

**College of Paramedical Sciences  
Teerthanker Mahaveer University**

**B.Optom. (B.Sc. Optometry)**

**Programme Outcome**

<b>PO-1</b>	:	Developing the ability to diagnose and manage various vision abnormalities including refractive errors as well as various eye diseases. <b>(Attitude)</b>
<b>PO-2</b>	:	Developing the ability to practice various sub-specialties of Eye care industry like Contact lens, spectacle dispensing, Orthoptics, Low Vision management, etc. <b>(Technology savvy/usage)</b>
<b>PO-3</b>	:	Developing the ability towards medical ethical as well as critical thinking <b>(Critical thinking)</b>
<b>PO-4</b>	:	Understanding environmental consciousness and societal & Community Eye care concerns in achieving the goal of vision for all. <b>(Social interaction &amp; effective citizenship)</b>
<b>PO-5</b>	:	Developing the ability to communicate effectively both with the patients as well as within the organization for effective team work <b>(Communication)</b>
<b>PO-6</b>	:	Recognizing and understanding the need to engage in life-long learning to upgrade oneself with Eye care innovations <b>( Lifelong learning)</b>
<b>PO-7</b>	:	Developing and applying computer skills in Eye care system and taking entrepreneurial decisions. <b>(Entrepreneurship)</b>
<b>PO-8</b>	:	Understanding environmental consciousness and societal concerns in achieving sustainable development <b>( Environment and Sustainability)</b>

**Programme Specific Outcome**

<b>PSO-1</b>	:	Understanding the basic concepts & theories related to applied science, human anatomy & physiology, biochemistry, ocular anatomy & physiology
<b>PSO-2</b>	:	Understanding the concepts & theories, techniques & Procedures used in optometry.
<b>PSO-3</b>	:	Understanding & applying quality assurance, safety measures and maintenance of ophthalmic instruments
<b>PSO-4</b>	:	Analyzing eye environmental factors & selecting the relevant optical mode of correction & Evaluating different optical correction technique
<b>PSO-5</b>	:	Evaluating & determining tools, technique, methods, tests used in optometry
<b>PSO-6</b>	:	Designing & planning of new techniques, procedure for patient and clinic management.

**Course Outcomes**

<b>BCO-S-101</b>	<b>CO-1</b>	Understanding the concept & terminology of Human Anatomy
	<b>CO-2</b>	Enlisting and memorizing the structure, function & location of cells,
	<b>CO-3</b>	tissues and major human organs system/part
	<b>CO-4</b>	Recognizing the different organ and organ system
	<b>CO-5</b>	Understanding relationship between different organ of the body with

