, PUNE – 18

SYLLABI & REGULATIONS FOR FIRST &
SECOND YEAR MASTER OF CLINICAL
OPTOMETRY

2015

Contents

Introduction

Admission Procedure

Overview

First Year, First Semester

<u>Paper No.</u>	<u>Subject</u>
1	Basic Sciences and Clinical Optometry-I
2	Community Optometry & Public Health
3	Advance Dispensing Optics
4	Research Methodology
5	Elective 1) Advanced Glaucoma 2) Pediatric Optometry

First Year, Second Semester

<u>Paper No.</u>	<u>Subject</u>
1	Orthoptics & Vision Therapy
2	Clinical Optometry-II & Advanced Diagnostic
3	Neuro Optometry
4	Business and Clinical aspects in Optometry
5	Elective 1) Eye Banking 2) Clinical Psychology

Second Year, Third Semester

<u>Paper</u>	<u>Subject</u>
1	1) Cornea & Contact Lens 2) Low Vision & Rehabilitation
2	Recent Advancement in Optometry
3	Special Clinic –I
4	Project / Dissertation - I

Second Year Fourth Semester

<u>Paper</u>	<u>Subject</u>
1	Special Clinic -II
2	Project Dissertation - II

INTRODUCTION

The institute of Optometry was launched in the year 2005 under Dr. D. Y. Patil Vidyapeeth. The institute conducts a 4 year full-time Bachelors program in Optometry and is venturing to start Masters Program in the same discipline.

Optometry is one of the most sought after profession in allied health. It is an independent specialty focusing on the diagnosis and non-surgical management of disorders of the eye and visual system.

According to world council of Optometry – the supreme governing body - Optometry is a healthcare profession that is autonomous, educated, and regulated (licensed/registered), and optometrists are the primary healthcare practitioners of the eye and visual system who provide comprehensive eye and vision care, which includes refraction and dispensing, detection/diagnosis of disease in the eye, and the rehabilitation of conditions of the visual system.

Masters program of Optometry is designed to produce graduates of high standards in research who are equipped with appropriate skills to meet the challenges and problems of primary eye care in a selected specialization. The curriculum has been designed after a detailed evaluation of the pattern followed by different International Schools of Optometry and considering the current eye care needs of India.

OBJECTIVES OF THE PROGRAM

- Enhance knowledge from clinical experience, interactions & Discussions and research to improve the quality of training and education in Optometry
- Explore a specialized field in depth and develop high degree of expertise to contribute to advancement of knowledge in Optometry.
- Develop teaching and presentation skills necessary to become efficient teachers utilizing state-of-the art facilities and equipments
- Build Up leadership qualities in education, practice and administration
- Contribute to emerging and vitally important industry through research.

SKILLS OF THE PROGRAM

Acquiring a Masters of Optometry will offer the candidate a confident platform to;

- Practice Optometry independently
- Become primary eye care service provider in Eye hospitals/clinics
- Earn key posts in academic institutions including teaching and research
- Military and public health service
- Offer clinical services to multinationals dealing with manufacturing and distribution of ophthalmic lenses, Low Vision Devices, Contact lenses and ophthalmic instruments.

Admission Procedure

ELIGIBILITY FOR ADMISSION

- The minimum educational requirement shall be the passing of Bachelor in Optometry from any recognized University with minimum 50% marks.

DURATION OF THE COURSE

The program shall be for 2 academic years

NUMBER OF SEATS

A total of 4 candidates will be enrolled in each academic year based on their performance in the entrance test and interview.

ATTENDANCE

- The candidate should have a minimum attendance of 75% in both theory and clinics separately in each academic year, failing which the student will not be permitted to appear for the University Examination of the subject.
- As per the University directions, there will be no consideration for leave on medical grounds. The student will have to adjust the same in the minimum prescribed attendance.
- Parents/Guardian of students will be informed about their ward's attendance and academic performance periodically during each academic year

DR. D. Y. PATIL VIDYAPEETH
Dr. D.Y. Patil Institute of Optometry and Visual Sciences

MASTER'S OF CLINICAL OPTOMETRY
(For the students admitted from the academic year 2015- 2016 onwards)

