

Programme Outcomes (POs)

- PO1. Develop understanding of human anatomy and physiology as it relates to health and disease
- PO2. Demonstrate knowledge of clinical procedures and diagnostic testing in various healthcare settings
- PO3. Acquire competency in medical terminology and documentation
- PO4. Communicate effectively with patients and healthcare professionals
- PO5. Demonstrate understanding of ethical and legal issues related to healthcare delivery
- PO6. Familiarize with healthcare management and healthcare delivery systems
- PO7. Critically analyze healthcare research and evidence-based practice
- PO8. Showcase competency in interprofessional collaboration and teamwork
- PO9. Develop lifelong learning and professional development to adapt to changing healthcare environments.

Programme Specific Outcomes (PSOs)

- PSO1. Demonstrate knowledge of vision care principles that govern ethical decision making and respect for the dignity of the patient.
- PSO2. Have the ability to work effectively in diverse fields of the eyecare industry – clinical, community, retail, corporate.
- PSO3. Able to practice independently as a primary eye care practitioner and render eye care services for the benefit of society.
- PSO4. Problem solving and critical thinking skills integrating current knowledge and scientific evidences

Course Outcomes

Batch 2021-2024

Semester	Subject Code	Subject	Course Outcomes
1	21BASOPT 101	Geometrical Optics (Optics I)	<p>CO1: Understanding of basic terminologies, principles, and laws from geometric optics</p> <p>CO2: To differentiate the properties of lens and mirror.</p> <p>CO3- To derive the equations for spherical and astigmatic surfaces.</p> <p>CO4- To apply Fermat's principle of light in Geometrical optics.</p>
1	21BASOPT102	Physiology (General)	<p>CO1: Understand the fundamental principles of cell physiology, including membrane transport, cellular metabolism, and the regulation of cellular activities.</p> <p>CO2: Acquire knowledge about regulation of fluid, electrolyte, and acid-base balance in the body, including the mechanisms of osmoregulation and the role of the kidneys.</p> <p>CO3: Understand physiological mechanisms of cardiovascular function, including the regulation of blood pressure, blood flow, and heart rate.</p> <p>CO4: Understand physiological mechanisms of respiratory function, including the control of breathing, gas exchange, and acid-base balance.</p> <p>CO5: Understand the physiological mechanisms of digestive function, including the regulation of digestive secretions, motility, and nutrient absorption.</p>

Semester	Subject Code	Subject	Course Outcomes
1	21BASOPT1 03	Anatomy (General)	<p>CO1: Understand the structure and function of the human body, including the organization of the various body systems (e.g., skeletal, muscular, cardiovascular, respiratory, digestive, urinary, and nervous).</p> <p>CO2: Acquire knowledge about the anatomy and physiology of the cell and tissues, including the different types of cells, tissues, and organs and their roles in maintaining homeostasis.</p> <p>CO3: Summarize the structure and function of the skeleton, including the bones, joints, and the musculoskeletal system.</p> <p>CO4: Learn about anatomy and physiology of the muscles, including the different types of muscles, the mechanisms of muscle contraction, and the functional relationships between the muscles and bones.</p>
1	21BASOPTD 01	Binocular Vision & Ocular Motility	<p>CO1: To outline the concept, advantage of Binocular Single Vision.</p> <p>CO2: To understand the 3 grades of BSV and their measurement using synoptophore.</p> <p>CO3: To acquire knowledge on horoptor, panum's space and areas, Veith Muller circle etc.</p> <p>CO4: Perform different clinical tests for the measurement of stereo-acuity.</p>

<p style="text-align: center;">1</p>	<p style="text-align: center;">21MENVIOV E2</p>	<p style="text-align: center;">Environment Studies</p>	<p>CO1: Demonstrate a basic understanding of the principles of environmental science, including key environmental issues, impact of human activities on the environment and the strategies for promoting sustainability.</p> <p>CO2: To apply critical thinking and analytical skills to evaluate environmental problems-based solutions</p> <p>CO3: understand environmental laws and regulations, as well as the legal frameworks for addressing environmental problems</p> <p>CO4: to assess the role of environmental movements in shaping environmental policy and practice in India, and propose strategies for advancing environmental justice and sustainability in the country</p> <p>CO5: To evaluate and address ethical and logistical challenges associated with conducting fieldwork in environmental studies and propose strategies for improving scientific integrity and social responsibility in environmental research</p>
<p style="text-align: center;">1</p>	<p style="text-align: center;">21ENG1L02</p>	<p style="text-align: center;">English-I</p>	<p>CO1: Demonstrate a coherent and systematic knowledge of the field of English literature showing an understanding of current theoretical and literary developments in relation to the specific field of English studies.</p> <p>CO2: Demonstrate a set of basic skills in literary communication and explication of literary practices and process with clarity</p>

