

OPTOMETRY WITH OPHTHALMIC TECHNIQUE



**Approved by
Govt. of West Bengal
An Initiative of Department of
Youth Services, Govt. of West Bengal**

Run by :



**I·R·H·C
INSTITUTE OF
RURAL HEALTH CARE**

OPTOMETRY WITH OPHTHALMIC TECHNIQUE

Course Name : Optometry with Ophthalmic Technique
Course Duration : 12 months

INTRODUCTION OPTOMETRY WITH OPHTHALMIC TECHNIQUE

Optometry with ophthalmic technique is a specialized field in healthcare that focuses on the care and management of visual health. Optometry involves the examination, diagnosis, and treatment of visual problems and disorders, while ophthalmic techniques include the use of various instruments and technologies to assess and manage eye conditions. This course provides a comprehensive understanding of the anatomy and physiology of the eye, as well as the skills and techniques necessary for the accurate diagnosis and treatment of visual problems. Students will also learn about various ophthalmic instruments and their applications in diagnosing and managing eye conditions. Upon completion of the course, graduates will be equipped to provide quality eye care services to patients, working alongside other healthcare professionals to promote overall visual health and well-being.

Desirable and Benefits of Optometry with Ophthalmic Technique

Individuals who opt for a career as optometrists are primary health care specialists trained to examine the eyes to detect defects in vision, signs of injury, ocular diseases or abnormality and problems with general health. In their career as optometrists, individuals diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment. May prescribe therapeutic drugs to treat specific eye conditions. In this article, we have also discussed optometrist degrees and alternative jobs for optometrists.

Test analysis: Individuals in the optometrist career are responsible for carrying out vision tests to determine the correctness of eyesight, they are also responsible for analyzing the results, this requires an understanding of mathematical and scientific information.

Diagnosis: With the appropriate analysis of tests optometrists are also required for the diagnosis of sight problems such as myopia, hypermetropia, and glaucoma.

Prescription: Based on the scenario they are also required to prescribe apt eyeglasses or contact lenses. Medications and other visual aids can also be prescribed by the Optometrist if the state law permits.

Surgery: Minor surgical processes could also be carried out by the Optometrists if required to do so, these surgical processes are used to treat health issues that are eye-related. Surgical procedures include foreign body removal, laser eye surgery, and surgical interventions

Treatment: Individuals in the optometrist career could also assist with vision therapies and also with low vision rehabilitation based on the medical condition. Optometrist conduct eye exams and test to know which type of treatment would be suitable.

Care: Providing preoperative and postoperative care also falls under the responsibility of the optometrists, it is usually required for patients undergoing eye surgery, such as examining a patient's eyes the day after surgery.

Evaluation of medical history: Evaluation of patient's medical conditions such as diabetes or hypertension, and refer patients to other healthcare providers as needed.

Counseling: Promotion of eye and general health is also expected from Optometrists. They are required for counseling patients to promote eye health.

Syllabus:

Total Course Duration: 360-hour

Module 1: Basic Anatomy and Physiology (30 hours)

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| i. Overview of human anatomy and physiology | 5hrs |
| ii. The musculoskeletal system | 5hrs |
| iii. The cardiovascular system | 4hrs |
| iv. The respiratory system | 4hrs |
| v. The nervous system | 4hrs |
| vi. The digestive system | 4hrs |
| vii. Anatomy of the Eye and Orbit | 4hrs |
| a. Eyelid and its glands | |
| b. Conjunctiva | |
| c. Lacrimal apparatus | |
| d. Extraocular muscles | |
| e. Cornea and Sclera, Iris, Ciliary body and choroids, Retina, Lens and vitreous | |
| f. Optic Nerve and Visual pathway, Cranial nerves III, V, VI, VII, Para Sympathetic and sympathetic nerve in relation to the eye | |
| g. Pituitary gland and Cavernous sinus, Embryology of the eye | |

Module 2: Ocular Microbiology (30Hours)

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| i. Ocular microbiology | 7hrs |
| ii. Bacteria, Viruses and Fungi | 7hrs |
| iii. Protozoa (Parasites) | 8hrs |
| iv. Sterilization | 8hrs |

Module 3: Ocular Pharmacology: (30Hours)