SCHEME OF EXAMINATIONS (Choice based Credit System) PATTERN

Semester First Year	Study Component	Course Title	Ins.Hrs/ Week	Exam				Credit
				Uni. exam		Internal	Total	
				Theory	Practical/ Viva			
I	Paper I	Basic Sciences and Clinical Optometry -I	6hrs/4w	40	40	20	100	5
	Paper II	Community Optometry & Public Health	6hrs/4w	40	--	10	50	5
	Paper III	Advance Dispensing Optics	6hrs/4w	40	40	20	100	5
	Paper IV	Research Methodology	7.5hrs/4w	40	--	10	50	6
	Electives	1. Advance Glaucoma 2. Pediatric Optometry	6hrs/4w	40	40	20	100	5
II	Paper V	Orthoptics and Vision Therapy	6hrs/w	40	40	20	100	5
	Paper VI	Clinical Optometry – II and Advanced Diagnostic	6hrs/4w	40	40	20	100	6
	Paper VII	Neuro Optometry	6hrs/w	40	40	20	100	5
	Paper VIII	Business and Clinical aspects in Optometry	6hrs/w	40	--	10	50	5
	Electives	1. Eye Banking 2. Clinical Psychology	6hrs/w	40	--	10	50	5
Second Year		Specialization in subjects Optional						
III	Paper IX	1. Cornea & Contact Lens 2.Low vision & Rehabilitation	6hrs/w	40	40	20	100	5
	Paper X	Recent Advancement in Optometry	6hrs/w	40	40	20	100	5
	Practical I	Special Clinic I	10hrs/w	--	80	20	100	8
	Project	Project / Dissertation	10hrs/w	--	80	20	100	8
IV	Practical II	Special Clinic II		--	50	50	100	11
	Project	Project Work		--	150	100	250	11
		Total	Total	480	680	390	1550	100

List of Elective papers (Colleges can choose any one of the paper as electives)	
Elective – I Sem - I	1. Advance Glaucoma 2. Pediatric Optometry
Elective – II Sem - II	1. Eye Banking 2. Clinical Psychology
Specialization Subjects – III Sem – III & IV	1. Cornea & contact lens 2. Low vision & rehabilitation

Credit Points Allocation Pattern 1 Credit Point = 20 hrs of Theory **or** Clinical **or** Supervised Practical's

Internal Assessment

First Year – First Semester – Internal examination & Viva

First Year - Second Semester – Technical Communication / Presentation

Practical Training

1. One week observation of any center of excellence (any one)
 - a) Sankara Netralaya, Chennai
 - b) L.V.Prasad Eye Institute, Hyderabad
 - c) R.P. Center (AIIMS), New Delhi
2. Organize or Active Participation in two CME
3. One scientific paper presentation

FIRST YEAR - FIRST SEMESTER

Paper I: BASIC SCIENCE AND CLINICAL OPTOMETRY – I

BASIC SCIENCES:

Study topics – Ocular Anatomy:

1. Development of the eye ball
2. Blood Supply of Orbit
3. - Nerve supply of the eyeball
 - Optic nerve
 - Oculomotor and Trochlear nerve
 - Trigeminal and Abducent nerve
 - Facial nerve
4. Ocular Adnexa,
5. Lacrimal apparatus
6. Eye ball (Sclera, uveal tract, retina)
7. Angle of anterior chamber.
8. Crystalline lens.
9. Movement of eyeball and extra ocular muscles.
10. Autonomic Nervous System.
11. Visual Pathway.

Study topics – Ocular Physiology:

1. Intra-ocular Pressure:-
Intra-ocular pressure: a dynamic equilibrium
Tonography
2. Visual Adaptation:-
Mechanisms of visual adaptation,
Dark adaptation and regeneration of rhodopsin, Adaptation of photoreceptors,
3. Visual Acuity:-
Specifications of the stimulus (physical basis)
Retinal anatomy,
Physiologic factors,
Acuity criteria,
Measurement of ordinary visual acuity (minimum angle of resolution)
Factors influencing visual acuity,
Sinusoidal grating targets,
4. Color Vision:-
Color and the visible spectrum,
Color mixing, metameric matches and complementary wavelengths,
Neural encoding of color,
Congenital & Acquired dyschromatopsias,
5. The Central Visual Pathways:-
The retino – geniculo- cortical pathway,

Visual field examination
Structure and functions of the lateral geniculate body,
The primary visual cortex,
Extrastriate visual cortex,
Visual deprivation

6. Binocular Vision:-
Normal adult psychophysics,
Normal development of binocular vision,
Mal development of binocular vision,
Strabismus and amblyopia,
Binocular vision in other animals

Study Topics – Related Pathology and Microbiology:

