



YENEPOYA

(DEEMED TO BE UNIVERSITY)

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Accredited by NAAC with 'A' Grade

**YENEPOYA INSTITUTE OF ALLIED
HEALTH SCIENCES**

PROGRAM OUTCOMES AND COURSE OUTCOMES

UNDERGRADUATE PROGRAM

BACHELOR OF SCIENCE

OPTOMETRY

 **ATTESTED**
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PROGRAM OUTCOMES
UNDERGRADUATE PROGRAM
BACHELOR OF SCIENCE
OPTOMETRY

(K -Knowledge, S -Skill, A -Attitude)

- PO 1 Detailed evaluation of refractive errors (K, S)
- PO 2 Prescription of optical corrections including spectacles, contact lens and prisms (K, S, A)
- PO 3 Diagnosis of common ocular disorders and their management (K, S, A)
- PO 4 Application, use and maintenance of common ophthalmic equipment, instruments and lenses. (K, S)
- PO 5 Participation in the national program for control of blindness (S, A)
- PO 6 Diagnosis and orthoptic management of common disorders of binocular vision (K, S,)
- PO 7 Counselling of patients for common ophthalmic conditions (K, S, A)
- PO 8 Counselling of patients undergoing ophthalmic procedures (K, S, A)
- PO 9 Functioning of Eye bank (S, A)

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COURSE OUTCOMES
UNDERGRADUATE PROGRAM
BACHELOR OF SCIENCE
OPTOMETRY
1ST SEMESTER

Anatomy	CO	Description
	CO 1	Comprehend the gross, functional and applied anatomy of various structures in the human body along with their inter-relationships.
	CO 2	Correlate the structure with the functions.
	CO 3	Competent to apply anatomical knowledge to perform minor technical procedural skills
Physiology	CO	Description
	CO 1	Understand the physiological structure of each organ system and its physiological functions
	CO 2	Understand broadly the clinical abnormalities of organs and its clinical physiological implications
Biochemistry	CO	Description
	CO 1	Understand the basic principles and procedures in specimen collection, reagent preparation and Testing in Clinical laboratory
	CO 2	Understand the properties of biomolecules, their function and biochemical process involved in health and disease
	CO 3	Understand the importance of nutrition in health and disease
Physical Optics (PO)	CO	Description
	CO 1	The objective of this course is to equip the students with a thorough knowledge of Properties of light.
	CO 2	At the end of this course, students will be able to predict the distribution of light under various conditions.
	CO 3	Knowledge about reflection, refraction, scattering and polarization in detail.
English and Communication Skills	CO	Description
	CO 1	Enable students in enhancing the ability to comprehend spoken and written English.
	CO 2	Avail effective communicative English in their professional work.
	CO 3	Practice students' skills in verbal and written English during clinical and classroom experiences.


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Constitution Of India	CO	Description
	CO 1	Understand the structure of Constituent Assembly
	CO 2	Understand the fundamental duties and rights of Indian citizen
	CO 3	Knowledge regarding electoral process of India
	CO 4	Understand the importance of directive policies of state policies
	CO 5	Understand the structure and composition of Indian Constitution, and the ways of amending the Constitution
	CO 6	Stimulate the roles of each of the three branches of government
	CO 7	Understand the provisions in the constitution for different areas

2nd SEMESTER

General Pathology	CO	Description
	CO 1	To be able to define the medical terms, define and classify disease and understand the concepts of the disease.
	CO 2	Able to describe the causes and mechanism of common diseases that occur during the routine work and also changes seen in different individuals and various organs and fluids
	CO 3	Able to enumerate the laboratory tests eg: urine, blood, body fluids and its application on various diseases

Microbiology	CO	Description
	CO 1	Understand the role of microbial agents in health and disease
	CO 2	Understand and practice various methods of Sterilisation and disinfection

Geometrical Optics (GO)	CO	Description
	CO1	Objective of this course is to equip the students with a thorough knowledge of mirrors and lenses.
	CO2	At the end of this course, students will be able to predict the basic properties of the images formed on the retina by the optics of the eye.
	CO3	Students learn about image formations for different lenses and mirrors

