VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.

SYLLABUS TOPICS FOR BACHELOR IN CLINICAL OPTOMETRY

Second Year Term Three

Topic Code		Lectures by	Number of hour Lectures	Practical
T301	Visual Optics	Optometric faculty	100	30
T302	Dispensing Optics	Optometric faculty	100	90
T303	Optometric Instruments	Optometric faculty	75	30
T304	Optometric Instruments	Optometric faculty	50	
T305	Ocular Diseases (i)	Optometric faculty	50	
	Total hours of teaching		450	180

Pattern of Examination at end of Third Term

Paper No.	Name of Paper	= Topics included	Total marks	Passing marks
P 1	Visual Optics	= T301	100	50
P 2	Dispensing Optics	= T302	100	50
P 3	Eye Checkup & instruments	= T303 + T304 + T305	100	50
Viva 1	Visual Optics	= T301	100	50
Viva 2	Dispensing Optics	= T302	100	50
Viva 3	Eye Checkup & instruments	= T303 + T304 + T305	100	50
	Total marks Examination		600	300

Second Year Term Four

Topic Code		Lectures by	Number of hour Lectures	Practical
T401	Optics & Refraction	Optometric faculty	100	45
T402	Optometric Optics & LVA	Optometric faculty	75	45
T403	Ocular diseases (ii)	Ophthalmic faculty	75	30
T404	Optometric Investigations	Optometric faculty	100	60
T405	Hospital procedures & Medical Psychology	Medical faculty	50	
	Total hours of teaching		400	180

Pattern of Examination at end of Fourth Term

Paper No.	Name of Paper	= Topics included	Total marks	Passing marks
P1	Optics & Refraction	= T401	100	50
P2	Optometric Optics & LVA	= T402	100	50
P3	Eye Investigation & disease	= T403+ T404 + T405	100	50
Viva 1	Optics & Refraction	= T401	100	50
Viva 2	Optometric Optics & LVA	= T402	100	50
Viva 3	Eye Investigation & disease	= T403 + T404 + T405	100	50
Total marks Examination			600	300

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM THREE

T301 VISUAL OPTICS

1. **Scope and Objective** = A sound knowledge of theory in Visual Optics is a pre-requisite for Practical training in clinical refraction and related area. The objective of the course is to prepare the candidate through didactic lecture which he is expected to translate into practice at the clinics.

2. **Text and reference books =**

a. Optics and Refraction – L.P.Aggarwal
b. Principles of Optics and Refraction – Duke Elder
c. Optics & Refraction – A.K. Khuara
d. Visual Optics and Refraction – A clinical approach DAVID D.MICHAELS. The C.V.Mosby & Co. 1985.
e. Principal & Practice of Refraction – N.C.Singhal

Lecture Topics

Review Of Geometrical Optics
1. Vergence and power
2. Sign convention
3. Spherical refracting surface
4. Spherical mirror; catoptric power
5. Cardinal points
6. Magnification

Optics Of Ocular Structure
1 Cornea and aqueous
2. Crystalline lens
3. Vitreous
4. Schematic and reduced eye

C. Refractive conditions of eye
a. Emmetropia
b. Myopia
c. Hyperopia
d. Astigmatism
e. Presbyopia

D. Refractive Anomalies And Their Cause
1. Aetiology of refractive anomalies
2. Contributing variabilites and their ranges
3. Populating distributions of anomalies

4. Optical component measurements
5. Growth of the eye in relation to refractive errors

E. Accommodation and Convergence

a. Far and Near point of accommodation, range of accommodation emptitude
b. Methods of measurement of Accommodation
c. Near point of convergence of significance
d.. Methods of measurements of Convergence
e. Accommodative Convergence Accommodation ratio

F. Retinoscopy-principles and methods

f. Retinoscopy – speed of reflex and optimum condition
g. Retinoscopy – design consideration
h. Review of objective refractive methods
i. Review of subjective refractive methods
j. Cross cylinder methods for astigmatism
k. Difficulties in subjective tests and their avoidance
l. Transposition of lenses
m. Spherical equivalent.