Semester	Subject Code	Subject	Course Outcomes
2	21BASOPT201	Anatomy (Ocular)	<p>CO1: Identify internal and external anatomy of the eye, naming and locating the following parts: cornea, iris, pupil, lens, retina, sclera, choroid, optic nerve and blind spot.</p> <p>CO2: Relate the structure and function of the eye tissues</p> <p>CO3: To understand the development of eye during gestation</p> <p>CO4: Discuss eye diseases and disorders, name risk factors and possible preventive measures</p>
2	21BASOPT202	Physiology (Ocular)	<p>CO1: Understand the relation between functions of CNS and the Eye.</p> <p>CO2: To describe the concept, types of color blindness and theories of color vision.</p> <p>CO3: To Review the functions of different optical surfaces of eye, viz- Cornea, lens, aqueous & vitreous humor.</p> <p>CO4: To describe the pupillary dynamics in RAPD.</p>
2	21BASOPT203	Physical Optics (Optics II)	<p>CO1: Understanding of basic facts, principles, and theories of light propagation</p> <p>CO2: Recall and use the terms used in refraction, reflection, angle of incidence and angle of reflection & refraction.</p> <p>CO3: Explain the wave nature of light using Huygens's principle</p> <p>CO4: To illustrate the concept, type and application of different optical phenomena (Interference, diffraction, polarization)</p> <p>CO5: To understand the use of different LASERS in Ophthalmology practice</p>

Semester	Subject Code	Subject	Course Outcomes
2	21BASOPT2 04	Biochemistry (General & Ocular)	CO1: Understanding and recalling the basics of biochemistry CO2: Interpret the biochemical structures, metabolism of macromolecules mainly carbohydrates, fats, proteins. CO3: Understand the role of different minerals and vitamins in the body and the consequences of deficiencies CO4: Regulation of Metabolism and catalysis both in general and ocular
2	21BASOPTD 02	Systemic Condition and the Eye	CO1: To review the normal features of the human eye and the ocular fundus. CO2: To record the common systemic diseases affecting the eye CO3: To describe the ocular signs/ symptoms associated with selected systemic diseases and their serious ocular sequel. CO4: To compare and contrast the important features of diabetic retinopathy types and the current screening guidelines CO5: to review the important ocular features of hypertension, thyroid disease, sarcoidosis and inflammatory conditions, malignancy and acquired immunodeficiency syndrome.
2	16ENG2L02	English-II	CO1: Display knowledge to cultivate a better understanding of values – both literary values that aid us in literary judgment and also values of life at all stages. CO2: Cultivate ability to look at and evaluate literary texts as a field of study and as part of the wider network of local and global culture.

Semester	Subject Code	Subject	Course Outcomes
3	21BASOPT3C01	Visual Optics (Optics III)	<p>CO1: Thorough understanding of the concept of vision and visual perception, components, types, and anomalies.</p> <p>CO2: Acquire knowledge on the optical phenomena like Interference, diffraction and polarization and their application pertaining to Vision.</p> <p>CO3: Calculation of different powers in a given lens surface, categorize different lens forms and peculiar properties of each.</p> <p>CO4: Conceptualization of the theory of various types of refractive errors, Etiology, and epidemiology.</p> <p>CO5: Conceptualizing the eye as an optical system with respect to Schematic eye models.</p>
3	21BASOPT3C02	Ophthalmic & Optical Instrumentation & Procedure I	<p>CO1: To achieve knowledge of the fundamental's principles of various instrument and its uses.</p> <p>CO2: To perform refraction, and orthoptic assessment independently and to assist Ophthalmologist.</p> <p>CO3: Involve and do special investigative procedures, documentation of various conditions.</p> <p>CO4: To operate and maintain Ophthalmic instruments.</p> <p>CO5: Expertise in performing the basic ophthalmic techniques and interpret the result.</p>
3	21CENG3A02	Communicative English	<p>CO 1: To enhance the understanding of LSRW skills and various approaches to language.</p> <p>CO 2: providing an in-depth academic exposure about various forms of communication to enable students to be better speakers and user's language.</p> <p>CO 3: Demonstrate a coherent and systematic knowledge of the field of communication through understanding of current linguistic and literary developments.</p> <p>CO 4: demonstrate a set of basic skills in literary communication and explication of literary practices and process with clarity</p> <p>CO 5: Write analytically in a variety of formats, including essays, speeches, and reflective writings</p>

