Bharati Vidyapeeth (Deemed to be) University, Medical College, Pune

Department of Optometry

Name of Programme: **Master of Optometry**

Program outcomes:

Optometrists are independent primary health care providers who examine, diagnose, treat, and manage diseases and disorders of the visual system, the eye, and associated structures as well as diagnose related systemic conditions.

It is expected that after completing the course at the Postgraduate level in Optometry, the students will develop a deep understanding of the interaction between ocular health, systemic health, mental health, and social health. A thorough understanding of major theoretical concepts and sound clinical knowledge is also expected. The students will have the ability to work effectively in diverse fields of the eye care industry be it community, be clinical, be it retail or corporate. They will be able to employ critical thinking and efficiency in problems solving ability for the patient or consumer management. They must develop the ability to transmit complex information in a clear and concise manner as they trained as a potential teacher of optometry. As health care practitioners, they must have the ability to understand the historically imposed socio-economic issues and encounter them with a strong ethical approach.

Objectives:

1. To develop the students in such a way so that they can practice independently as a primary eye care practitioner and render eye care services for the benefit of society.

2. To develop expertise in assessment, evaluation, planning, and inventions in achieving the eye care needs of Indian society.

3. To develop such professionals who will actively participate in community optometry programs to achieve the goals of Vision 2020 and the national programs for the prevention of blindness and effectively organize and participate in vision screening eye camps to help controlling blindness.

4. To create Postgraduate optometry teachers with strong academics and research background who will help develop the science of Optometry.

5. To help the students to learn to maintain collaborative relationships with members of other disciplines to improve health care.

6. To develop an interest in life-long learning for personal and professional advancement among the students.

Program-specific outcomes:

To serve the public and the profession well, the new post-graduate in Master of Optometry must embrace and demonstrate the ethical and professional standards appropriate to being recognized as a healthcare provider. The new post-graduate in Master of Optometry must also recognize that the completion of the Master of Optometry degree program is only the first step in a life-long commitment to self-directed learning and continual professional improvement. The School of Optometry shall ensure that before post-graduation in Master of Optometry each student will have demonstrated critical professional and personal attributes, including the following:

Personal attributes:

• a commitment to life-long learning and providing the highest standard of care

• the ability to acquire, analyze and apply new information while making reasonable and informed decisions that are consistent with the interests and needs of the patient and broader community

• problem-solving and critical-thinking skills that integrate current knowledge, scientific advances and the human/social dimensions of patient care to assure the highest quality of care for each patient

• the ability to recognize personal limitations regarding optimal patient care and to work with the broader health care community in providing the best care possible.

Professional attributes:

• an understanding of professional ethics and challenges to the optometric profession posed by conflicts of interest inherent in health care delivery, and the ability to incorporate those principles into decisions affecting patient care, always keeping the patient's welfare foremost. Patients should get equal treatment irrespective of any social or socio-economic differences.

• professionalism, by demonstrating honesty and integrity in all interactions with patients and their families, colleagues, and others with whom the optometrist must engage in his/her professional life

• respect for the dignity of every patient and a commitment to empathetic and confidential care

• a commitment to work as an integral member of the larger interprofessional health care team to improve patient care outcomes

• a commitment to be actively involved in organized optometry and the community

• to be able to become an entrepreneur as an optometrist

The new post-graduate in Master of Optometry must be knowledgeable to provide quality eye and vision care to their patients, they must have an established knowledge of the basic and clinical sciences. The foundation must be broad and include the biological, medical, vision, and optical sciences, as well as a basic understanding of the health care delivery system. The new post-graduate in Master of Optometry must

recognize the dynamic nature of knowledge and possess the commitment and skills needed to responsibly assess and apply new information and treatment strategies throughout his/her career. The school of optometry shall ensure that before graduation each student will have demonstrated knowledge of:

• basic organ systems, with special emphasis on the ocular and visual system, and their inter-relationships to the body as a whole

• the cellular, the molecular and genetic basis of the development, physiology, pathology, and treatment of eye disease

• the structures and processes contributing to the development of refractive error and other optical and perceptual abnormalities of the visual system (This includes vision function with respect to deviation and enhancement such as, but not limited to, strabismus, amblyopia, oculomotor function, accommodation, and visual perception.)

• the optics of the eye and ophthalmic lens systems (including spectacles, contact lenses and low vision devices) used to correct refractive, oculomotor and other vision disorders

• the various processes and causes that lead to dysfunction and disease, and the effect that these processes can have on the body and its major organ systems, with special emphasis on the ocular and visual systems

• mechanisms of action of the various classes of pharmaceutical agents, their interactions and their safe and effective use for the treatment of diseases and conditions affecting the eye and visual system

• vision therapy and other rehabilitative methods used for the management of common visual disorders

• the psychosocial dynamics of the doctor/patient relationship and understanding of the social, psychological and economic forces affecting diverse patient populations

• community health care resources and delivery systems to improve care

• practice management structures and strategies as they pertain to the various practice settings.