Optometric Optics Practical Demonstrations

Visual acuity, stereo acutiy in emmetropia
Myopia and pseudomyopia, myopia and visual acuity
Measurement of accommodation: near and far points and range
Measurement of Convergence – near point and adduction and abduction range
Practice of retinoscopy – Emmetropia
Practice of retinoscopy - spherical ametropia
Practice of retinoscopy – simple astigmatism
Practice of retinoscopy – compound hyperopia
Practice of retinoscopy – compound myopia
Practice of retinoscopy – oblique astigmatism
Practice of retinoscopy – media opacities
Practice of retinoscopy – in irregular astigmatism
Interpretation of cycloplegic retinoscopic findings

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM THREE

T302 DISPENSING OPTICS

1. **Scope and Objective** = This course deals manily with the prescription of lenses, prisms and frames, which form the backbone of optometric practice prepares the students to work competently and confidently in the Clinical environment, imparting the knowledge about surfacing and polishing spherical, sphero-cylindrical, and bifocal spectacle lenses. To cut finished lenses according to various frame shapes and sizes and fit them into frames after glazing. Make them capable of assessing facial and frame shape and sizes they are taught to evaluate all parameters, which are essential for an ideal spectacle fit. To check any defects in a finished lens before dispensing the lenses to a patients.

2. **Text and reference books =**

a. Principles of Ophthalmic Lenses : M.JALIE
b. Spectacle Lenses : Theory & Practice – Colin Fowler & Keziah Latham
c. Ophthalmic Lenses and Dispensing – M Jalie

Lecture Topics

Ophthalmic Lenses Types, Manufacturing, Workshop Practice

1. Recording and ordering of Ophthalmic lenses
2. Terminology used in lens workshop
3. Ophthalmic raw materials – history and general outline
4. ISI Standars for lenses
5. Manufacturing of Ophthalmic blanks – Plastics
6. Plastic lenses – materials types and characteristics
7. Plastic lenses – manufacture
8. Ophthalmic lens designs – best form lenses
9. Design of high powered lenses
10. Bifocal design and manufacture
11. Unusual Lens forms
12. Faults in lenses – description
13. Faults in lenses – detection

Types of Ophthalmic lenses

Aspheric lenses
High index lenses
Bifocal and multifocal lenses – types and characteristics.
Bifocal and multifocal lenses - purposes and choice
Photo chromic lenses
Polaroid lenses
Tinted lenses – absorptive properties
Tinted lenses – examples and discussions
Special purpose lenses.

Spectacle Frames – theory basics (1)

1. History of spectacles
2. Nomenclature and terminology
3. Classification of frames – Temple position, colouration
4. Types of frame materials – advantages and disadvantages
5. Frame materials – Gold
6. Frame materials – Basic metal
7. Frame materials – Plastics
8. Manufacturing of spectacle frames – overview
9. Face and frame measurement
10. Dyes and colorants – lenses and frames

Spectacle manufacturing – Optician shops (II)

1. Dispensing counter organization
2. Types of spectacle frames available
3. Types of human faces
4. Face and frame measurements
5. Choice of frames
6. Cosmetic dispensing – different types of faces colours etc.
7. Functional dispensing – various professions and age groups
8. Special purpose frames and accessories
9. Testing of frames – general
10. Testing of frames – special
11. Recording and ordering of frames and appropriate lenses
12. Measurement for ordering spectacles – IPD, marking center, vertex distance calculations.
13. Special measurements for fitting special lenses – Bifocals, multifocals, prism lenses etc.
14. Fitting of lenses in various types of frames.
15. Glazing and Edging Processes
16. Glazing of Bifocals, high powered, other special lenses.
17. Faults in lenses – description and detection
18. Final checking, adjustments to prescription spectacles
19. Final dispensing of spectacles to customer
20. Patient complaints, handing and correction
21. Repairs to spectacles – Soldering, rivets for metal plastics frames
22. Special types of spectacles and appliances
23. Monocells and Ptosis crutches

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM THREE

T303 OPTOMETRIC INSTRUMENTS

1. **Scope and Objective** = This course gives an in-depth knowledge about the construction and working of various instruments used in the Optometric practice and helps the students to use the instruments to an optimum level in diagnosis and management of ocular disorders and help them in maintenance of these instruments.

