

PROGRAM SPECIFIC OUTCOME (PSO)

Master of Science in Optometry:

The course aims at carving out graduates in Optometry who will be well versed in:

- Enhancing knowledge from clinical experience , interactions, discussions and research to improve the quality of training and education in optometry
- Build up leadership qualities in education , practice and administration
- Contribute to emerging and vitally important industry through research
- Explore a specialised field in depth and develop high degree of expertise to contribute to the advancement of knowledge in optometry

PROGRAM OUTCOMES (PO):

1. Optometry knowledge: Show mastery of basic medical-science subjects needed to work as a health care professional and to deliver patient care that considers socio-economic and cultural factors
2. Problem analysis: Identify, formulate, review research literature, and analyse critical problems reaching substantiated conclusions
3. Ethics And Accountability: Follows ethics code set by the professional body/faculty/department and keeps proper relationships and boundaries with patients and caregivers
4. Communication: Communicates effectively with the patient, interprofessional team members, and other stakeholders using patient-centered principles that address physical, social, cultural or other barriers to communication.
5. Professional Responsibility: Practices as an autonomous professional, exercising their own professional judgment and demonstrates a commitment to their patients, public, and profession.
6. Self-Awareness And Emotional Intelligence: Demonstrate the importance of self-awareness and self-reflection and be able to reflect critically on personal practice in order to be able to improve it.
7. Research Methodology: Familiar with basic health sciences research methods and demonstrates the process of evidence-based practice.
8. Lifelong Learning: Committed to continuous improvement of skills and knowledge.
9. Information Literacy: Graduates should be able to assess, evaluate and apply relevant research findings, clinical guidelines and other sources of evidence to inform their practice and decision making.
10. Clinical Competency: Graduates should possess the necessary skills to perform clinical procedures and techniques relevant to their chosen field, such as patient assessment, diagnostic testing, therapeutic interventions and patient education.
11. Leadership : Collaborates with inter professional team, demonstrates flexibility within team and works effectively with inter professional team, and other stakeholders to manage positive professional relationships.

COURSE OUTCOMES(CO)

CO 4.1 ADVANCED CONTACT LENS STUDIES 1

- Demonstrate in-depth understanding of advanced contact lens materials, designs, manufacturing technologies, and recent innovations in contact lens science.
- Analyze complex corneal and anterior segment conditions to select and design specialty contact lenses such as scleral, orthokeratology, keratoconus, post-surgical, and prosthetic lenses.
- Apply advanced techniques in contact lens fitting, assessment, and troubleshooting for irregular corneas and challenging refractive or ocular surface conditions.
- Evaluate and manage complications associated with long-term contact lens wear, integrating evidence-based clinical protocols and ocular pharmacology principles.
- Conduct independent research in contact lens science, including study design, data collection, analysis, and interpretation of findings to contribute to academic and clinical advancements.
- Critically appraise recent literature, technological advances, and clinical practices in contact lens care to enhance decision-making and patient outcomes.
- Demonstrate professional ethics, patient education, and counseling skills for ensuring safe, compliant, and optimal contact lens use in diverse populations.

CO 4.2 LOW VISION AND REHABILITATION

- Demonstrate advanced understanding of the causes, types, and classifications of visual impairment and their impact on functional vision and quality of life.
- Perform comprehensive low vision assessments, including visual acuity, contrast sensitivity, visual fields, and functional vision evaluation, using advanced techniques and equipment.
- Prescribe and evaluate optical, non-optical, and electronic low vision devices tailored to the patient's specific visual and functional needs.
- Develop individualized vision rehabilitation plans integrating orientation and mobility training, activities of daily living (ADL), and assistive technology.
- Collaborate effectively with multidisciplinary rehabilitation teams—including ophthalmologists, occupational therapists, educators, and counsellors—to provide holistic patient-centered care.