<b>BCO-S-102</b>	<b>CO-1</b>	Understanding concepts & terminology of human physiology
	<b>CO-2</b>	Enlisting and memorizing the function & structure of cells, tissues and major human organs systems/parts
	<b>CO-3</b>	Understanding function of various organ systems and employing its knowledge to identify diseases related to them.
	<b>CO-4</b>	Identifying and explaining the interrelation between different organ systems.
	<b>CO-5</b>	Differentiating various organs & organs system
<b>BCO-S-103</b>	<b>CO-1</b>	Understanding the concepts and theories of Biochemistry related to optometry
	<b>CO-2</b>	Understanding the chemistry of carbohydrates, proteins, lipids and amino acids.
	<b>CO-3</b>	Analyzing the mechanism of enzyme action and identify the classes and factors affecting action
	<b>CO-4</b>	Understanding the biochemical testing and analyzing the test result.
<b>BCO-S-104</b>	<b>CO-1</b>	Understanding concepts and theories of light, its nature & properties
	<b>CO-2</b>	Understanding concepts and properties of mirror & lenses.
	<b>CO-3</b>	Identifying various of lens & mirror during practical
	<b>CO-4</b>	Applying formula calculation related to vergence
<b>BCO-S-105</b>	<b>CO-1</b>	Understanding the concept of nutrition & its importance to eye
	<b>CO-2</b>	Understanding nutritional components & their requirements
	<b>CO-3</b>	Understanding the concept of mal nutrition & its impact on human health
	<b>CO-4</b>	Classifying & Analyzing appropriate nutrients requirement for human body disorder
<b>TMUGE 101</b>	<b>CO-1</b>	Introduce themselves confidently.
	<b>CO-2</b>	Remove their fear of speaking in English among peers & teachers.
	<b>CO-3</b>	Understand the importance of English Language.
	<b>CO-4</b>	Know the basics of communication
	<b>CO-5</b>	Develop the ability to speak in English (even if grammatically not perfect)
<b>BCO-S-201</b>	<b>CO-1</b>	Understanding the concepts & terminology of Ocular Anatomy
	<b>CO-2</b>	Enlisting and memorizing the structure, function & location of different parts of eye
	<b>CO-3</b>	Recognizing the different Ocular structures
	<b>CO-4</b>	Understanding relationship between different Ocular structures
	<b>CO-5</b>	Developing a holistic approach to Ocular health and medical research.
<b>BCO-S-202</b>	<b>CO-1</b>	Understanding concepts & terminology of Ocular physiology
	<b>CO-2</b>	Enlisting and memorizing the functions & structure of Eyes
	<b>CO-3</b>	Understanding function of various ocular structures and applying this knowledge to identify diseases related to them.
	<b>CO-4</b>	Identifying and explaining the interrelationships between different Ocular structures
	<b>CO-5</b>	Differentiating various Ocular structures.
<b>BCO-S-203</b>	<b>CO-1</b>	Understanding the concepts and theories of Biochemistry
	<b>CO-2</b>	Understanding the chemistry of carbohydrates, proteins, lipids and amino acids related to eye
	<b>CO-3</b>	Understanding the basic metabolism of biomolecules and their energetic related to eye

	<b>CO-4</b>	Understanding the role of Minerals with respect to eyes
	<b>CO-5</b>	Understanding the process of biochemical testing and analyzing the test result
<b>BCO-S-204</b>	<b>CO-1</b>	Understanding concepts and theories of light, its nature & properties
	<b>CO-2</b>	Understanding concepts & theories of interference, polarization & diffraction
	<b>CO-3</b>	Understanding concepts & operations of various optical instruments
	<b>CO-4</b>	Understanding concepts of Laser & Radiometry
<b>BCO-S-205</b>	<b>CO-1</b>	Understanding the concepts of schematic & Reduced Eye and Visual Acuity
	<b>CO-2</b>	Understanding the concept of refractive error and its management options
	<b>CO-3</b>	Understanding the concept of image formation by different types of lenses
	<b>CO-4</b>	Understanding the concept of Accommodation & Presbyopia and different options of presbyopia
	<b>CO-5</b>	Understanding the concepts of Eye with and without crystalline lens
<b>BCO-S-206</b>	<b>CO-1</b>	Understanding the fundamentals and history of computer
	<b>CO-2</b>	Understanding the concept of Computer's Memory Management and processing
	<b>CO-3</b>	Understanding and applying the basic functions on document sheet, Spread sheet and presentation slide
	<b>CO-4</b>	Understanding the concept of Internet, Web and Websites
	<b>CO-5</b>	Understanding and applying the Web surfing, E mail and recognize e mail netiquette
<b>TMUGE -201</b>	<b>CO-1</b>	Acquire competence in constructing short sentences dealing day to day activities with grammatical accuracy.
	<b>CO-2</b>	Acquire adequate knowledge of grammar and vocabulary to address competitive exams.
	<b>CO-3</b>	Improve their listening skills during conversation and speeches
	<b>CO-4</b>	Write official letters and emails in correct format on common issues.
	<b>CO-5</b>	Develop a paragraph on given topics.
	<b>CO-6</b>	Improvise their voice modulation while reading and speaking something.
	<b>CO-7</b>	Attain proficiency in oral presentation.
	<b>CO-8</b>	Comprehend, analyse and enrich their vocabulary through prescribed text
<b>BCO-S-301</b>	<b>CO-1</b>	Understanding about the characteristics of bacteria, viruses, fungi and parasites.
	<b>CO-2</b>	Understanding of the principles of sterilization and disinfection in hospital and ophthalmic practice.
	<b>CO-3</b>	Understanding of the pathogenesis of the diseases caused by the organisms in the human body with particular reference to the eye infections.
	<b>CO-4</b>	Understanding of basic principles of diagnostic ocular Microbiology.
	<b>CO-5</b>	Understanding about the characteristics of bacteria, viruses, fungi and parasites.
<b>BCO-S-302</b>	<b>CO-1</b>	Understanding about the various optical constants of the eye & their measurements