2. **Text and reference Books =**

a. Basic Ophthalmology - Renu Jogi 3rd Ed., Jaypee published
b. Parson's Diseases of the eye – Ramanjit Sihota. Radhika Tandon 20th Ed. Elsvier Pvt. Ltd.
k. Low Vision Aids – Monica Chaudhry 2006 Jaypee published
l. Practical Manual of Ophthalmology – Vinod Lohiya 2006, Jaypee published
e. Basic Ophthalmology – Basak

Lecture Topics

1. Binocular Vision
2. Refractive Instruments
    a. Test charts standards
    b. Choice of test charts
    c. Trial case lenses
    d. Refractor (phoropter) head units
    e. Optical considerations of refractor units
    f. Trial frame design
    g. Near vision difficulties with units and trial frames
    h. Retinoscope – types available
    i Adjustment of Retinoscope – special features
    j. Cylinder retinoscopy
    k. Objective optopmeters
    l. Coincidence optometers-principals and details
    m. Infrared optometer devices
    n. The interpretation of objective findings
    o. Speacial subjective test polarizing and displacement etc.
    p. Projection charts
    q. Illumination of the consulting room
    r. Time and motion study in refraction
    s. Furniture and accessories in the practice
    t. Instruments of the future

3. Ophthalmoscopes and related devices.
a. Design of ophthamoscopes- illumination
b. Design of ophthamoscopes- viewing
c. Ophthamoscopes disc
d. Filters for ophthamoscopes
e. Indirect ophthamoscopes
f. The use of ophthamoscopes in special cases.

4. Lensometer, lens gauge or clock

5. Slit Lamp
a. Slit lamp systems
b. Viewing microscope systems
c. Slit lamps in production
d. Slit lamp accessories
e. Slit lamp techniques
f. Slit lamp appearances
g. Mechanical design instruments

6. Tonometer

a. Tonometer principles
b. Types of tonometers and standardization
c. Use and interpretation of tonometers

7. Fundus Camera
a. The fundus camera - principles
b. The fundus camera – techniques

8. External eye photography - apparatus.

a. External eye photography - techniques

9. Corneal examination
   a. Placidos Disc.
   b. Keratometer
   c. Video Keratoscopy
   d. Corneal Topography
   e. Specular Microscope
   f. Aesthesiometer

10. Exopthalmometer

11. Refractionometer

12. Orthoptic Instruments
   a. Orthoptic instruments - haploscopes
   b. Orthoptic instruments – home devices

   c. Orthoptic instruments – pleoptics
   d. Historical instruments

13. Colour vision testing devices.

14. Field of vision and screening devices.
    a. Perimeter and visual field
    b. Campimeters and fixation devices
    c. Illumination of field testing instruments
    d. Projection perimeters and Campimeters
    e Screening devices for field defects
    f. Results of field examination
    g. Vision screeners – principles
    h. Vision screeners – details
    i. Analysis of screener results

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM THREE

T304 CLINICAL EXAMINATION OF VISUAL SYSTEM

1. **Scope and Objective** = This course is to acquaint the students regarding basic hist ttaking and basic examination technique of a patient attending the Out Patient Department with ophthalmic complaints. The students should also become familiar with certain diagnosis treatments like visual fields, macular function test, etc. to confirm the clinical findings are help aid in diagnosis.

