



Department of MLT

Suren Das College, Hajo, Kamrup, Assam

Program Outcome & Course Outcome

CBCS -Course under Gauhati University

B. Voc. MLT

PROGRAM OUTCOMES (POS)

Department of MLT	After successfully completion of three years degree program in B.Voc MLT, a student should be able to
Program Outcomes (POs)	<p>POs-1. At the end of graduation, they should possess expertise which will provide them competitive advantage in pursuing higher studies from India or abroad.</p> <p>POs-2. To be eligible for employment in Medical laboratory, teaching, civil services and other industries.</p> <p>POs-3. To be able to become an entrepreneur by opening diagnostic center.</p>

COURSE CONTENT (CBCS)

SEMESTER	PAPER
Semester I	MLT-VC-1016: BASIC ANATOMY AND PHYSIOLOGY MLT-VC-1026: BIOCHEMISTRY – I MLT-VC-1036: CLINICAL PATHOLOGY
Semester II	MLT-VC-2016: MICROBIOLOGY - I MLT-VC-2026: BIOCHEMISTRY – II MLT-VC-2036: PATHOLOGY – II
Semester III	MLT-VC-3016: MICROBIOLOGY – II MLT-VC-3026: BIOCHEMISTRY – III MLT-VC-3036: PATHOLOGY – III SKILL ENHANCEMENT COURSE ZOO-SE-3024: Apiculture
Semester IV	MLT-VC- 4016: MICROBIOLOGY – III MLT-VC-4026: BIOCHEMISTRY – IV MLT-VC- 4036: PATHOLOGY – IV
Semester V	DISCIPLINE SPECIFIC ELECTIVE (DSE) MLT-VE- 5016: MICROBIOLOGY – IV MLT-VE- 5026: BIOCHEMISTRY – V MLT-VE- 5036: PATHOLOGY – V
Semester VI	DISCIPLINE SPECIFIC ELECTIVE (DSE) MLT-VE- 5016: MICROBIOLOGY – VI MLT-VE- 5026: BIOCHEMISTRY – VI MLT-VE- 5036: PATHOLOGY – VI

COURSE OUTCOMES (CBCS)

<i>Semester-I</i>	
Course	Learning Outcome (After completion of these courses students should be able to)
MLT-VC-1016: BASIC ANATOMY AND PHYSIOLOGY	<p>CO-1. The students will understand the basics and fundamentals of cells, tissues.</p> <p>CO-2. The students will understand different systems of the body including GI system, Respiratory system, cardiovascular system, urinary system, reproductive system, endocrine system etc.</p> <p>CO-3. Further the students have to learn about the medical terminology used in human anatomy, functions of different systems of human.</p>
MLT-VC-1026: BIOCHEMISTRY – I	<p>CO-1. The students will be able to identify various laboratory glassware, plastic ware and instruments along with care and maintenance of equipments and apparatus used in the laboratory.</p> <p>CO-2. The students will have understand the phlebotomist's duties towards identification of patient and taking their consents before withdrawing blood specimens.</p> <p>CO-3. In addition to that preparing appropriate site for blood samples.</p>
MLT-VC-1036: CLINICAL PATHOLOGY	<p>CO-1. In this paper the students will know about various blood collection equipment's, different types of blood sample collections, about colour coded vacutainers, anticoagulants.</p> <p>CO-2. Further the students have to know basics about blood and other samples with suitable collections and various tests.</p> <p>CO-3. The students have to learn about various laboratory hazards, safety and first-aid and personal hygiene.</p>
<i>Semester-II</i>	
Course	Learning Outcome (After completion of these courses students should be able to)
MLT-VC-2016: MICROBIOLOGY - I	<p>CO-1. The student will have basic knowledge about various microorganisms like bacteria and its growth & nutrition, virus, parasites.</p>