1. Infections, Inflammation and repair mechanisms.
2. Allergic reactions in ocular tissues.
3. Bacteria, Virus, Fungus and their features for differentiation.
4. Common bacterial infections of the eye.
5. Common fungal infections of the eye.
6. Common viral infections of eye

Study Topics – Ocular Pharmacology:

1. Classification of Ophthalmic drugs.
2. Sympathomimetics & Sympatholytics.
3. Parasympathomimetics & Parasympatholytics.
4. Diagnostic drugs used in optometry – Dyes and stains.
5. Antibacterial, Antifungal agents.
6. Steroid and Non-steroidal anti-inflammatory drugs.

CLINICAL OPTOMETRY:

1. Diseases of lids
2. Diseases of adnexa, Diseases of orbit
3. Diseases of Lacrimal Apparatus
4. Diseases of Conjunctiva
5. Refractive errors

Text Book:

1. Stephen J. Miller : Parsons Diseases of the Eye, 18th edition, Churchill Livingstone, 1990
2. Jack J. Kanski Clinical Ophthalmology: A Systematic Approach, 6th edition, Butterworth - Heinemann, 2007
3. Myron Yanoff and Jays Duker : Ophthalmology

Paper II: COMMUNITY OPTOMETRY & PUBLIC HEALTH

COMMUNITY OPTOMETRY:

To include the theoretical knowledge and clinical exposure of community Optometry. The outcomes of the course are: through understanding of conducting of screening for specific eye conditions, and resultant implications through theoretical and practical exposure.

- 1) Concept of Health and Disease
- 2) Principles of Epidemiology and Epidemiological Methods
- 3) Screening for Eye Disease – Refractive errors, Low Vision, Cataract, Diabetic retinopathy, Glaucoma, Amblyopia, Squint
- 4) Blindness
- 5) Health Information and Basic Medical Statistics
- 6) Communication for Health Education
- 7) Health planning and Management
- 8) Health care of community
- 9) How to plan and implement vision 2020

PUBLIC HEALTH:

This course deals with the basic of ocular epidemiology and present details on various eye diseases. It also introduces the students to the concepts of preventive measures.

- 1) Prevalence, incidence, and distribution of visual impairment
- 2) Methodology
 - a) Basics of epidemiology study methods
 - b) Types of study designs
 - c) Screening for visual disorders
- 3) Childhood blindness
- 4) Refractive errors and presbiopia
- 5) Age related cataract
- 6) Diabetic retinopathy
- 7) Glaucoma
- 8) Age related macular degeneration
- 9) Vitamin a deficiency
- 10) Corneal and external diseases
- 11) Prevention strategies

Paper III: ADVANCE DISPENSING OPTICS

1. Outline of lens surfacing and polishing, terminology used in Lens workshops:
 - a) Ophthalmic raw materials – history and recent development
 - b) Manufacturing of Ophthalmic lenses – Glass, Plastics and new generation materials.
 - c) ISI Standards for ophthalmic lenses.
2. Ophthalmic lens materials and designs types:
 - a) Aspheric, atoric, High Index lenses and special purpose lenses.
 - b) Absorptive and protective lenses.
 - i) Theory and practical aspects.
 - ii) Toughening – methods, uses and application
 - c) Sunglasses – Tinted, Photochromic, Polaroid lenses
3. Progressive and Varifocal lenses:
 - a) Properties and Material
 - b) Bifocal and multifocal lenses.
 - c) Selecting appropriate progressive lens.
 - d) Wavefront design and new types of progressive lens – market availability

Spectacle Frames:

1. Raw materials for spectacle frames and manufacturing methods.
2. Spectacle frame measurements and markings.
3. New trends – latest developments in spectacle frames.
4. Spectacle Options for Patients-
 - a) Photophobia and glare
 - b) Presbyopia
 - c) High refractive errors
 - d) Squint and oculo-motor problems.
5. Guidelines for safety standards for spectacles in –
 - a) Children
 - b) Sports
 - c) Uniocular patient

Paper IV: RESEARCH METHODOLOGY

To introduce the concept of scientific Research and the methods of conducting scientific data collection.