2. **Text and reference books =**

a. External Eye Diseases – A Colour Atlas – Mark T.Watts, Butterworth Heinemann.
b. Clinical Procedures for ocular examination - Carlson
c. External Eye Diseases a systemic approach Ian Machie, Butterworth Heinemann
d. Clinical Examination of Ophthalmic cases – M.L.Aggarwal & L.C.Gupta, CBS Publish Delhi.
e. Clinical Ophthalmology, Jack K.Kanski, Butterworth, 2nd edition 1989.
f. Basic and Clinical Sciences – American Optometric Association.
g. Clinical Procedure in primary eye care – David Elliot
h. Diagnosis of defective colour vision – Jennie Birch, Butterworth Heinemann

Lecture Topics

1. History of the Ophthalmic subject
   a. Ocular symptoms
   b. The past prescription – its influence
2. Visual acuity testing – distance and near and colour vision
3. Colour Vision – methods of testing, significance
4. Examination of muscle balance.

Slit Lamp examination

a. Examination of eye lids, conjunctive and sclera
b. Examination of cornea
c. Examination of iris, ciliary body and pupil
d. Examination of lens.
5. Examination of intraocular pressure and examination of angle of anterior chamber
6. Ophthalmoscopy – direct and indirect
7. Examination of fundus (vitreous and disc) choroids and retina
8. Examination of lacrimal system
9. Examination of the orbit
10. Macular function test
11. Visual field charting (central) (peripheral)
12. Neuro ophthalmological examination.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM THREE

T305 OCULAR DISEASES – I

1. **Scope and Objective** = This course is designed to provide the further Optometrist with a Comprehensive yet concise Curriculum of the field of Ophthalmology, with reference to ocular diseases. The Course reviews basic background knowledge as well as focuses on specific areas of key interest to the Optometrist. Special attention will be paid to the method of examination in various sub-specialties of Ophthalmology.

2. **Text and reference books =**

a. Parsons Diseases of the eye,Ramanjit Sihota, Radhika Tondon. 20th Ed. Elsevier. Pvt.Ltd.
b. Clinical Ophthalmology – JACK J.KANSKI, 2ND Ed. , 1989 Butterworths.
c. Modern Ophthlmology – L.C.Dutta 3rd Ed., Jaypee publishers.
d. Ophthalmology for undergraduate strudents – M.L Agrawal, L.C. Gupta, Sanjeev Agarval - Jaypee published 1st Ed.
c. Text book of ophthalmology – H.V. Nema 4th Ed., Jaypee publishers.
f. Basic Ophthalogy – Renu Jogi Jaypee publishers.

Lecture Topics

EYELIDS
a. Eyelid anatomy
b .Congenital and developmental anomalies
c. Blepharospasm
d .Ectropion
e. Entropion
f. Trichiasis and symblepharon
g. Eyelid inflammations
h. Eyelid tumors
i. Ptosis
j. Eyelid retraction
k. Eyelid trauma

LACRIMAL SYSTEM
a. Lacrimal anatomy
b. Lacrimal pump
c. Methods of lacrimal evaluation
d. Congenital and development anomalies of the lacrimal system
e. Lacrimal obstruction
f. Lacrimal sac tumors
g .Lacrimal trauma

SCLERA, EPISCLERA.

a. Ectasis and staphyloma
b. Scleritis and episleritis

ORBIT

a. Orbital anatomy
b. Incidence of orbital abnormalities
c. Methods of orbital examination
d. Congenital and developmental anomalies of the orbit
e. Orbital tumors
f. Orbital inflammation
g. Sinus disorders affecting the orbit
h. Orbital trauma

CONJUNCTIVA AND CORNEA

a. Inflammation
b.1. Therapeutic principles,
2. Specific inflammatory diseases

c. Tumors
1. Tumors of epithelial orgin
2. Glandular and adenexa tumors
3. Tumors of neuroectodermal origin
4. Vascular Tumors
5. Xanthomatous origin
6. Inflammatory tumors
7. Metastatic lesions

d. Degeneration and dystrophies
1. Definition
2. Degeneration's
3. Dystrophies

e. Miscellaneous conditions
1. Keratoconjunctivitis Sicca (K-Sicca)
2. Tear function tests
3. Steven Johnson syndrome
4. Ocular Rosacea
5. Atopic eye disorders
6. Benign mucosal pemphigoid (BMP)-ocular pemhigold
7. Vitamin A deficiency
8. Metabolic diseases associated with corneal changes