	<b>CO-2</b>	CO2 Understanding the various aspects of vision and measuring visual acuity
	<b>CO-3</b>	Having a knowledge about various optical defects of the eye
	<b>CO-4</b>	Analyzing about various refractive anomalies of the eye
	<b>CO-5</b>	Applying all the theoretical skills on practical purpose
<b>BCO-S-303</b>	<b>CO-1</b>	Understanding the concept of different phenomenon of light & basic of ophthalmic prism.
	<b>CO-2</b>	Understanding the concept& terminology use to describe the ophthalmic lenses
	<b>CO-3</b>	Understanding the concept of different types & design of ophthalmic lenses
	<b>CO-4</b>	Understanding the concept of Prismatic effect
	<b>CO-5</b>	Applying the Prentice"s Rule
<b>BCO-S-304</b>	<b>CO-1</b>	Understanding and application of the refractive instrument
	<b>CO-2</b>	Understanding & design, application and use of refractive instrument use in refraction room
	<b>CO-3</b>	Understanding the optics and applying the basic functions of Ophthalmoscope
	<b>CO-4</b>	Understanding the optics and applying the basic functions and importance of examination of anterior segment
	<b>CO-5</b>	Understanding and applying the various tools to measure ocular condition
<b>BCO-S-305</b>	<b>CO-1</b>	Understanding the concept of different Ocular diseases of anterior segment of Eye
	<b>CO-2</b>	Applying the concept of anatomy & Physiology of Eye while understanding the Pathology of different ocular diseases
	<b>CO-3</b>	Utilizing the concept of clinical features of the diseases for the differential diagnosis of the anterior segment diseases
	<b>CO-4</b>	Analyzing the concept of clinical features of the diseases for the management of anterior segment diseases
	<b>CO-5</b>	Understanding the concept of different Ocular diseases of anterior segment of Eye
<b>BCO-S-306</b>	<b>CO-1</b>	Understanding about the process of history taking and its clinical importance
	<b>CO-2</b>	Understanding about various clinical examination test available
	<b>CO-3</b>	Analyzing the importance of pupillary examination in the field of optometry
	<b>CO-4</b>	Applying all the theoretical knowledge on practical field
	<b>CO-5</b>	Understanding about the process of history taking and its clinical importance
<b>BCO-S-307</b>	<b>CO-1</b>	Understanding the concept of Indian traditional medicine.
	<b>CO-2</b>	Understanding the concept of Telemedicine.
	<b>CO-3</b>	Applying concept of PHS.
	<b>CO-4</b>	Understanding the concept of demography and vital-statistics
	<b>CO-5</b>	Understanding the concept of census, and its impact.
<b>BCO-S-308</b>	<b>CO-1</b>	Understanding basic concepts in the context of ecological and environmental sciences.
	<b>CO-2</b>	Interpreting the ideas about energy resources in today"s scenario and

