



**EXAM SCHEME AND SYLLABUS**  
(Applicable for the batches admitted from the Academic Session  
2023-24 onwards)

**Diploma in Optometry & Refraction**  
(DOR, 2 Year Diploma Programme)

FACULTY OF PARAMEDICAL SCIENCE & ALLIED HEALTH SCIENCE

**Chirayu University**  
Bhopal, MP 462030, India

**AIMS:** The aim of Diploma in Optometric Refraction Technician program is designed to provide students with the necessary knowledge and skills to become proficient in performing optometric refraction procedures and supporting optometrists.

**OBJECTIVES:**

1. Technical Competence: Develop technical skills in performing optometric refraction, including measuring and assessing visual acuity, prescribing corrective lenses, and conducting additional tests to evaluate ocular health.
2. Patient Care: Train students to provide quality care to patients during the refraction process, including effective communication, addressing patient concerns, and ensuring a comfortable and supportive environment.
3. Ocular Anatomy and Physiology: Provide a solid foundation in the anatomy and physiology of the eye, as well as common ocular conditions, to enable students to understand the basis for vision issues and corrective measures.
4. Optical Instruments and Equipment: Familiarize students with the proper use and maintenance of optical instruments and equipment used in optometric refraction, such as phoropters, lensometers, and autorefractors.
5. Prescription Interpretation: Develop the ability to interpret and understand optometrists' prescriptions, enabling technicians to accurately dispense and fit corrective lenses based on the optometrist's recommendations.
6. Patient Record Keeping: Instruct students on the importance of maintaining accurate and detailed patient records, including prescription information, test results, and any relevant patient history.
7. Communication Skills: Foster effective communication skills to interact with patients, optometrists, and other healthcare professionals, ensuring clear and concise information exchange.
8. Ethics and Professionalism: Instill ethical principles and professional conduct in dealing with patients, respecting confidentiality, and upholding the highest standards of integrity in the provision of eye care.
9. Continuing Education: Encourage a commitment to staying updated on advancements in optometric technology, procedures, and eyewear fashion trends through continuous learning and professional development.
10. Certification and Accreditation: Prepare students for certification and ensure that the program meets accreditation standards set by the council.
11. Team Collaboration: Develop the ability to work collaboratively with optometrists and other members of the eye care team, contributing to a coordinated and comprehensive approach to patient care.

These aims and objectives collectively aim to produce skilled optometric refraction technicians who play a crucial role in supporting optometrists and ensuring the accurate assessment of patients' visual needs. The emphasis is on a combination of technical proficiency, patient-centered care, and adherence to ethical and professional standards

The aim of Diploma in Optometric Refraction Technician program is designed to provide students with the necessary knowledge and skills to become proficient in performing optometric refraction procedures and supporting optometrists.

**COURSE STRUCTURE:**

Diploma in Optometry and Refraction (DOR) is 2 Year Diploma Programme.

**DURATION OF THE PROGRAM:**

1. DOR I YEAR
2. DOR II YEAR

**TEACHING DAYS:** Each academic year shall consist of 160 teaching days.

**SYLLABUS AND SCHEME OF EXAMINATION:**

Syllabus and Scheme of examination will be the same for both first and second year.

## SCHEME OF EXAMINATION: DIPLOMA IN OPTOMETRY AND REFRACTION

### FIRST YEAR DIPLOMA IN OPTOMETRY AND REFRACTION EXAMINATION

S. No.	Paper	Subject	Max. Marks	Min. Passing Marks
1	Paper - I	Anatomy & Physiology	100	50
2	Paper - II	Optics and refractions	100	50
3	Paper - III	Ocular Diseases and drugs	100	50
4	Paper - IV	Ophthalmic equipments and contact lens	100	50

(There shall be Institutional /College level theory examination as per university notification, marks to be send to University for internal assessment purposes of university examination)

### SCHEME OF EXAMINATION FOR 2<sup>ND</sup> YEAR (UNIVERSITY EXAMINATION): DIPLOMA IN OPTOMETRY AND REFRACTION

There shall be university examination at the end of 2<sup>nd</sup> year curriculum of DIPLOMA IN OPTOMETRY AND REFRACTION

S. No.	Paper	Subject	Theory	Internal Assessment	Practical	Total
1	Paper - I	Anatomy & Physiology	100	100	100	300
2	Paper - II	Optics and refractions	100	100	100	300
3	Paper - III	Ocular Diseases and drugs	100	100	100	300
4	Paper - IV	Ophthalmic equipments and contact lens	100	100	100	300
Total			400	400	400	1200

N.B.- 1. First year institutional /college level theory examination's awarded marks would be consider as Internal assessment marks and candidate have to get min. 50% marks in university theory examination in addition to Internal assessment marks i.e. 100 marks collectively for passing the examination.