IRIS, CILIARY BODY AND PUPIL

a. Congenital anomalies
b. Primary and secondary disease of the iris and ciliary body
c. Tumors
d. Anomalies of pupillary reaction

7. CHOROID

a. Congenital anomalies of the choroid
b. Diseases of the choroid
c. Tumors

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM FOUR

T401 OPTICS & REFRACTION

1. **Scope and Objective** = Imparting the knowledge about surfacing and polishing, spherical sphero-cylindrical and bifocal spectacle lenses. To cut finished lenses according to various frame shapes and sizes and fit them into frames after glazing. Make them capable of assessing facial and frame shape and size. They are taught to evaluate all parameters which are essential for an ideal spectacle fit. To check any defects in a finished lens before dispensing the lenses to a patient.

2. **Text and reference books =**

a. Principle of Ophthalmic Dispensing : M.JALIE
b. Spectacle Lens Theory & Practice – COLIN FOWLER

Lecture Topics

1.a. Tinted and protective lenses
  b. Characteristics of tinted lenses
  c. Absorptive glasses
  d. Polarizing filters
  e. Photochromaic filters
  f. Reflecting filters

2. Bifocal lenses
3. Trifocal lenses
4. Progressive addition lenses
5. Lenticular lenses
6. a. Spectacle magnifiers
  b. Recumbent prisms and present prims
  c. Reflections from spectacle lenses, ghost images reflection in bifocals at the dividing line.
  d. Anti-reflection coating
  e. Field of the view of the lenses.
  f. Size, shape and mountings of the ophthalmic lenses

Effective power of spectacles, vertex distance effects
Spectacle magnification and relative spectacle magnification

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM FOUR

T402 OPTOMETRIC OPTICS AND LVA

1. Scope and Objective = Optometric Optics is more a clinical oriented course. The object of the course is to prepare the student to co-relate all aspects of Optics, clinical examination diagnosis and planning Optometric management of the patient.

2. **Text and reference books =**

a. Practice of Refraction = Duke Elders, Edn. 9, 1991
b. Optics & Refraction = A.K.KHURANA
c. Clinical optics – BUDD APPLETON
e. Low vision Aids – MONIKA CHAUDHRY

Lecture Topics

1. a. Correction of spherical ametropia
   b. Axial versus refractive ametropia
   c. Ocular refraction versus spectacle refraction
   d. Ocular accommodation versus spectacle accommodation
   e. Rational image blur, depth of focus and depth of field.

2. Measurement of the optical constants of the eye
a. Corneal curvature and thickness
b. Keratometry
c. Curvature of the lens and ophthalmic phakometry
d. Axial and axis of the eye
e. Far and Near Point of Accommodation
f. Subjective Methods of refractions
g. Objective Methods of refraction
h. Guideline for correction of refractive error
i. Patient Management

3. Introduction to Orthoptics
a Extra Ocular Muscles
b. Laws of ocular motility
c. Accommodation & Convergence
d Binocular vision
e. Diplopia, Confusion
f. Type of deviations
g. Introduction to Orthoptic examination
h. Introduction to Orthoptic instruments

Optometric Optics Practical Demonstrations

1. Visual acuity, stereo acuity in emmetropia
2. Myopia and pseudomyopia, myopia and visual acuity
3. Myopic correction-subjective verification and monocular and binocular
4. Hypermetropia – determination of manifest error subjectively
5. Hypermetropio correction – subjective verification
6. Demonstration of astigmatism: Use of slit and keratometry to find the principal meridians

7. Astigmatism: Fan – subjective verification tests.
8. Astigmatism: Cross-cyl. Subjective verification tests.
9. Measurement of accommodation: near and far points and range
10. Presbyopic correction and methods: accommodative reserve, balancing the relative accommodation and cross grid cylinder test.
11. Methods of differentiating axial and refractive ametropia
12. Practice of Retinoscopy – Emmetropia
13. Practice of Retinoscopy - spherical ametropia
14. Practice of Retinoscopy – simple astigmatism
15. Practice of Retinoscopy – compound hyperopia.