Health Care	CO	Description
	CO 1	Understand the concepts of health, illness and national health policy various welfare programmes in India.
	CO 2	Understand the concepts of Nursing
	CO 3	Understand the basic, special needs of the patient ,bandaging and first aid for common emergencies
	CO 4	Understand infection control


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Environmental Studies	CO	Description
	CO 1	Able to learn about environment, factors affecting it, environmental ethics and its protection
	CO 2	Able to Describe a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
	CO 3	Able to Critically analyze technical subject matter (written or oral) for scientific merit apply learned environmental knowledge and understanding to solve technical /research problems in new contexts

Sociology	CO	Description
	CO 1	Able to understand the meaning of sociology, its relationship with other disciplines and also to gain knowledge on the sociological methods of investigations
	CO 2	Able to understand social factors and its role in health and disease
	CO 3	Able to understand the meaning, importance and agencies of socialization
	CO 4	Able to understand the concept and role of social groups in health, sickness and rehabilitation
	CO 5	Able to understand the meaning of family and its role in health, nutrition and sickness among members
	CO 6	Able to understand the meaning, features and health hazards of rural and urban communities
	CO 7	Able to understand the concept of culture and health and their relationship
	CO 8	Able to understand the meaning of social change, factors of social change, social change and stress, social change and health
	CO 9	Able to understand the meaning of social problems and types of social problems in the society
	CO 10	Gain knowledge on the social security and social legislation measures for the disabled
CO 11	Able to understand the meaning of social work and role of medical social worker	

Medical Ethics	CO	Description
	CO 1	Understand the fundamentals of Medical Ethics
	CO 2	Understand the Ethical Issues in Professional conduct of Healthcare
	CO 3	Gain knowledge in the Medico legal aspects of health records in healthcare practice
	CO 4	Able to explain the respective ethical challenges and potential conflicts of interest in the functional departments of the organization
	CO 5	To increase the awareness and knowledge of the value dimensions of interactions with the Patients, colleagues, relations and public.
CO 6	Understand and respect the rights of the patient and the duties and responsibilities of the healthcare people	

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3rd SEMESTER

Ocular pathology and microbiology (OPAMB)	CO	Description
	CO 1	Understand the concepts of Inflammation and repair aspects
	CO 2	Pathology of various parts of the eye and adnexa.
	CO 3	Understand the pathogenesis of the diseases caused by the organisms in the human body with particular reference to the eye infections
	CO4	Understand basic principles of diagnostic ocular Microbiology.
Ocular Anatomy and ocular physiology (OAP)	CO	Description
	CO 1	Comprehend the normal disposition, inter-relationships, gross, functional and applied anatomy of various structures in the eye and annexe.
	CO 2	Identify the structures of the eye and correlate the structure with the functions.
	CO 3	Explain the normal functioning of all structures of the eye and their interactions
	CO 4	Elucidate the physiological aspects of normal growth and development of the eye
General Pharmacology (GP)	CO	Description
	CO1	Know the basics of pharmacology like history, scope & general principles
	CO2	Describe the pharmacokinetics and pharmacodynamics of essential and commonly used drugs.
	CO3	To appreciate adverse reactions and drug interactions of commonly used drugs
	CO4	Knowledge on essential drugs in special conditions such as diuretics, opioids, corticosteroids, antihistamines, antiemetics, IV fluids, and Immunosuppressants etc
Ocular Pharmacology (OPC)	CO	Description
	CO 1	Basic principle of pharmacokinetics & Pharmacodynamics
	CO 2	Commonly used ocular drugs, mechanism, indications, contraindications, drug dosage and adverse effects.
Optometric Instruments (OI)	CO	Description
	CO 1	The student should be able to gain theoretical knowledge
	CO 2	Basic practical skill in handling the Optometric instruments
Clinical Optometry I (CO I)	CO	Description
	CO 1	The students will get to know clinical training on the practical aspects on optometric instruments.
	CO 2	Able to get proper Hands-on experience under supervision.