		discussing about alternate energy sources.
	<b>CO-3</b>	Classifying and describe biodiversity and also summarize biogeographically distribution of India.
	<b>CO-4</b>	Describing concepts and methods to apply in environmental communication and public awareness.
	<b>CO-5</b>	Interpreting the ethical and cultural conduct in environmental activities.
<b>TMUGE 301</b>	<b>CO-1</b>	Acquire adequate knowledge of grammar to address competitive exams.
	<b>CO-2</b>	Use advance English language by using variety of words i.e. idioms and phrase in variety of sentences in functional context
	<b>CO-3</b>	Enhance writing and comprehensive skills in English.
	<b>CO-4</b>	Refine their usage of English grammar in day to day context.
	<b>CO-5</b>	Improve their listening to understand the basic content.
<b>TMUGS-301</b>	<b>CO-1</b>	Utilizing effective verbal and non-verbal communication techniques in formal and informal settings
	<b>CO-2</b>	Understanding and analyzing self and devising a strategy for self growth and development.
	<b>CO-3</b>	Adapting a positive mindset conducive for growth through optimism and constructive thinking.
	<b>CO-4</b>	Utilizing time in the most effective manner and avoiding procrastination.
	<b>CO-5</b>	Making appropriate and responsible decisions through various techniques like SWOT, Simulation and Decision Tree.
	<b>CO-6</b>	Formulating strategies of avoiding time wasters and preparing to-do list to manage priorities and achieve SMART goals.
<b>BCO-S-401</b>	<b>CO-1</b>	Understanding to select the tool power for grinding process
	<b>CO-2</b>	Understanding about different types of materials used to make lenses and its characteristics
	<b>CO-3</b>	Understanding about Spectacle frames, various Lens designs,
	<b>CO-4</b>	Analyzing various dispensing spectacle lens and frames based on the glass prescription
	<b>CO-5</b>	Evaluating various facial measurements - Interpupillary distance measurement and measuring heights (single vision, multifocal, progressives)
<b>BCO-S-402</b>	<b>CO-1</b>	Understanding about accommodation, its anomalies and their practical significance
	<b>CO-2</b>	Understanding about convergence, its anomalies and their clinical significance
	<b>CO-3</b>	Have a knowledge about retinoscopy and its procedure
	<b>CO-4</b>	Analyzing the importance of subjective and objective refraction
	<b>CO-5</b>	Applying the theoretical knowledge on clinical practice
<b>BCO-S-403</b>	<b>CO-1</b>	Understanding the concept of different Ocular diseases of posterior segment of Eye
	<b>CO-2</b>	Applying the concept of anatomy & Physiology of Eye while understanding the Pathology of different ocular diseases
	<b>CO-3</b>	Utilizing the concept of clinical features of the diseases for the differential diagnosis of the ocular diseases
	<b>CO-4</b>	Analyzing the concept of clinical features of the diseases for the management of ocular diseases

<b>BCO-S-404</b>	<b>CO-1</b>	Understanding the basic concepts of infection, Inflammation and repair
	<b>CO-2</b>	Understanding the clinical features of various diseases like Tuberculosis, Leprosy, Syphilis
	<b>CO-3</b>	Understanding the clinical features of Anemia, Leukemia, Bleeding disorders
	<b>CO-4</b>	Understanding the clinical features Circulatory disturbances like Thrombosis, Infarction, Embolism
	<b>CO-5</b>	Analyzing the urine report, blood smear
<b>BCO-S-405</b>	<b>CO-1</b>	Understanding the basics of drugs and its different sources as well as pharmaco-dynamics and pharmaco-kinetics.
	<b>CO-2</b>	Understanding the concept & terminologies of Pharmacology and Ocular preparations.
	<b>CO-3</b>	Understanding the advantages and disadvantages of general routes of drug administration and routes of drug administration in Ophthalmology.
	<b>CO-4</b>	Applying of different pharmaceutical agents in the management of Ocular disease as well as managing Ocular Toxicity.
	<b>CO-5</b>	Analyzing and applying diagnostic and therapeutic drugs in Ophthalmology.
<b>BCO-S-406</b>	<b>CO-1</b>	Understanding the concept of Quality assurance of different equipment used in ophthalmic department and its management
	<b>CO-2</b>	Understanding the concept of basics of emergency care and life support skills
	<b>CO-3</b>	Applying concept of biomedical waste management and environment safety.
	<b>CO-4</b>	Applying concept of Infection and prevention control
	<b>CO-5</b>	Understanding the concept of ocular drainage and other mechanical systems.
	<b>CO-6</b>	Utilizing the concept of disaster preparedness and management
<b>BCO-S-407</b>	<b>CO-1</b>	Understanding the concept of Medical Psychology.
	<b>CO-2</b>	Applying concept of Medical Psychology in clinic.
	<b>CO-3</b>	Applying concept of learning, personality and Motivation in Clinic
	<b>CO-4</b>	Understanding the concept of Body Image & language.
	<b>CO-5</b>	Utilizing Patient-therapist relation in clinic.
	<b>CO-6</b>	Analyzing the mentality of patient for present illness.
<b>TMUGE 401</b>	<b>CO-1</b>	Refine their usage of English grammar in day to day context.
	<b>CO-2</b>	Acquire adequate knowledge of grammar and vocabulary to address competitive exams.
	<b>CO-3</b>	Improve their listening to understand the basic content.
	<b>CO-4</b>	Enhance writing and comprehensive skills in English.
	<b>CO-5</b>	Proactively participate in activities in situational context (like Impromptu).
	<b>CO-6</b>	Write a simple proposal and report.
	<b>CO-7</b>	Formulate their CVs along with cover letter in Job oriented perspective.
	<b>CO-8</b>	Proactively participate in Job Oriented activities.
	<b>CO-9</b>	Be aware of the skills required in corporate world.
	<b>CO-10</b>	Comprehend, analyse and enrich their vocabulary through prescribed text.
<b>TMUGS-401</b>	<b>CO-1</b>	Communicating effectively in a variety of public and interpersonal

