



YENEPOYA

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

**YENEPOYA INSTITUTE OF ALLIED
HEALTH SCIENCES**

PROGRAM OUTCOMES AND COURSE OUTCOMES

UNDERGRADUATE PROGRAM

BACHELOR OF SCIENCE

MEDICAL LABORATORY TECHNOLOGY

ATTESTED

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PROGRAM OUTCOMES
BACHELOR OF SCIENCE
MEDICAL LABORATORY TECHNOLOGY

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

- PO 1 To have a broad understanding of the health and hospital care system and factors impacting its various components (K,A)
- PO 2 Learn to develop expertise in phlebotomy, handling and analyzing patient samples (K,S,A)
- PO 3 Learn to utilize the available resources optimally and effectively in inventory management(K,S,A)
- PO 4 Comprehend to meet the challenges of achieving quality together with cost containment (S,A)
- PO 5 Learn to practice the periodic maintenance of costly and vital equipment (K,S)
- PO 6 Learn to meet the challenges arising of chronic and newer diseases (K,A)
- PO 7 To be able to identify and apply the concepts of trouble shooting in the daily routine (K,S)
- PO 8 Learn to do the root cause analysis, take corrective/preventive action and releasing of reports (K,S,A)
- PO 9 Learn to manage human resources and have team spirit (A)
- PO 10 To be able to take an integrated approach to managing out patients/inpatients and laboratory operations (S,A)

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COURSE OUTCOMES
BACHELOR OF SCIENCE
MEDICAL LABORATORY TECHNOLOGY

1ST SEMESTER

	CO	Description
Anatomy	CO 1	Demonstrate the structure of various organs in the human body and correlate the structure with the functions to know how both structure and function are modified by disease.
	CO 2	Identify and locate all the structures of the body.
	CO 3	Identify the microscopic structures of various tissues and organs in the human body and correlate the structure with the functions for understanding the altered state in various disease processes.
	CO 4	Understand the basic principles of embryology including major variations, abnormalities and the congenital anomalies involved in development of the organs and systems.
Physiology	CO	Description
	CO 1	Can able to broadly understand the physiological structure of each organ system and its physiological functions.
	CO 2	Can able to understand broadly the clinical abnormalities of organs and its clinical physiological implications
Biochemistry	CO	Description
	CO 1	Various bio molecules in our body and their classification
	CO 2	Sample collection for various tests performed in laboratory
	CO 3	Preparation of dilutions of chemicals and body fluids.
	CO 4	Various terms used in quality control
	CO 5	Biomedical wastes management
	CO6	Significance of various special investigations
Basic of medical laboratory technology	CO	Description
	CO 1	To know the various types and sections of Clinical Laboratory
	CO 2	Describe the indications of haemodialysis and peritoneal dialysis
	CO 3	Explain the functioning and management of haemodialysis apparatus

English and Communication Skills	CO	Description
	CO 1	Apply the concepts and principles of English Language use in professional development such as pronunciation, vocabulary, grammar, paraphrasing, voice modulation, Spelling, pause and silence.
	CO 2	Apply LSRW (Listening, Speaking, Reading and Writing) Skill in combination to learn, teach, educate and share information, ideas and results.

Constitution Of India	CO	Description
	CO 1	This course is to keep the students abreast with the knowledge of the Constitution of India.
	CO 2	To make the students understand the importance of human rights as citizens of India.

2nd SEMESTER

General Pathology	CO	Description
	CO 1	Understand how body reacts to cellular responses and injuries.
	CO 2	Have a basic knowledge about various laboratory tests and its application on various disorders.
	CO 3	Define the medical terms, define and classify disease and understand the concepts of the disease.

Microbiology	CO	Description
	CO 1	Understand how the bacteria grow and how sterilization & disinfection works.
	CO 2	Have a basic knowledge about Immunization schedules and bacterial infections.
	CO 3	Define terms in virology, mycology and parasitology.

Laboratory Equipment	CO	Description
	CO 1	Identify various equipment used in all three sections of lab, operating procedures, troubleshooting steps involved
	CO 2	Basic principles, care and maintenance of equipment and calibration - if applicable

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Health Care	CO	Description
	CO 1	Describe the concepts of health, illness and national health policy various welfare programmes in India.
	CO 2	Explain the concepts of Nursing
	CO 3	Explain the basic, special needs of the patient, bandaging and first aid for common emergencies
	CO 4	Explain infection control
Environmental Studies	CO	Description
	CO 1	Students learn to knowledge on Echo systems, biodiversity and environmental policies and practices.
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	Increasing the awareness and knowledge of students of the value dimensions of interactions with the patients, colleagues, relations and public.
	CO 2	Fostering the development of skills of analysis, decision making and judgment.
	CO 3	Making the students aware of the need to respect the rights of the patient.
	CO 4	Duties and responsibilities of the technologists.


