

**MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB**  
(Formerly West Bengal University of Technology)

**Syllabus for Bachelors in Optometry Programme**  
(Effective for Students Admitted in Academic Session 2018-2019)

**5<sup>th</sup> SEMESTER**

**Paper: LOW VISION AND VISUAL REHABILITATION**

**Code: BO -501**

**Contact: 2L+1T**

**Credits: 3**

<b>Course Content</b>	
<b>UNIT/MODULE1</b>	a) Definition-old, new, proposed b) Grades of low vision c) Epidemiology & Terminology of Low Vision
<b>UNIT/MODULE 2</b>	d) Low vision optics- 1. Magnification 2. Optics of Galilian&Keplarian telescope- advantage/ disadvantage, significance of exit & entrance pupil 3. Optics of spectacle magnifier -Determination of add 4. Optics of stand & hand magnifier 5. Electronic magnifier
<b>UNIT/MODULE 3</b>	e) Low vision examination: visual acuity, refraction, field testing, color vision, contrast sensitivity and glare testing f) Assessment & prescription of low vision devices-optical, non-optical & rehabilitation
<b>UNIT/MODULE 4</b>	g) Overview of Rehabilitation Services h) Overview of systematic / retinal diseases in relation to low vision i) Counseling of low vision patient/ parents/ guardians/relatives

**Reference Books:**

1. *THE ART & PRACTICE OF LOW VISION , BY FREEMAN & JOSE, BUTTERWORT PUB.*
2. *UNDERSTANDING LOW VISION , AFB PUBLICATION*
3. *LOW VISION, BY FAYEA E.E.*
4. *LOW VISION PRACTICE- MONIKA CHOUDHURY*

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**Paper: CONTACT LENS**

**Code: BO -502**

**Contact: 2L+1T**

**Credits: 3**

<b>Course Content</b>	
<b>UNIT/MODULE1</b>	a) Contact lens history & development. Benefits of contact lens over spectacle. Manufacturing methods-spin cast, Lethé cut, Cast modeling. b) Measurement of Contact lens c) Contact lens optics-Contact lens & spectacle lens. Back vertex calculation. Contact lens & Tear lens system.
<b>UNIT/MODULE 2</b>	d) Classification of contact lens & its material ( soft& RGP ); Material property. e) Contact lens terminology. RGP & soft lens design. FDA classification of contact lens material. Patient selection & prescreening. Indications & contra indications of contact lens.
<b>UNIT/MODULE 3</b>	g) Fitting & Assessment of soft contact lens & RGP. h) care & maintenance of Soft contact lens and RGP. i) Writing contact lens prescription and order.
<b>UNIT/MODULE 4</b>	j) Modification of finished RGP lens. k) <b>Verification of</b> the parameters

**Reference book:**

1. *OPHTHALMIC ASSISTANT BY HAROLD A STEIN,*
2. *CONTACT LENS PRACTICE- MONIKA CHOUDHURY*

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**Paper: CLINICAL REFRACTION-II**

**Code: BO -503**

**Contact: 2L+1T**

**Credits: 3**

<b>Course Content</b>	
<b>UNIT/MODULE1</b>	Assessment of children Vision & Paediatric evaluation, diagnosis & management. Amblyopia. Neuro- Optometric <b>Assessment and</b> Rehabilitation
<b>UNIT/MODULE 2</b>	Evaluation, Diagnosis & Optometric management of special children Visual Disorders in senior citizens, evaluation, diagnosis & management. Sports vision.
<b>UNIT/MODULE 3</b>	Refraction in special cases Behavioural optometry Nystagmus and its optometric management

**Reference Books:**

1. PAEDIATRIC OPTOMETRY, BY JEROME ROSNER

2. VISION DEVELOPMENT, BY ILG & BULLIS

3. MANAGEMENT OF SPECIAL POPULATION, BY DOMINIQUEE MAINO.

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**Paper: OCULAR DISEASE –II (Posterior segment and Neuro-Ophthalmic Disease)**