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| i. General aspects of Pharmacology | 6hrs |
| ii. Anti-microbials | 6hrs |
| iii. Anti-inflammatory drugs | 6hrs |
| iv. Autonomic drugs and anti-glaucoma agents | 3hrs |
| v. Drugs for dry eye and diagnostic agents | 3hrs |
| vi. Ocular anaesthetics | 3hrs |
| vii. Ophthalmic prescriptions | 3hrs |

Module 4: Mechanical Optics and Workshop: (40Hours)

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| i. General power, shape and size of lenses | 4hrs |
| ii. Transposition of spectacle lenses | 4hrs |
| iii. Spherical lenses | 4hrs |
| iv. Cylindrical lenses | 4hrs |
| v. Bifocals and multifocal | 4hrs |
| vi. Ophthalmic prisms | 5hrs |
| vii. Oblique cylinders | 5hrs |
| viii. Protective and plastic lenses | 5hrs |
| ix. Lens measure: GENEVA, Focimeter, Special lenses, miscellaneous lenses and appliances. | 5hrs |

Module 5: Practice as an Eye Care Professional (60hrs)

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| i. Initial patient contact and reception and ethics | 6hrs |
| ii. Office manner, secretarial assistance, records and their retrieval | 6hrs |
| iii. Ophthalmic equipment, Maintenance of ophthalmic equipment | 6hrs |
| iv. Examination of the eye | 6hrs |
| v. Special investigations, Routine ophthalmic investigation | 6hrs |
| vi. Conjunctival smear, fluorescein staining and PH testing | 6hrs |

vii. Colour vision	6hrs
viii. Syringing and lacrimal function tests	6hrs
ix. Refractometer and focimeter usage	6hrs
x. Tension taking, Keratometry, Pachometry, Anaesthesiometry and dark adaptometry, Exophthalmometry A Scan and B Scan	6hrs

Module 6: General First-aid, resuscitation, Bandages & Common Eye Diseases (30hrs)

- i. Eyelids, Orbit, Adnexa, Conjunctiva, Cornea, Sclera,
Uvea, Lens, Retina, Glaucoma, Injuries of eye

Module 7: Sterilization and theatre: (60Hours)

i. General Aspects	10hrs
ii. Sterilization and disinfections	10hrs
iii. Theatre set up	10hrs
iv. Principles of sterilization – asepsis and antisepsis	10hrs
v. Eye instruments and operating room equipment	10hrs
vi. Surgical scrub and donning sterile linen and gloves	10hrs

Module 8: Pre and Post-operative procedures (40Hours)

- i. Preoperative preparation
- ii. Post-operative care, general considerations
- iii. Surgical preparation and draping

Module 9: Outlines of operative procedures (40Hours)

i. Lids	4hrs
ii. Lacrimal apparatus	4hrs
iii. Extraocular muscles	4hrs
iv. Cornea	4hrs
v. Lens	4hrs
vi. Glaucoma	4hrs
vii. Eye banking and anucleation	4hrs
viii. Trauma	4hrs
ix. Retina and vitreous	4hrs
x. Application of lasers	4hrs

Job Opportunity

Optometry has a flexible career structure and it's possible to move between sectors and also to combine a number of roles. Opportunities for career progression within corporate practice can include promotion within the clinical and/or management structure. Transfer between practices may help you to progress.

Some optometrists choose to go into practice management where salaries may be higher. You will usually be responsible for practice direction and overall business management, as well as the routine work of an optometrist (e.g. sight testing). It's possible to buy into an optometry practice (either franchise or joint venture) so that you have a direct influence on the running of the business. You can also set up an independent practice, which may be of particular interest if you want to develop a specialist optometric service. If you're working in an NHS hospital, there's a defined career structure and you can work your way up from basic optometrist to specialist and principal optometrist and then, ultimately, consultant optometrist.

With further study there are also opportunities to become an independent prescribing optometrist. You may choose to develop your career by going into research and lecturing. Some optometrists become involved in supervision of pre-registration students and full training is provided by The College of Optometrists. It may also be possible to get involved in the education of ophthalmic nurses and medical students.

Minimum Eligibility

The minimum qualification for admission is class 10th Passed from any recognized board in India.