CO 4.3 PEDIATRIC OPTOMETRY

- Demonstrate advanced knowledge of visual development, ocular anatomy, and physiology in infants and children, and understand how they differ from adults.
- Perform comprehensive pediatric eye and vision examinations using age-appropriate assessment techniques, instruments, and communication methods.
- Diagnose and manage common pediatric ocular and visual disorders such as amblyopia, strabismus, refractive errors, and binocular vision anomalies.
- Design and implement vision therapy and management plans for pediatric patients with visual efficiency or perceptual disorders.
- Counsel and educate parents, caregivers, and teachers regarding visual development, eye safety, and management of pediatric vision problems.
- Collaborate with pediatricians, ophthalmologists, special educators, and rehabilitation specialists for interdisciplinary management of pediatric patients.

CO 4.4 OCCUPATIONAL OPTOMETRY

- Demonstrate advanced understanding of occupational vision science, visual ergonomics, and the impact of work environment on visual performance and eye health.
- Assess and analyze visual demands of various occupations and evaluate the visual capabilities required for optimal job performance and safety.
- Conduct comprehensive vision screenings and functional visual assessments for industrial, corporate, and special occupational groups.
- Identify and manage vision-related occupational hazards such as digital eye strain, exposure to radiation, illumination issues, and protective eyewear requirements.
- Design and recommend vision conservation and eye safety programs, including preventive strategies and ergonomically sound workplace solutions.

CO 4.5 RESEARCH METHODOLOGY

- Demonstrate a comprehensive understanding of the principles, concepts, and importance of research in optometry and vision science.

- Identify and formulate appropriate research problems, objectives, and hypotheses relevant to clinical and vision science domains.
- Design and plan suitable research methodologies, including qualitative, quantitative, and mixed-method approaches, for addressing specific research questions.
- Apply appropriate sampling techniques, data collection tools, and measurement methods ensuring reliability and validity.
- Utilize biostatistical methods and software for data analysis, interpretation, and presentation of research findings.
- Critically review scientific literature and evaluate the quality, ethics, and validity of published research

CO 5.1 ADVANCED CONTACT LENS STUDIES II

- Assess and manage complex anterior segment and corneal conditions (e.g., keratoconus, post-keratoplasty, ocular surface disease) through advanced contact lens applications.
- Perform advanced diagnostic evaluations using corneal topography, anterior segment OCT, and other imaging modalities to guide lens fitting and follow-up.
- Identify, prevent, and manage contact lens–related complications through evidence-based clinical decision-making and therapeutic management strategies.
- Design and conduct research projects in contact lens science—formulating hypotheses, collecting data, analyzing outcomes, and presenting findings effectively.
- Critically appraise emerging trends, technologies, and materials in contact lens design and manufacturing, integrating them into modern clinical practice.

CO 5.2 EYE DISEASES AND THERAPEUTICS

- Demonstrate comprehensive knowledge of the etiology, pathology, clinical features, and classification of common and complex ocular diseases affecting the anterior and posterior segments of the eye.
- Perform advanced clinical examination and diagnostic procedures to identify and differentiate various ocular pathologies.

- Interpret findings from diagnostic tools such as slit-lamp biomicroscopy, fundus imaging, OCT, fluorescein angiography, and visual field testing for accurate diagnosis and monitoring.
- Understand the pharmacokinetics, mechanisms of action, therapeutic uses, contraindications, and adverse effects of ophthalmic and systemic drugs used in ocular disease management.
- Formulate and implement evidence-based management and therapeutic plans, including pharmacological, non-pharmacological, and surgical co-management strategies.
- Apply knowledge of ocular emergencies and first-line optometric interventions for acute and sight-threatening eye conditions.

CO 5.3 CLINICAL IMAGING

- Perform and interpret a range of imaging techniques including fundus photography, anterior segment imaging, optical coherence tomography (OCT), fundus autofluorescence, and fluorescein/indocyanine angiography.
- Analyze and correlate imaging findings with clinical signs and symptoms to support diagnosis, management, and monitoring of ocular diseases.
- Utilize imaging tools for documenting ocular structures, disease progression, and treatment outcomes in various anterior and posterior segment disorders.
- Evaluate the advantages, limitations, and clinical relevance of different imaging modalities for specific ocular conditions.
- Integrate digital imaging and tele-optometry technologies for remote screening, diagnosis, and patient education.