**Code: BO -504**

**Contact: 3L+0T**

**Credits: 3**

<b>Course Content</b>	
<b>UNIT/MODULE1</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Diseases of the Vitreous Humour- Congenital Anomalies. Vitreous Opacities. Hereditary Vitreo – Retinal Degeneration’s. Vitreous Haemorrhage .Detachment of Vitreous Humour . Vitreous Surgery .</li> <li><input type="checkbox"/> Methods of clinically assessing the posterior segment ( direct&amp; indirect ophthalmoscopy)</li> </ul>
<b>UNIT/MODULE 2</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Disease of the Retina- Congenital &amp; Dev. Defects. Inflammation of the Retina(Retinitis) . Retinal Vasculitis . Oedema of the Retina. Haemorrhage of the Retina. Vascular Occlusion . Retinal Arteriosclerosis. Retinopathies . Retinal Telangiectasis. Degeneration’s of the Retina. Detachment of the Retina. Surgical Procedures for Retinal Detachment Tumours of the Retina. Injuries of the Retina.</li> <li>Disease of the Optic Nerve- Congenital Anomalies. Papilloedema. Inflammation of the Optic Nerve(Optic-Neuritis). Ischaemic Optic Neuropathy . Optic Atrophy. Tumours of the Optic Nerve. Injuries of the Optic Nerve.</li> </ul>
<b>UNIT/MODULE 3</b>	Pupillary reaction Abnormal Pupillary Reactions Afferent pupillary conduction defects Argyll Robertson pupils Differential diagnosis of light-near dissociation Adie pupil
<b>UNIT/MODULE 4</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Visual Pathway defects</li> <li><input type="checkbox"/> Migraine</li> <li><input type="checkbox"/> Myotonic dystrophy &amp; blepharospasm</li> </ul>

**Reference books:**

1. CLINICAL OPHTHALMOLOGY- JACK J KANSKI

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**Paper: PUBLIC HEALTH AND COMMUNITY OPTOMETRY**

**Code: BO -505**

**Contact: 2L+0T**

**Credits: 2**

<b>Course Content</b>	
<b>UNIT/MODULE1</b>	<ol style="list-style-type: none"><li>1. Concept of public health.</li><li>2. Principles of primary, secondary and tertiary care.</li><li>3. Planning of health services.</li></ol>
<b>UNIT/MODULE 2</b>	<ol style="list-style-type: none"><li>4. Health Policies</li><li>5. Role of Optometrist in managing eye camps</li><li>6. NPCB and refractive blindness – optometrist’s role as primary health care provides.</li><li>7. Health cares insurance including role of TPA.</li></ol>
<b>UNIT/MODULE 3</b>	<ol style="list-style-type: none"><li>8. Ocular emergencies –<ol style="list-style-type: none"><li>a) Foreign body</li><li>b) Eye Pain</li><li>c) Watering</li><li>d) Injuries-perforating, non perforating&amp; chemical</li></ol></li><li>9. Role of International organization and NGOs in eye care</li></ol>

**Reference books: PREVENTIVE AND SOCIAL MEDICINE BY K.PARK**

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**Practical**

**Paper: LOW VISION AND VISUAL REHABILITATION**

**Code: BO-591**

**Contacts: 2P**

**Credits: 2**

- a) Case history.
- b) Assessment.
- c) Application of devices.
- d) Rehabilitation.

**Paper: Contact Lens**

**Code: BO-592**

**Contacts: 2P**

**Credits: 2**

- a) Routine clinical procedure for contact lens patient & selection of contact lens.
- b) Keratometry & slit lamp Biomicroscopy.
- c) Spherical soft & Spherical RGP contact lens fitting: selection of contact lens Base curve, diameter & Power & fitting Assessment .
- d) Insertion & Removal of soft & RGP contact lens.
- e) Contact lens & maintenance.

**Paper: CLINICAL REFRACTION-II**

**Code: BO-593**

**Contacts: 2P**

**Credits: 2**

- 1. Assessment of children Vision & Paediatric evaluation, diagnosis & management.
- 2. Aniblyopia.
- 3. Evaluation, Diagnosis & Optometric management of special children
- 4. Refraction in special cases
- 5. Review of subjective refraction