The new post-graduate in Master of Optometry must be capable to provide the highest quality of care to all their patients, they must possess appropriate cognitive and motor skills needed to prevent, diagnose, treat and manage clinical conditions that are within the scope of their professional responsibilities.

The School of Optometry shall ensure that before post-graduation each student will have demonstrated the following:

• all the skills required for the diagnosis, triage, management and/or treatment of common visual conditions, including or resulting from:

-refractive anomalies

-abnormalities of accommodation, monocular or binocular vision skills, oculomotor and sensory/perceptual dysfunctions of ocular disease and trauma

-prior ocular surgery and/or laser intervention

-systemic disease

-environmental or occupational conditions

• the ability to order and interpret frequently needed laboratory and diagnostic procedures

• the critical-thinking skills needed to assess the patient's visual and physical status and to interpret and process the data to formulate and execute effective management plans

• the ability to prescribe or use ophthalmic materials, contact lenses, vision therapy, low vision devices, to treat and manage vision disorders and disease

• an understanding of nutritional influences on ocular physiology and systemic health and disease

• the ability to understand, evaluate and apply the use of contemporary imaging technologies in the provision of eye and vision care

• the ability to recognize and initiate the coordination of patient care requiring advanced medical, systemic, inter-professional or specialty care

• the ability to recognize life-threatening conditions and to initiate immediate intervention

• effective communication skills, both oral and written, as appropriate for maximizing successful patient care outcomes

• the ability to appropriately use all resources, including the use of ancillary personnel, intra- and inter-professional collaboration, co-management, and referral, in ensuring the best quality patient care

• the ability to access evidence-based knowledge (including through the use of information technology) and manage information, and to apply that information in making decisions about patient care and health care delivery

• the ability to embrace the cultural diversity and individual differences that characterize patients, populations and the health care team

• the ability to work in cooperation with those who receive care, those who provide care, and others who contribute to or support the delivery of prevention and health services by working with interdisciplinary and multidisciplinary sectors.

Program structure:

Master of Optometry is a two-year course that encourages the students in active learning by involving them in a refresher course, blended course, self-study using library resources, teaching and clinical assignments, patient care, workshops, hands-on training, educational seminars, and industry interactions.

For helping the students in deep learning, apart from regular lectures, guest faculties, field experts, and industry officials are invited and they interact with the students.

Teaching methodology and research methodology are being taught by expertise. Students have to be involved in teaching undergraduate students for the lectures, demonstrations, and hands-on practical sessions.

Students have to complete one research and dissertation project during their final year. They can choose their area of interest, for their project under the supervision of the project guide.

Ranking of the candidates:

Students will be awarded class on the basis of the total aggregate marks for both the examination (First year & Second year) as follow

50% and more but less than 55% aggregate marks = Pass Class

55% and more but less than 60% aggregate marks = Second Class

60% and more but less than 70% aggregate marks = First Class

70% and above = First Class with Distinction

Syllabus: Master of Optometry (1st Year)

Course Code	Name of Course	Description
M 101	Applied Optics	Clinical, Visual & Dispensing Optics
M 102	Basic Sciences	Ocular Anatomy, Physiology, Pharmacology
M 103	Clinical Sciences	Eye checkup procedures, Special investigation, Instruments
M 104	Specialty Subject	Contact lens, Binocular vision, Low vision and management
M 105	Support Subject* (examination will not be conducted)	Research methodology & statistics, Education & teaching, Management - personal & Business

*(trial of CBCS pattern)

The pattern of Examination at the end of First Year Master of Optometry:

Paper	Name of the course	Internal marks	External marks		Total
			Theory	Viva	
P1	Applied Optics	25	50	25	100
P2	Basic Sciences	25	50	25	100
P3	Clinical Sciences	25	50	25	100
P4	Specialty Subject	25	50	25	100
P5	Comprehensive Practical	50	—	50	100
Total					500

Course Outcomes:

(what students should be able to do at the end of a course)