To introduce the statistical tools of data Analysis and to conduct a Research study and prepare the report writings protocol

1. RESEARCH METHODOLOGY

Introducing to concepts - Definition, objectives, types, approaches, significance - Research method v/s methodology – Research process - Criteria of good research- Research problems encountered by researchers - Defining the Research problem - Defining a Research problem, & its importance- Technique involved in selecting a Research problem - Selecting the Research problem

2. RESEARCH DESIGN

Research design- Meaning & need for research design - Features of a good design - Important concepts relating to research design - Explanation of different types of research designs & their uses - Developing a research plan

3. INTRODUCTION TO BASIC STATISTICS, TESTS OF SIGNIFICANCE

Introduction to concepts - Experimental settings & tests of hypothesis - areas of application in statistics - Data: recorded in routine clinical practice - Qualitative & quantitative observations - scales of measurement.

Introduction to procedures – Tests of significance for large & small samples - Distribution of chi-square – Applications & misuses of chi-square tests - Non Parametric Statistical Tests of Further Statistical Methods – Introduction to concepts - Advantages and disadvantages of non parametric tests

4. FREQUENCY DISTRIBUTION, MEASURES OF CENTRAL TENDENCY & DISPERSION

Conceptual issues - Frequency distribution - characteristics & diagrams - Arithmetic mean, median, mode, position of averages, percentiles - Geometric mean & Harmonic mean - Measures of dispersion - concept of range - Mean deviation - Interquartile range, variance & standard deviation - Coefficient of variation & method of calculating standard deviation

5. SAMPLING DESIGN AND METHODS OF DATA COLLECTION

Census & sample survey- The Sampling process - Sample Size - Determination – Various sampling methods - Measurement & Scaling Techniques - Measurement concept in research - Measurement scales & tests of sound measurement - Technique of developing measurement tools - Sources of errors in measurement - Scaling - definition, classification, important techniques - Derived Attitude Scales - Scale construction techniques- questionnaire Designs

Concept of primary & secondary data - Methods of data collection - questionnaire, schedule – Observations, interview, case study. etc. Appropriate method of data collection & guidelines. Data Processing & Analysis - Processing operations - Problems in processing - Unvaried Hypothesis Tests - Hypothesis tests requiring interval data - Hypothesis tests using ordinal data - Hypothesis tests using nominal data –

6. INTERPRETATION AND REPORT WRITING

Meaning of interpretation - Need & technique of data interpretation - Caution in interpretation - Significance & steps in report writing - Mechanics of writing a research report - Marketing Information and decision Support Systems - Marketing Information Systems – Marketing Decision Support Systems - Expert Systems

7. LINEAR REGRESSION & CORRELATIONS

Introduction - Scatter diagram. Correlation and regression - Correlation coefficient & regression equation & restrictions - Multiple regression & other extensions

8. ETHICAL ISSUES IN RESEARCH

The nature of Ethical issues in Research - Ethical Issues in Medical Research - Health Management Research - Introducing to concept of HMR - Steps in the Profess of HMR .

REFERENCES:

1. Research Methodology - Methods & Techniques - C.R. Kothari, 2 Edition (1992), Eastern limited publication.
2. Principles of Research Methodology (2012) – Phyllis G. Supino, Jeffrey S. Borer
3. Epidemiology and Biostatistics (2009) – Kestenbaum, Bryan

ELECTIVE PAPER I- ADVANCE GLAUCOMA

1. Gonioscopy
Ophthalmoscopic techniques for evaluation of the optic nerve head Optic disc drawings;
2. Optic disc photography;
Flicker analysis;
3. Plaimetry;
Sterephotogrammetry;
4. Image analyzers,
5. Retinal nerve fiber layer evaluation.

Text BooK

1. Becker Shaffer's: Diagnosis and Therapy of the Glaucoma
2. Schield's : Text book of glaucoma

ELECTIVE PAPER I- PEDIATRIC OPTOMETRY

This module is designed to increase the student's understanding about human visual development, its defects and evaluation of Paediatric age groups. Completion of this module ensures the student a sound knowledge in evaluation and problem solving techniques of pediatric population.