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3	21BASOPT3 D01	Medical Pathology (General and Ocular)	<p>CO1: Should acquire the knowledge of pathogenesis of various general and ocular diseases.</p> <p>CO2: To identify various presentations of ocular signs and symptoms</p> <p>CO3: To become familiar with observable differences (both normal and abnormal) seen in orbit and eye</p> <p>CO4: To introduce the concept of evidence – based medicine</p>
3	21BASOPT3 D02	Pharmacology (General and Ocular)	<p>CO1: Describe pharmacology of drugs acting on circulatory system and ocular system</p> <p>CO2: Explain principles of drug administration for diseases and mechanisms of bacterial resistance</p> <p>CO3: Justify and classify the pharmacology of antimicrobial drugs</p> <p>CO4: Summarize the pharmacology of immunopharmacological drugs</p> <p>CO5: Study of concept of pharmacology specific emphasis pharmacokinetics and pharmacodynamics</p>
3	21ENTPD01	Entrepreneurship development program	<p>CO1: Outline the function of the entrepreneur in the successful, commercial application of innovations and recall the different opportunities and successful growth stories</p> <p>CO2: learn how to start an enterprise and design business plans that are suitable for funding by considering all dimensions business.</p> <p>CO3: prioritize personal attributes that enable best use of entrepreneurial opportunities</p> <p>CO4: Examine Economic conditions with higher level knowledge and understanding of contemporary trends in e commerce and business finance</p> <p>CO5: explore entrepreneurial leadership and management style</p>

Semester	Subject	Course Outcomes
4	Visual Optics (Optics IV)	<p>CO1: Conceptualization of the theory of various types of refractive errors, Etiology, and epidemiology and quantification in diverse group of patients.</p> <p>CO2: Thorough understanding of the concept of vision and visual perception, and near triad(accommodation-Convergence & pupillary constriction), components, type, and anomalies.</p> <p>CO3: Acquire a detailed knowledge on use and implementation of static vs dynamic retinoscopy, dry vs wet retinoscopy etc.</p> <p>CO4: Perform the different techniques of subjective refraction like- duochrome, JCC, Fogging, Stenopic slit, binocular balancing etc.</p> <p>CO5: Understand pupillary dynamics and learn cycloplegic refraction.</p>
4	Ophthalmic & Optical Instrumentation & Procedure II	<p>CO1: To achieve knowledge of the fundamentals principles of various instrument and its uses.</p> <p>CO2: To perform refraction, and orthoptic assessment independently and to assist Ophthalmologist.</p> <p>CO3: Involve and do special investigative procedures, documentation of various conditions.</p> <p>CO4: To operate and maintain Ophthalmic instruments.</p> <p>CO5: Expertise in performing the basic ophthalmic techniques and interpret the result.</p>
4	Ocular Disease I (Anterior Segment Disease)	<p>CO1: Understand the range of pathophysiological processes underpinning anterior eye disease.</p> <p>CO2: Be able to recognize a wide range of anterior eye conditions by integrating knowledge of epidemiology, pathophysiological processes and clinical presentation and be able to communicate findings effectively.</p> <p>CO3: Locate and critically evaluate high quality current information and evidence on anterior eye Disease</p> <p>CO4: Understand the pathological processes underlying disease as well as a solid knowledge of the epidemiology, signs symptoms and clinical presentation of ocular disease.</p> <p>CO5: To describe the pathogenesis of disease and the implications for ocular health and function and be knowledgeable in ocular and laboratory testing used in the assessment of systemic, visual and ocular function.</p>
4	Medical Microbiology (General and Ocular)	<p>CO1: To recall basics of Microbiology</p> <p>CO2: Understanding hospital acquired infections, its causative agent and preventions</p> <p>CO3: To perform common laboratory techniques</p> <p>CO4: To understand the pathogenesis and laboratory diagnosis of bacteria, virus, parasites and fungi</p> <p>CO5: To describe pathogens involved in ocular infection, clinical features and lab diagnosis</p>

4	Database Management	<p>CO1: To provide the knowledge of hospital management system</p> <p>CO2: To determine the ability to archive data, manage and retrieve the necessary hospital management data</p> <p>CO3: to create different visual representation of data</p> <p>CO4: to acquire knowledge of front end and back end of internet</p> <p>CO5: apply programming fundamentals using programming tools</p>
4	Indian Constitution	<p>CO1: To learn and understand the Indian constitution and follow as a citizen</p> <p>CO2: To remember, understand and apply the Indian constitution and also citizens following the constitution within the framework.</p> <p>CO3: To understand the concept of CM and state governor, PM and president, appointment of supreme court, high court and consumer court judge's</p> <p>CO4: To understand the existing houses and the functioning system of it.</p>