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3rd SEMESTER

	CO	Description
Pathology I	CO 1	To learn various histo techniques, decalcification process, cutting of paraffin and frozen tissues specimens and staining procedures.
	CO 2	To learn about the theory of staining and perform routine and special staining techniques
	CO 3	Understanding nutrition ,health & disease
Biochemistry I	CO	Description
	CO 1	Understanding the classification of bio molecules and Enzymology
	CO 2	Understand the principle and procedure of the mentioned techniques
	CO 3	Understanding nutrition ,health & disease
Microbiology I	CO	Description
	CO1	Understanding the immune system
	CO2	Understanding of the immunological mechanisms in health and disease
	CO3	Knowledge of the principles and application of infection control measures
Kannada	CO	Description
	CO 1	To comprehend and communicate in simple Kannada and improve their vocabulary of daily usage
	CO2	They can also act as a bridge between doctors and patients

4th SEMESTER

Pathology II	CO	Description
	CO 1	To learn about collection of blood by various methods, to efficiently perform routine as well as special investigations. In haematology laboratory, bone marrow aspiration and biopsy procedure and principle.
	CO 2	To learn about different haematological diseases, role of laboratory for detecting the abnormalities and various laboratory methods used in the investigation of anomies.
	CO 3	To learn about blood coagulation, disorders of haemostasis, principles, methods and assessment of coagulation.
Biochemistry II	CO	Description
	CO 1	Understanding the metabolism of bio molecules
	CO 2	Understand the principle and procedure of the mentioned techniques
	CO 3	Understanding the clinical significance of Diabetes mellitus, GTT and its curve patterns, its interpretation
	CO4	Understanding NPN substances, Preparation of protein free filtrates, Sample collection

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Microbiology II	CO	Description
	CO 1	Ability to classify and identify the bacteria
	CO 2	Ability to understand the aetiology, pathogenesis, laboratory diagnosis & prevention of common bacterial infections

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

Biostatistics	CO	Description
	CO 1	Gains Knowledge in application of statistics in medical field and research.
	CO 2	Possesses knowledge and skill in the use of basic statistical methods.

5th SEMESTER

Pathology III	CO	Description
	CO 1	Understanding the basics of cytology and its techniques.
	CO 2	Demonstration and development of skills for cytological investigations including collection, handling, processing, staining procedures for different clinical procedure
	CO 3	Understanding and developing the skills of basic techniques of cytogenetics and immune histochemistry

Biochemistry III	CO	Description
	CO1	Understanding of biochemical and molecular processes involved in health and disease
	CO2	Understanding of biochemical basis and rationale of clinical laboratory tests, and ability to perform these tests
	CO3	Understanding and developing skills by acquainting with advancement in Biochemistry

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Microbiology III	CO	Description
	CO 1	Ability to classify and identify the viruses and fungi
	CO 2	Ability to understand the aetiology, pathogenesis, laboratory diagnosis & prevention of common viral infections
	CO 3	Ability to understand the aetiology, pathogenesis, laboratory diagnosis & prevention of common fungal infections.

6th SEMESTER

Pathology IV	CO	Description
	CO 1	Understand the basics of transfusion medicine hazards component preparation, quality control and aphaeresis techniques
	CO 2	Understand the principles of immune hematology, blood collections, infectious
	CO 3	Learning and developing skill by acquainting with advancement in blood banking

Biochemistry IV	CO	Description
	CO 1	Understanding of biochemical and molecular processes involved in health and disease including enzymology and inborn errors of metabolism
	CO 2	Understanding of biochemical basis and rationale of clinical laboratory tests, and demonstrate ability to perform these tests.
	CO 3	Understanding Quality control in laboratory and developing skills by acquainting with advancement in Biochemistry

Microbiology IV	CO	Description
	CO 1	Ability to classify and identify the Protozoans and helminthes.
	CO 2	Ability to understand the aetiology, life cycle, pathogenesis, laboratory diagnosis & prevention of common parasitic infections.

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