2. University Practical examination of 100 max. marks is inclusive of viva and candidate should get separate 50% marks i.e. 50 marks to get pass.

**SYLLABUS & SCHEME OF EXAMINATION**  
**DIPLOMA IN OPTOMETRY AND REFRACTION**

**PAPER-I: ANATOMY & PHYSIOLOGY**  
**SCHEME OF EXAMINATION**

<b>Paper</b>	<b>Subject</b>	<b>Theory</b>	<b>Internal Assessment</b>	<b>Practical</b>	<b>Total</b>
Paper - I	Anatomy & Physiology	100	100	100	300

**INSTRUCTION FOR THE PAPER SETTER**

The University theory examination shall be of 100 marks and question paper will be set by qualified examiner MS Anatomy/MD Physiology , who shall be on the panel of examiners of internal or external ,50% shall be the minimum passing marks. Internal assessment will be of 100 marks, which would be counted in theory marks for passing university examination. For practical examination; there will be two examiner MS Anatomy/MD Physiology - one internal Examiner; from the institute /college and one from other college /institute of the university from the panel of University examiners. The pattern of University theory examination will be as under for **100 Max. Marks in question paper** and distribution of marks for questions will be as under

<b>No. and Type of Questions</b>	<b>Marks for each Question</b>	<b>Total Marks</b>
<b>10</b> Very short answer Questions <i>Answer to be given in 50-60 words</i>	<b>02</b>	<b>20</b>
<b>05</b> Short answer Questions <i>Answer to be given in 250-300 words</i>	<b>10</b>	<b>50</b>
<b>02</b> Essay type Questions <i>Answer to be given in 450-500 words</i>	<b>15</b>	<b>30</b>
Total Marks		<b>100</b>

**DIPLOMA IN OPTOMETRY AND REFRACTION**

**PAPER-I: ANATOMY & PHYSIOLOGY**

**Total teaching hours- 100**

**Total theory & Practical  
hours- 60 & 40 hrs.**

**Syllabus Contents:**

1. Embryology
2. Conjunctiva
3. Cornea
4. Sclera
5. Uveal Tissue
6. Lens
7. Vitreous and Retina
8. Optic Nerve
9. Orbit
10. Eyelid and lacrimal apparatus

**SYLLABUS & SCHEME OF EXAMINATION**  
**DIPLOMA IN OPTOMETRY AND REFRACTION**

**PAPER- II: OPTICS AND REFRACTION**

**SCHEME OF EXAMINATION**

<b>Paper</b>	<b>Subject</b>	<b>Theory</b>	<b>Internal Assessment</b>	<b>Practical</b>	<b>Total</b>
PAPER- II	Optics and Refraction	100	100	100	300

**INSTRUCTION FOR THE PAPER SETTER**

The University theory examination shall be of 100 marks and question paper will be set by qualified Examiner MS Ophthalmology, who shall be on the panel of examiners of internal or external, 50% shall be the minimum passing marks. Internal assessment will be of 100 marks, which would be counted in theory marks for passing university examination. For practical examination; there will be two examiner MS Ophthalmology - one internal Examiner; from the institute /college and one from other college /institute of the university from the panel of University examiners.

The pattern of University theory examination will be as under for **100 Max. Marks in question paper** and distribution of marks for questions will be as under

<b>No. and Type of Questions</b>	<b>Marks for each Question</b>	<b>Total Marks</b>
<b>10</b> very short answer Questions Answer to be given in 50-60 words	<b>02</b>	<b>20</b>
<b>5</b> short answer Questions Answer to be given in 250-300 words	<b>10</b>	<b>50</b>
<b>2</b> essay type Questions Answer to be given in 450-500 words	<b>15</b>	<b>30</b>
Total Marks		<b>100</b>

**DIPLOMA IN OPTOMETRY AND REFRACTION**

**PAPER- II: OPTICS AND REFRACTION**

**Total teaching hours- 100**

**Total theory & Practical hours- 60 & 40 hrs.**

**SYLLABUS CONTENTS:**

1. Visual Acuity
2. Amplitude of accommodation
3. Color Vision
4. Principal of retinoscopy
5. Static refraction
6. Errors of refraction
7. Myopia
8. Hypermetropia
9. Astigmatism
10. Aphakia
11. Presbyopia
12. Anisometropia
13. Anisokomia
14. Physical Optic
15. Properties of Light
16. Principles of Reflection
17. Principles of Refractions
18. Lenses and their combinations