		settings.
	<b>CO-2</b>	Applying concepts of change management for growth and development by understanding inertia of change and mastering the Laws of Change.
	<b>CO-3</b>	Analyzing scenarios, synthesizing alternatives and thinking critically to negotiate, resolve conflicts and develop cordial interpersonal relationships.
	<b>CO-4</b>	Functioning in a team and enabling other people to act while encouraging growth and creating mutual respect and trust.
	<b>CO-5</b>	Handling difficult situations with grace, style, and professionalism.
<b>BCO-S-501</b>	<b>CO-1</b>	Understanding about contact lens history, introduction, design & relation with structure of eye
	<b>CO-2</b>	Understanding about RGP contact lens material & their property their parameter
	<b>CO-3</b>	Understanding about RGP contact lens manufacturing techniques & fitting of RGP lenses
	<b>CO-4</b>	Understanding and know about care maintenance and do"s & don"t of RGP contact lens
	<b>CO-5</b>	Learn about complication and their management of RGP contact lenses
<b>BCO-S-502</b>	<b>CO-1</b>	Understanding the basic definition and classification of Low Vision
	<b>CO-2</b>	Analyzing the various causes of Low Vision
	<b>CO-3</b>	Understanding how to do examination of a low vision Patient,
	<b>CO-4</b>	Applying various optical and non-optical devices for visual rehabilitation of a low vision Patient.
	<b>CO-5</b>	Understanding the legal aspects of Low Vision in India, as well as applying case studies to for visual rehabilitation of a low vision Patient.
<b>BCO-S-503</b>	<b>CO-1</b>	Understanding the concept of Ocular anatomy and Physiology.
	<b>CO-2</b>	Understanding the concept of systemic diseases of geriatric and pediatric patients.
	<b>CO-3</b>	Applying concept of optometric Evaluation procedure.
	<b>CO-4</b>	Understanding the concept of ocular drainage and other mechanical systems.
	<b>CO-5</b>	Utilizing the concept of various optical and primarily medicated intervention and therapeutic procedure.
<b>BCO-S-504</b>	<b>CO-1</b>	Understanding the concept of Ocular anatomy and Physiology.
	<b>CO-2</b>	Understanding the concept of systemic diseases of geriatric and pediatric patients.
	<b>CO-3</b>	Applying concept of optometric Evaluation procedure.
	<b>CO-4</b>	Understanding the concept of ocular drainage and other mechanical systems.
	<b>CO-5</b>	Utilizing the concept of various optical and primarily medicated intervention and therapeutic procedure.
<b>BCO-S-505</b>	<b>CO-1</b>	Understanding the basics of systemic Disease having impact on the ocular health.
	<b>CO-2</b>	Understanding the definition, classification, clinical diagnosis, complications and management of various systemic diseases.
	<b>CO-3</b>	Analyzing the Ocular manifestation of some common systemic diseases like DM, HT, etc

