

## Programme Outcomes (POs) for UG courses of Faculty of Life Sciences

1. To develop skills in graduate students to be able to acquire theoretical and practical knowledge in fundamentals of biology in respective disciplines of plants, animals, microbes and environment.
2. To inculcate ability to critically evaluate problems and apply lateral thinking and analytical skills for professional development.
3. To create awareness on ethical issues, good laboratory practices and biosafety.
4. To develop ability in youth for understanding basic scientific learning and effective communication skills.
5. To prepare youth for career in teaching, industry, government organizations and self Reliant entrepreneurship.
6. To make students aware of natural resources and environment and its sustainable Utilization.
7. To provide learning experience in students that instills deep interest in biological science for the benefit of society.

## Programme Learning Outcomes (PLOs) for UG courses Bachelor of Vocation in Medical Laboratory Technology

1. To develop critical thinking and problem solving.
2. To operate and maintain laboratory equipment, utilizing appropriate quality control and safety protocol.
3. To understand rigorous specimen handling protocols, prepare samples for analysis.
4. To make aware the students about human physiology and immunology.
5. To highlight the role of medical lab technician in the diagnosis of the disease.
6. To effect a transition of information and experiences learned in the MLT program to employment situations.

### Semester I

After completing this course, the learner will be able to:

1. Demonstrate the knowledge of structure, function and inter- relationship of bio molecules.
2. Understand the integration of various aspects of metabolism and their regulatory pathways.
3. Know about the apparatus and reagents used in analytical and diagnostic section of biochemistry.
4. Teach about the concept of quality control.

### Paper II

After completing this course, the learner will be able to:

1. To know the basics of microbiology and knowledge about the contributions of microbiologists.
2. Identify the microorganisms and the disease process as well as aseptic and sterile techniques.
3. Impart general insight into the history, bacterial genetics and serology.
4. Provide knowledge about the equipment used in microbiology and safety precautions.
- 5\*. Handle the instruments and know about the sterilization Techniques

### Paper III

After completing this course, the learner will be able to:

1. Learn about histopathology, classification of tissues and their functions.
2. Impart awareness about recording of specimens and maintaining records.
3. Gain knowledge about the morphology and anatomy of human body.
4. Use of various equipments for histology.
- 5\*. Study of laboratory organization related to histology and cytology.

### Semester II

After completing this course, the learner will be able to:

1. Provide a good theoretical and practical education in understanding importance of water.
2. Understand the organization of a clinical laboratory including lab information system, autoanalyzers in laboratory for qualitative analysis.
3. Introduce various body fluids with their biochemical composition and regulatory mechanism in blood pH.
4. To provide knowledge about various body fluids with their importance in diagnosis of different diseases.
- 5\*. Provide skills for accurate results as well as calibrate different laboratory instruments

### Paper II

After completing this course, the learner will be able to:

1. Know the occurrence, spread and control of bacterial infections.
2. Provide information about bacterial culture procedures, staining procedures and bio-chemical tests for identification of bacteria.
3. Know the occurrence, spread and control of mycological infections, culture methods required to perform micro-biological tests.
4. To learn general characters, life cycle and laboratory diagnosis of various medically important parasites.

5\*. To train the students with knowledge of medically significant isolates in mycology, parasitology, isolation methods and treatments.

### Paper III

After completing this course, the learner will be able to:

1. Provide knowledge about general principles, recording and labeling of histology specimens.
2. Gain knowledge about various fixatives for tissue embedding.
3. Enable the students to know about the working of microtome.
4. Learn about the methods of collection of museum specimens, preparation and their storage.
- 5\*. Prepare microtomy slides of various organs