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Kannada	CO	Description
	CO 1	To comprehend and communicate in simple Kannada and improve their vocabulary of daily usage
	CO2	to understand distinct sounds and improve pronunciation
	CO3	to form simple sentences to talk to patients, bystanders and the localities

4th SEMESTER

Optometric & Dispensing Optics (ODO)	CO	Description
	CO 1	Understand the theory behind spectacle lenses and frames
	CO 2	Understand the construction, design application and development of lenses


Visual Optics (VO)	CO	Description
	CO 1	Understand the fundamentals of optical components of the eye
	CO 2	Gain theoretical knowledge and practical skill on visual acuity measurement,
	CO 3	Gain theoretical knowledge and practical skill on objective and subjective clinical refraction

Ocular Disease I (OD I)	CO	Description
	CO 1	Able to learn aetiology of posterior segment ocular diseases
	CO 2	Gain knowledge in Epidemiology of ocular conditions
	CO 3	Gain knowledge in Symptoms, signs & management of ocular conditions

Clinical Optometry II (CO II)	CO	Description
	CO 1	The students will get clinical training on the practical aspects on visual optics, Ocular disease I, Optometric & Dispensing optics.
	CO 2	Able to get proper Hands-on experience under supervision.

Community & Occupational Optometry (COO)	CO	Description
	CO 1	Gains knowledge in the Community based eye care in India.
	CO 2	knowledgeable in the Prevalence of various eye diseases
	CO 3	Gains knowledge in the Organize health education programmes in the Community
	CO 4	Gains knowledge in the Vision screening for various eye diseases in the community and for different age groups

Human Rights & Gender Equity	CO	Description
	CO 1	Basic Knowledge of Human Rights and its function and authorities in society.
	CO 2	Basic Knowledge of Human Rights in industry women's status, issues and gender Equity.


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	CO	Description
Biostatistics	CO 1	At the end of the course students will be familiar with statistics methods and techniques.
	CO 2	After the completion of the course students will be able to manage the data with various validation and cleaning process
	CO 3	At the end of the course students will be familiar with different types of data analysis techniques.
	CO 4	At completion of the course students can able to operate the statistical software to describe the data With proper presentation.

5th SEMESTER

Contact Lens I(CL I)	CO	Description
	CO1	List the important properties of contact lenses
	CO2	Finalise the RGP CL design for various kinds patients
	CO 3	Recognize various types of fitting
Binocular Vision I(BV I)	CO	Description
	CO1	learn on gross anatomy and physiology relating to the extra-ocular muscles.
	CO2	Explanation on the aetiology, investigation and management of binocular vision anomalies.
Ocular Disease II(OD II)	CO	Description
	CO1	Able to learn Aetiology of posterior segment ocular diseases
	CO2	Understand the Epidemiology of ocular conditions
	CO 3	Understand the Symptoms , signs & management of ocular conditions
Paediatric & Geriatric Optometry(POGO)	CO	Description
	CO1	Gains knowledge in ocular health of both geriatric & paediatric People
	CO2	Ocular Evaluation and management of various geriatric & paediatric ocular diseases.
Clinical optometry III(CO III)	CO	Description
	CO1	The students will get clinical training on the practical aspects on contact lens, Binocular Vision, Ocular disease II.
	CO2	Able to get proper Hands-on experience under supervision.

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6th SEMESTER

Contact Lens II(CL II)

CO Description

- CO1 Recognize various types of fitting
- CO2 Identify and manage the adverse effects of contact lens
- CO 3 Explain all procedures of contact lens speciality fitting

Clinical optometry IV(CO IV)

CO Description

- CO1 The students will get clinical training on the practical aspects on contact lens, Binocular vision and Low vision.
- CO2 Able to get proper Hands-on experience under supervision.

Low vision(LV)

CO Description

- CO1 Ability to diagnose and manage patients with vision impairment^[1]
- CO2 Ability to perform specialized diagnostics
- CO 3 Ability to rehabilitate patients with vocational counselling and activities of daily Living

Binocular Vision II(BV II)

CO Description

- CO1 Learn on different types of strabismus anomalies.
- CO2 learn on the investigations, diagnosis and management of all strabismus

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