Low Vision Aids

Scope and Objective – Patient both. Young and old, who suffer from irreversible and incurable conditions which cannot be managed by Conventional therapy, can be helped to perform their tasks with Low Vision Aids, prescribing of which is a Specific of Optometrists.

Text Book & Reference Books

a. Low Vision Aids – MONIKA CHAUDHRY

Lecture Topics:

1. Identifying a low vision patient
2. History
3. Refraction
4. Evaluation of near vision Amsler grid and the field defects
5. Demonstrating aids
6. Teaching the patient to use aids
7. Guide to selected low vision aids
8. Fitting spectacles telescope and glasses
9. Children with low vision
10. Effects of the eye condition of functional vision
11. Light, glare and contrast in low vision care rehabilitation
12. Diagnostic procedutes in low vision care management
13. Optics of low vision aids
14. Bioptic telescopes
15. Optical devices that help people with field defects

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM FOUR

T403 OCULAR DISEASES – II

1. **Scope and Objective** = This course is designed to provide the further Optometrist with a Comprehensive yet concise Curriculum of the field of Ophthalmology with reference to ocular diseases. The Course reviews basic background knowledge as well as focuses on specific areas of key interest to the Optometrist. Special attention will be paid to the methods of examination in various subspecialties of Ophthalmology.

2. **Text and reference books =**

a. Parsons Diseases of the eye,Ramanjit Sihota, Radhika Tondon. 20th Ed. Elsevier. Pvt.Ltd.
b. Clinical Ophthalmology – JACK J.KANSKI, 2ND Ed. , 1989 Butterworths.
c. Modern Ophthlmology – L.C.Dutta 3rd Ed., Jaypee published.
d. Ophthalmology for undergraduate strudents – M.L Agrawal, L.C. Gupta, Sanjeev Agarval Jaypee published 1st Ed.
e. Text book of ophthalmology – H.V. Nema 4th Ed., Jaypee published
f. Basic Ophthalogy – Renu Jogi Jaypee published

Lecture Topics

1. VITREOUS
a. Developmental abnormalities
b. Hereditary hyaloidoretinopathies
   Juvenile retinoschisis
   Asteroid hyalosis
   Cholestrolosis
e. Vitreous hemorrhage
   Blunt trauma and vitreous
   Inflammation and vitreous
   Parasitic infestations
   Pigment granules in the vitreous
f. Vitreous complications in cataract surgery

2. RETINA
a. Retinal vascular anomalies
b. Diseases of the choroidal vasculature, Bruch's membrane, and retina pigment epithelium (RPE)
c. Retinal tumors and retinoblastoma
d. Other retinal disorders
   1. Retinal inflammations
   2. Metabolic diseases affecting the retina
   3. Miscellaneous disorders
   4. Electromagnetic radiation effects on the retina
e. Retinal physiology and psychophysics
f. Hereditary macular disorders (including albinism)
g. Peripheral retinal degeneration
h. Retinal holes and detachments
i. Intraocular foreign bodies

j. Photocoagulation

3. **NEUOR-OPHTHALMOLOGY**

. Neuro – ophthalmic examination
   1. History &Visual function test
   2. Technique of pupillary examination
   3. Ocular motility
   4. Checklist for testing

. Visual sensory system
   1. The retina optic disc, optic nerve, optic chiasma, optic tracts
   2. The lateral genticulate body, optic radiations, visual cortex
   3. The visual field
   4. Disorders of visual system