1. Anatomical and functional aspects of visual development
2. Abnormal development of vision
3. Methods to assess the development of visual functions in infants
4. Limitations of the currently available techniques
5. Common genetic problems in pediatric age group
6. Diseases of the orbit and anterior segment
7. Disease of the posterior segment and neuro- ophthalmological disorders
8. Ocular manifestation of systemic disorders
9. Case history, Clinical examination and assessment formats of pediatric patients
10. Pediatric dispensing – Spectacles and contact lenses

FIRST YEAR – SECOND SEMESTER

Paper V: ORTHOPTICS AND VISION THERAPY

1. Nonstrabismic Binocular Vision Anomalies, Convergence insufficiency, Convergence excess, Fusional vergence dysfunction. Functional Ocular Motor Dysfunction Disorders of Accommodation.
2. Esodeviations, Exodeviations, Mechanically restrictive strabismus, Paralytic strabismus,
3. Horizontal gaze disturbances, Vertical gaze disturbances, Ocular myasthenia gravis, Amblyopia
4. Diagnostic techniques
5. Primary care diagnosis and vision therapy for non-strabismic binocular vision disorders

Text Book:

Erik M. Weissberg: Essentials of clinical binocular vision

Griffin, John R. *Binocular Anomalies: Diagnosis and Vision Therapy*. 4th ed. Boston: Butterworth-Heinemann, 2002.

Press, Leonard J., ed. *Applied Concepts in Vision Therapy with Accompanying Disk*. St. Louis: Mosby, 1997

Scheiman, Mitchell and Wick, Bruce. *Clinical Management of Binocular Vision*. 2nd ed. Philadelphia: Lippincott, Williams & Wilkins, 2002.

VonNoorden, Gunter K. *Binocular Vision and Ocular Motility: Theory and Management Of Strabismus*. 6th ed. St. Louis: Mosby, 2001.

**PAPER VI: CLINICAL OPTOMETRY – II AND
ADVANCED DIAGNOSTICS**

CLINICAL OPTOMETRY

1. Disease of Lens
2. Disease of Cornea,
3. Disease of Sclera.
4. Disease of Uveal tract
5. Ocular motility

Text Book:

1. Stephen J. Miller : Parsons Diseases of the Eye, 18th edition, Churchill Livingstone, 1990
2. Jack J. Kanski Clinical Ophthalmology: A Systematic Approach, 6th edition, Butterworth - Heinemann, 2007
3. Myron Yanoff and Jays Duker : Ophthalmology

ADVANCED DIAGNOSTICS

This course gives both in-depth theoretical knowledge and clinical exposure ocular diseases & the diagnostic procedures. The outcomes of this course are: Through understanding of the causes and treatment of ocular diseases and referral criteria at appropriate stages through didactic lectures and clinical postings.

1. Anterior segment diseases
2. Posterior segments diseases
3. Neuro Ophthalmology
4. Diagnostic procedures
5. Ocular therapeutics

Paper VII : NEURO OPTOMETRY

This course provides understanding of the issues of visual functioning which will also be related to clinical assessment issues. Topics covered include: processing of visual information in mammals, repair in the nervous system of vertebrates, objective assessment of visual pathway, review of brainstem and brainstem anatomy, review of amino acid chemistry related to brain neurochemistry, glutamate and neurotoxicity in glaucoma, visual attention and arousal systems, brainstem mechanisms in the control of eye movements, visually directed activities-reading. Parietal factors in vision, frontal factors in vision, after effects and inter-ocular transfers.

Topic:

1. Pupils
2. CN III disorders
3. CN II disorders
4. CN IV disorders
5. CN V disorders
6. CN VI disorders
7. Papilledema
8. AAION
9. CVD – CAD
10. Migraine
11. NAION
12. Optic neuritis
13. Neuro imaging
14. Nystagmus
15. Brainstem motility
16. Myasthenia

References:

1. Jack J. Kanski Clinical Ophthalmology: A Systematic Approach, 8th edition, Butterworth - Heinemann
2. Stephen J. Miller : Parsons Diseases of the Eye, 18th edition, Churchill Livingstone,

Paper VIII: BUSINESS AND CLINICAL ASPECTS IN OPTOMETRY

The business skills with respect to clinical setup in Optometry course provides in depth training in business, marketing and management skills, relevant to the practice of Optometry. Particularly in Market review; Understanding financial management in clinical as well as optical set up ; Identifying potential target markets; Evaluating markets; Reviewing existing product mix; Optimizing product / service mix for target markets; Business set-up; Retail sales; Product development; Marketing; Systems and procedures and human resources.

Topics:

1. The Legal Environment
2. Taxation and Insurance
3. Planning
4. Marketing
5. Management Theory
6. Management of medical record system(Needs and importance)
7. Prescription format (General clinics and specialty clinics)
8. Set- up of an optometry clinic with and without optical outlet.