	<p>CO-2. Come to know how to identify bacteria, preparation of culture medium to grow bacteria.</p> <p>CO-3. The students will be able to perform various sterilization methods,</p> <p>CO-4. They will understand hospital born disease and its prevention and control.</p>
MLT-VC-2026: BIOCHEMISTRY – II	<p>CO-1. Understand basics about biochemistry of carbohydrates, lipids, vitamins, enzymes.</p> <p>CO-2. Will learn code of conduct for medical laboratory.</p> <p>CO-3. The students will able to perform various blood and urine tests.</p>
MLT-VC-2036: PATHOLOGY – II	<p>CO-1. The students will be able to understand basics about the production of various blood cells, haemostasis and coagulation and related tests,</p> <p>CO-2. Slide preparation for blood and bone marrow for normal and abnormal cells.</p> <p>CO-3. Development of aware healthcare waste, safe handling and management of waste.</p>
<i>Semester-III</i>	
Course	Learning Outcome (After completion of these courses students should be able to)
MLT-VC-3016: MICROBIOLOGY – II	<p>CO- 1. In this course the students will be able to understand about various bacteria & fungus and diseases caused by it and lab diagnosis.</p> <p>CO-2. Further the students will learn about various staining techniques for bacterial cell wall, bacterial capsule, fungal staining etc.</p>
MLT-VC-3026: BIOCHEMISTRY – III	<p>CO-1. The students will develop an understanding on the basics of Acid base balance.</p> <p>CO-2. They will have a broad knowledge on food and nutrition and its importance along with lipids, amino acids and protein metabolism.</p>
MLT-VC-3036: PATHOLOGY – III	<p>CO-1. In this paper the students will know about haemoglobin and various types of anaemia, different types of blood cell counts.</p>

	CO-2. They will learn about basics of histotechniques and body fluid analysis.
Semester-IV	
Course	Learning Outcome (After completion of these courses students should be able to)
MLT-VC- 4016: MICROBIOLOGY – III	CO-1. The students will learn about various Parasites and its types and the disease caused and various virus its transmission lab diagnosis etc. CO-2. The students will be able to identify different blood and stool parasites.
MLT-VC-4026: BIOCHEMISTRY – IV	CO-1. To learn about hormone and its mechanism, different enzymes and elevated levels in various disease conditions, CO-2. To know about the functions of liver, kidney, heart, thyroid and tests to evaluate these organs.
MLT-VC- 4036: PATHOLOGY – IV	CO-1. They will understand about blood groups, blood transfusion, different methods to identify blood groups, matching donor's blood with patient's blood, various screening procedures for donors. CO-2. Further the students will be able to learn about cytotechniques.
Semester V (DISCIPLINE SPECIFIC ELECTIVE)	
Course	Learning Outcome (After completion of these courses students should be able to)
MLT-VE- 5016: MICROBIOLOGY – IV	CO-1. In this paper the students will understand about body defense system and types, vaccines and immunization. CO-2. The students will learn infection that can be transmitted from hospital, prevention and control of hospital infection. CO-3. Further the students will have idea about various serological tests.
MLT-VE- 5026: BIOCHEMISTRY – V	CO-1. The students will be able to learn about water and mineral metabolism and associated diseases related to it. CO-2. To have brief knowledge about different inorganic ions and

	<p>importance in our body.</p> <p>CO-3. Deep information about formation of kidney stone, concept of acid and base with related disease.</p>
MLT-VE- 5036: PATHOLOGY – V	<p>CO-1. In this paper the students will learn about the tissue specimen, taking specimen for grossing, fix it with proper fixative.</p> <p>CO-2. Methods of processing the tissue specimen to place the fixed tissue in the paraffin, taking tissue specimen for embedding.</p> <p>CO-3. The Way of Proper sectioning of the tissue and stain it with various staining solutions.</p>
Semester-VI (DISCIPLINE SPECIFIC ELECTIVE)	
Course	Learning Outcome (After completion of these courses students should be able to)
MLT-VE- 5016: MICROBIOLOGY – VI	<p>CO-1. The students will learn in details about various medically important bacteria.</p> <p>CO-2. The basics of molecular biology and different types of microscope including electron microscope.</p>
MLT-VE- 5026: BIOCHEMISTRY – VI	<p>CO-1. The students will learn about basics of DNA & RNA, replication of DNA, genetic engineering.</p> <p>CO-2. To discuss metabolic disorders of amino acids, elevation of enzymes in disease condition, isoenzymes.</p> <p>CO-3. To know the techniques used in biochemistry.</p> <p>CO-4. Further the students will understand the basics of biostatistics.</p>
MLT-VE- 5036: PATHOLOGY – VI	<p>CO-1. In this paper the students will learn in details about cytopathology and various branches, different types of specimen used in cytopathology lab, different normal and abnormal cells.</p> <p>CO-2. The students will learn Fine needle aspiration cytology along with different fixation and staining.</p>
<p>COURSE OUTCOMES (ZOOLOGY SKILL ENHANCEMENT COURSES) Course Objective: To introduce students to bee hive colony, individuals comprising the beehive, their ethology. The students are to have an idea on how to rear bees in a domestic environment, identify its potential enemies and correlate all of them for commercial purpose</p>	