Course Code	Name of Course	Course Outcome
M 101	Applied Optics	1. Conceptualization of the theory of various types of refractive errors.Their etiology, and epidemiology. Proficiency in measuring and managing various types of refractive errors in diverse types of patients. 2. Conceptualizing the eye as an optical system. Thorough understanding of the concept of vision and visual perception, and near triad(accommodation-convergence-pupillary constriction), components, types, and anomalies. 3. Proficiency in terminologies, measurements, and basic calculation(lens and prism related) used in spectacles ordering or dispensing. Sound knowledge regarding various ophthalmic lenses and frames (materials, coatings, tints, or special features). In-depth knowledge about Progressive Addition Lenses.
M 102	Basic Sciences	1. Conceptualizing and thorough knowledge of the embryologic developments of the ocular and surrounding structures with their blood supply, nerve supply, and related physiology. Correlation with components of vision and visual perception. Understanding the concept of genetic counseling. 2. Understanding the ocular pathology and microbiology to counter various ocular conditions. 3. In-depth knowledge of ocular pharmacology including pharmaco-dynamics and pharmacokinetics of ocular preparations.
M 103	Clinical Sciences	1. Knowledge about Optometric eye care service and procedure. SOP of general optometry practice. 2. In-depth knowledge of various investigation procedures in eye care services with basic instrumentations. Ability to interpret the test report and chalking out the treatment plan.
M 104	Specialty	1. Proficiency in basic contact lens practice and thorough

	Subject	knowledge about contact lens and lens care regime. Related soft skills and advanced in depth practical knowledge of the subject. 2. Thorough understanding of the concept of binocular single vision and orthoptics and the basics of patient management. Related soft skills and advanced in depth practical knowledge of the subject. 3. Thorough understanding of the concept of low vision and related optics and pathogenesis and the basics of low vision patient management. Related soft skills and advanced in depth practical knowledge of the subject.
M 105	Support Subject	1. Ability to understand the concept of the research and formation of the research question, methodology, data collection and presentation, and interpretation of the results. 2. Ability to understand the basic concept of philosophy of the teaching-learning process. Understand the various pedagogical concepts and various terminologies. Proficiency in making a lesson plan and conducting a hands-on session or lecture for the undergraduates. 3. Understanding the concept of entrepreneurship and professional management along with the importance of developing soft skills and public relations. Conceptualize the social value of optometry and the process of building up individual optometry practice.

Syllabus: Master of Optometry (2nd Year)

Course Code	Name of Course	Description
M 201	Optics and Contact Lenses	Specialty fittings and advanced contact lenses
M 202	Clinical Management in orthoptics	Vision therapy in Binocular Vision Disorders
M 203	Dispensing Optics and Low Vision	Practical application of Dispensing and Low Vision
M 204	Professional Optometry* (examination will not be conducted)	Computer, Practice management & ethics
M 205	Dissertation Thesis	

* (trial of CBCS pattern)

The pattern of Examination at the end of Second Year Master of Optometry:

Paper	Name of the course	Internal marks	External marks		Total
			Theory	Viva	
P1	Optics and Contact Lenses	25	50	25	100
P2	Clinical Management in orthoptics	25	50	25	100
P3	Dispensing Optics and Low Vision	25	50	25	100
P4	Comprehensive Practical Exam	50	—	50	100
P5	Dissertation Thesis	50	—	50	100
Total					500

Course Outcomes:

(what students should be able to do at the end of a course)

Course Code	Name of Course	Course Outcome
M 201	Optics and Contact Lenses	In addition to basic in depth knowledge of soft skills and patient management, making the students eligible for understanding the optics of the contact lens and practice specialty contact lens for justifying diverse types of patient's visual needs.
M 202	Clinical Management in orthoptics	In addition to basic in depth knowledge of soft skills and patient management, making the students proficient for dealing with special cases with non- surgical treatment & management, along with being able to help the patients with recent advancements in orthoptics. Making them understand the concept and application of vision therapy for patient management.
M 203	Dispensing Optics and Low Vision	1. In addition to basic in depth knowledge of soft skills and patient management, making the students proficient in dispensing counter management, using and understanding the basic instrumentation of various dispensing tools in daily practice. Understanding the needs of the patient and dispense accordingly. Decision making by critical analysis. 2.In addition to basic in depth knowledge of soft skills and patient management, decision making and management plan for low vision patients,along with being able to help the patients with recent advancements in low vision. Rehabilitation of visually impaired individuals.
M 204	Professional Optometry	1. Fluency in using the computer and its various features for keeping the

		records and representing data in a systematic way. Utilizing cloud resources for personal and professional advancement. 2. Experience practice management and business etiquette. 3. Understand medico-legal aspects and ethical issues. 4. Conceptualizing finance and account management.
M 205	Dissertation Thesis	Experiencing a technical and methodological way of conducting a project. Making students able to conduct further research individually.

Note:

A comprehensive practical examination includes assessments of patient care and clinical skills for both the year students followed by a feedback session.