**SYLLABUS & SCHEME OF EXAMINATION**  
**DIPLOMA IN OPTOMETRY AND REFRACTION**

**PAPER- III: OCULAR DISEASES AND DRUGS**

**SCHEME OF EXAMINATION**

<b>Paper</b>	<b>Subject</b>	<b>Theory</b>	<b>Internal Assessment</b>	<b>Practical</b>	<b>Total</b>
PAPER- III	Ocular Diseases and Drugs	100	100	100	300

**INSTRUCTION FOR THE PAPER SETTER**

The University theory examination shall be of 100 marks and question paper will be set by qualified examiner MS Ophthalmology, who shall be on the panel of examiners of internal or external, 50% shall be the minimum passing marks. Internal assessment will be of 100 marks, which would be counted in theory marks for passing university examination. For practical examination; there will be two examiner MS Ophthalmology - one internal Examiner; from the institute /college and one from other college /institute of the university from the panel of University examiners.

The pattern of University theory examination will be as under for **100 Max. Marks in question paper** and distribution of marks for questions will be as under

<b>No. and Type of Questions</b>	<b>Marks for each Question</b>	<b>Total Marks</b>
<b>10</b> very short answer Questions Answer to be given in 50-60 words	<b>02</b>	<b>20</b>
<b>5</b> short answer Questions Answer to be given in 250-300 words	<b>10</b>	<b>50</b>
<b>2</b> essay type Questions Answer to be given in 450-500 words	<b>15</b>	<b>30</b>
Total Marks		<b>100</b>

**DIPLOMA IN OPTOMETRY AND REFRACTION**

**PAPER- III: OCULAR DISEASES AND DRUGS**

**Total teaching hours- 100**

**Total theory & Practical hours- 60 & 40 hrs.**

**SYLLABUS CONTENTS:**

1. Diseases of conjunctiva
2. Diseases of Cornea
3. Diseases of sclera
4. Diseases of Uvula Tissue
5. Glaucoma
6. Diseases of Lens
7. Diseases of Vitreous and retina
8. Diseases of Optic nerve
9. Diseases of Orbit
10. Diseases of Eyelid Lacrimal apparatus

**SYLLABUS & SCHEME OF EXAMINATION****DIPLOMA IN OPTOMETRY AND REFRACTION****PAPER- IV: OPHTHALMIC EQUIPMENTS AND CONTACT LENS****SCHEME OF EXAMINATION**

<b>Paper</b>	<b>Subject</b>	<b>Theory</b>	<b>Internal Assessment</b>	<b>Practical</b>	<b>Total</b>
PAPER- IV	OPHTHALMIC EQUIPMENTS AND CONTACT LENS	100	100	100	300

**INSTRUCTION FOR THE PAPER SETTER**

The University theory examination shall be of 100 marks and question paper will be set by qualified Examiner MS Ophthalmology, who shall be on the panel of examiners of internal or external, 50% shall be the minimum passing marks. Internal assessment will be of 100 marks, which would be counted in theory marks for passing university examination. For practical examination; there will be two examiner MS Ophthalmology - one internal Examiner; from the institute /college and one from other college /institute of the university from the panel of University examiners.

The pattern of University theory examination will be as under for **100 Max. Marks in question paper** and distribution of marks for questions will be as under

<b>No. and Type of Questions</b>	<b>Marks for each Question</b>	<b>Total Marks</b>
<b>10</b> very short answer Questions Answer to be given in 50-60 words	<b>02</b>	<b>20</b>
<b>5</b> short answer Questions Answer to be given in 250-300 words	<b>10</b>	<b>50</b>
<b>2</b> essay type Questions Answer to be given in 450-500 words	<b>15</b>	<b>30</b>
Total Marks		<b>100</b>

**DIPLOMA IN OPTOMETRY AND REFRACTION**  
**PAPER- IV: OPHTHALMIC EQUIPMENTS AND CONTACT LENS**

**Total teaching hours- 100**

**Total theory & Practical hours- 60 & 40 hrs.**

**SYLLABUS CONTENTS:**

1. Slit Lamp
2. Auto Refractometer
3. Keratometer
4. A Scan
5. Tonometry
6. Contact Lenses
  - Indications
  - Types
  - Uses
  - Fitting of contact Lenses
7. Low Visual aids

## **Book References**

### **Anatomy & Physiology**

- I. Textbook of Anatomy – B.D. Chaurasia
- II. Text book of Anatomy – Vishram Singh 2<sup>nd</sup> Edit
- III. Essential of Medical Physiology – K Sembulingam
- IV. Text book of Physiology – A.K. Jain
- V. Text book of physiology – G.K. Pal
- VI. Textbook of Ophthalmology -B.M. Chaterzee
- VII. Handbook of Ophthalmology – A.K. Khurana