References:

1. ICEE Modules

ELECTIVE PAPER I - EYE BANKING

1. Introduction to Eye Banking, History & milestones, Requirements in eye bank,
2. Duties and responsibilities of eye bank personals, Indications and contra indications, Instruments,
3. Tissue retrieval, Handling of tissue, preservation techniques,
4. Evaluation techniques, specular microscopy, Documentation,
5. Legal aspects, keratoplasties, Advanced keratoplasties

Text Book:

1. Dean Vavra: Eye Banking
2. Smolin and thoft,s :The Cornea Scintific foundation and clinical practice ,fourth edition
3. T.Bredehorn Mayr : Eye Banking ,Karger

ELECTIVE PAPER II : CLINICAL PSYCHOLOGY

1. Mental health criterion, Mental Health and Illness, concept of Positive mental health, Psychological well being, attitude towards mental illness, epidemiological studies and socio-demographic correlates of mental illness in India
2. Social class, Social Change, Cultural shock, Migration, Religion and gender related issues with special reference to India.
3. Psychological aspects of disability and rehabilitation in India context, the role of family and society in the education, training and rehabilitation of disabled, Behavioral Model, Evaluation of behavioral modal, Psychodynamic model, Evaluation of psychodynamic model, Cognitive model, Evaluation
4. Case history and Interviewing, Psychopathology of personality and Behaviors disorder, Specific personality disorders, Habit and Impulse disorders, Mental and behavior disorder, psychosomatic disorder,
5. Psychopathology of childhood and adolescence disorders, Anxiety disorders, Schizophrenia, Psychopathology of emotional, behavioural and developmental disorders of childhood and adolescence
Mental retardation, Classification, Etiology and management /rehabilitation

Text Book:

David R. Shaffer, Katherine KIPP: Developmental psychology childhood and Adolescence

Kevin Brewer: Clinical Psychology

Niraj Ahuja: A Short Textbook of Psychiatry

Margaret Harris and George Butterworth: Developmental *Psychology: A Student's Handbook*

SECOND YEAR – THIRD SEMESTER

Paper IX: 1. CORNEA AND CONTACT LENS

1. Current concepts in anatomy and Physiology of the cornea and tear film
Microbiology and Immunology in relation to Contact Lens wear
Use of Slit Lamp in Contact Lens Practice
2. Review of Contact Lens solution contents
The effects of wear on Contact lenses
3. Soft Contact Lens complications
Causes and management
RGP complications: management
Keratoconus; Overview and contact lens fitting
4. Contact lens for children
Contact Lenses for aphakics
Bandage contact lenses
Contact Lenses in post refractive surgery/PRK
5. Lens choice for
Astigmatism
Presbyopia
Soft Contact Lens Design
R.G.P. Lens Design

Text books:

- IACLE modules 1 - 10
- CLAO Volumes 1, 2, 3
- Anthony J. Phillips: Contact Lenses, 5th edition, Butterworth-Heinemann, 2006
- Elisabeth A. W. Millis: Medical Contact Lens Practice, Butterworth-Heinemann, 2004
- E S. Bennett, V A Henry :Clinical manual of Contact Lenses, 3rd edition, Lippincott Williams and Wilkins, 2008

Paper IX: 2. LOW VISION AND REHABILITATION

1. Clinical evaluation of low vision patients – prognostic & psychological factors; Psycho-social impact of low vision
2. Types of low vision aids – Optical aids, non-optical aids & electronic devices
Clinical evaluation – assessment of visual acuity, visual field, selection of low vision aids,
3. Optics of Low Vision Lenses.
4. Variables affecting success and how to improve results.
5. New developments and future directions.
6. Low vision care of mentally retarded
Mobility Training
Instruction & training
7. Pediatric Low Vision care
Low vision aids – dispensing & prescribing aspects
8. Visual rehabilitation & counseling Legal aspects of Low vision in India Case Analysis

Text books:

1. Christine Dickinson: Low Vision: Principles and Practice Low vision care, 4th edition, Butterworth-Heinemann, 1998
2. E Vaithilingam: practice of Low vision – A guide book,
3. A J Jackson, J S Wolffsohn: Low Vision Manual, Butterworth Heinnemann, 2007

Paper X : RECENT ADVANCEMENT IN OPTOMETRY

In this course latest articles published in Optometry and vision science journals will be discussed. This will enable the students to keep abreast of latest developments in the field of Optometry and vision science.

Special Clinic – I

Project/Dissertation - I

Second year IVth Semester

Special Clinic – II

Project / Dissertation - II