	<b>CO-4</b>	Understanding the pathophysiology of the ocular changes due to underlying systemic disease.
	<b>CO-5</b>	Applying the knowledge to manage the ocular manifestation of various systemic diseases
<b>BCO-S-506</b>	<b>CO-1</b>	Understanding the basic concept of research methodology.
	<b>CO-2</b>	Understanding the concept of Ethical issues in research & different types of Research design.
	<b>CO-3</b>	Understanding the Research tools and Data collection methods
	<b>CO-4</b>	Understanding the Sampling methods.
	<b>CO-5</b>	Applying the concept to Develop a research proposal
<b>BCO-S-601</b>	<b>CO-1</b>	Understanding about soft contact lens material & their property, selection of parameter
	<b>CO-2</b>	Understanding about soft contact lens fitting characteristics and evaluation of fitting
	<b>CO-3</b>	Understanding about toric soft contact lens, stabilization techniques and application
	<b>CO-4</b>	Learn about complication and their management of soft contact lenses
	<b>CO-5</b>	Understanding about specialty contact lenses
<b>BCO-S-602</b>	<b>CO-1</b>	Understanding the classification of strabismus
	<b>CO-2</b>	Understanding the concept of recording history in strabismus patients
	<b>CO-3</b>	Understanding the clinical features of convergent & divergent Strabismus
	<b>CO-4</b>	Understanding the clinical features of vertical & paralytic Strabismus
	<b>CO-5</b>	Understanding the procedure of various investigation to rule out the types of strabismus
<b>BCO-S-603</b>	<b>CO-1</b>	Understanding about the concepts and definitions of public health
	<b>CO-2</b>	Understanding the role of optometrist in public health
	<b>CO-3</b>	Having a knowledge about various eye programmes and screening procedures
	<b>CO-4</b>	Analyzing the role of optometrist in school screening programmes
	<b>CO-5</b>	Analyzing the importance of tele ophthalmology in the field of optometry
<b>BCO-S-604</b>	<b>CO-1</b>	Understanding the concepts of Business Management and Practice Establishment.
	<b>CO-2</b>	Analyzing and Applying various aspects of Stocking, staffing and business Computerization in running an Optometry Clinic, Optical outlet or business.
	<b>CO-3</b>	Understanding, Analyzing and Applying various aspects of accounting principles, different sources of finance and cash flow.
	<b>CO-4</b>	Applying various rules of Book keeping to monitor and calculate final profit/Loss of a business establishment, and helps on taxation planning of the Establishment.
	<b>CO-5</b>	Understanding, Analyzing and Applying various aspects of professionalism, integrity, objectivity, personal values, team work, etc in running a business efficiently.
<b>BCO-S-605</b>	<b>CO-1</b>	Understanding the general aspects of Visual health and Ocular Hygiene.
	<b>CO-2</b>	Understanding the role of various national and international bodies in guiding and maintaining standards of Visual Hygiene, and framing various Acts and rules.



	<b>CO-3</b>	Understanding the effects of various occupational hazards on the eye and applying Optometric expertise to provide protective measures and eye gears.
	<b>CO-4</b>	Analyzing and Applying various eye screening methods for various task/jobs and providing necessary eye protections and guidelines to avoid eye strain and fatigue
	<b>CO-5</b>	Analyzing the effect of Visual Display Unit and electronic gadgets on the eye and applying optometric expertise to manage the symptoms caused due to Visual display units.
<b>BCO-S-606</b>	<b>CO-1</b>	Understanding the goal & scope of Medical ethics
	<b>CO-2</b>	Understanding the concept of Basic principles of medical ethics
	<b>CO-3</b>	Understanding the concept of Malpractice and negligence
	<b>CO-4</b>	Understanding the concept medico legal aspects of medical records
	<b>CO-5</b>	Understanding the standardized protocol to avoid near miss or sentinel events