. Ocular motor system

1. Supranuclear control of eye movements
   i. Saccadic system
   ii. Clinical disorders of the saccadic system
      Gaze palsies
      Parkinson's disease.
   iii. Smooth pursuit system and disorders
   iv Non visual reflex system
   v. Position maintenance system
   vi Nystagmus
2. Ocular motor nerves and medial longitudinal fasciculus

d. The facial nerve

e. Pain and sensation from the eye

f. Autonomic nervous system

g. Selected system disorders with neuro-ophthalmologic signs

4. **LENS**

Anatomy and pathophysiology
   1. Normal anatomy and aging process
   2. Developmental defects
   3. Acquired lenticular defects

b. Management of lenticular defects

5. **TRAUMA**
   a. Anterior segment trauma
   b. Posterior segment trauma

6. **BLINDNESS**

a. Blindness definitions
   1. Causes
   2. Social implications
   3. Rationale therapy

b. Drug induced ocular disease.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM FOUR

T404 OPTOMETRIC INVESTIGATIONS

1. **Scope and Objective** = This course is designed to provide the Optometrist with a comprehensive and concise understanding of all Ophthalmic Investigations. The Course reviews basic background knowledge as well as focuses on specific areas of key interest to the Optometrist. Special attention will be paid to the methods of examination and instruments expected to be used by an Optometrist in an Ophthalmic hospital as well as in an optical establishment.

2. **Text and reference books =**

a. Clinical procedures in Primary Eye Care – David Elliott, Butterworth Heinemann
b. Basic and Clinical Science Course, American Academy of Ophthalmology (AAO)
c. Clinical Ophthalmology – JACK J. KANSKI, 2nd Ed. 1989 Butterwosths.

Lecture Topics

1. Visual Acuity Testing & Theory
2. Colour Vision Testing & Theory
3. Electro Retino Graphy, E.R.G.
4. Electro Oculo Graphy, E.O.G.
5. Electro Myo Graphy, E.M.G.
6. Electro Nystagmo Graphy, E.N.G.
7. Fluorescein Angiography F.A.
8. Ultrasono Graphy U.S.G.
9. Visual Evoked Response / Potential V.E.R. or V.E.P.
10. Tonometer, Tonometry & Tonography
11. Visual Field Charting & Perimetry
12. Adaptation & Adaptometry
13. Berman's Locator
14. Cryo Technique
15. Diathermy
16. Photo-coagulation
17. Method's of examination (Focal illumination)
18. Slit lamp and attachments
19. Goinoscopy
20. Pachymetry
21. Ocular Photography (Ant.Seg.)
22. Contact & Trans-illumination
23. pH Testing & Schirmer's Test
24. Fluorescein Staining & Techniques
25. Syringing & Lacrimal Function Test
26. Ophthalmoloscopy
27. Retinoscopy
28. Auto-Refraction
29. Keratometry
30. Ophthalmic Lens Measuring Instruments

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
BACHELOR OF OPTOMETRY (B.OPTOM)
SECOND YEAR TERM FOUR

T405 HOSPITAL PROCEDURES AND MEDICAL PSYCHOLOGY
HOSPITAL PROCEDURES

Lecture Topics.

1. Administration
2. Medical Records department
3. Reception
4. Computer Section – appointment scheduling, accounts
5. Laboratory – all investigations performed
6. Correspondence
7. Stores

MEDICAL PSYCHOLOGY

Lecture Topics

1. Introduction to Psychology – Definitions – Schools of thought, fields of Psychology.
2. Man in society
3. Emotions and feelings
4. Motivation – Human motivation
5. Personality – what it is, concept of body image
6. Normality and abnormality – major and minor psychiatric entities
7. Why Medical Psychology?
8. The patient in his mileu – socio-economic aspects.
9. The patient therapist relationship – The initial encounter – basic principles of the therapist.
10. Illness – it's impact on the patient.
11. Eye diseases – their impact on the patient
12. The patient's adaptation to variants of normalcy in vision –prejudices and biases
13. Rehabilitation of the blind.