

## **BACHELOR OF MEDICAL LABORATORY TECHNOLOGY (BMLT)**

**Course Title:** Bachelor of Medical Laboratory Technology

**Abbreviation:** BMLT

**Type of Course:** A three years Degree course

**Pattern:** Semester system (6 semesters)

### **Course Objective:**

Bachelor in Medical Laboratory Technology program aims to provide the aspirant with sufficient knowledge and skills to carry out routine laboratory diagnostic procedures and some sophisticated laboratory diagnostic procedures. The course deals with new advances in Management of laboratories, instrumentation etc. along with advanced professional skills. As a health professional the students shall have a value added responsibility towards the community health issues to understand and manage the prevailing health problems and apply suitable remedial measure. After completion of the course the students will develop a lifelong career of personal and practicing professional growth with ethical codes and self esteem.

### **Course Outcome:**

Medical laboratory science is an umbrella field comprising a number of different disciplines. The major role of medical laboratory is to assist in the diagnosis and treatment of disease by performing qualitative quantitative or screening test procedures or examination on materials derived from the human body. A medical laboratory technologist is a health care professional who performs chemical, haematological, immunological, histopathological, cytopathological, microscopic and bacteriological diagnostic analyses on body fluids as well as other specimens. The syllabus covered all the important area of laboratory sciences to increase their analytical skills, quality control, and advanced knowledge so that they will work in clinical laboratories at hospitals, reference labs, bio technology labs and non clinical industrial labs. Students will know and comprehend the significant theories, models, themes, and ideas in the biomechanical, physiological, behavioural, biological, socioeconomic, environmental, and socio-cultural aspects and Community Health.

### **Minimum eligibility criteria and the process of admission:**

Students should have passed in class 12th in Science with minimum 50% (45% for SC/ST) or equivalent CGPA from a recognized board.

## **Curriculum for Bachelor of Medical Laboratory Technology (BMLT)**

### 1<sup>ST</sup> YEAR: SEMESTER-I

| Sl | Course Code | Subject                                  | Period |   |   | Credit    |
|----|-------------|--|--------|---|---|-----------|
|    |             |  | L      | T | P |           |
| 1  | XBM1001     | Human Anatomy & Physiology-I (Theory)    | 3      | - | - | 3         |
| 2  | XBM1002     | Pathology-I (Theory)                     | 3      | - | - | 3         |
| 3  | XBM1003     | General Microbiology-I (Theory)          | 3      | - | - | 3         |
| 4  | XBM1004     | General Biochemistry-I (Theory)          | 3      | - | - | 3         |
| 5  | XBM1005     | Communication For Professionals (Theory) | 3      | - | - | 3         |
| 6  | XBM1101     | Human Anatomy & Physiology I (Practical) | -      | - | 3 | 2         |
| 7  | XBM1102     | Pathology-I (Practical)                  | -      | - | 3 | 2         |
| 8  | XBM1103     | General Microbiology-I (Practical)       | -      | - | 3 | 2         |
| 9  | XBM1104     | General Biochemistry-I (Practical)       | -      | - | 2 | 2         |
| 10 | XBM1501     | Seminar & GD                             | -      |   |   |           |
| 11 | XBM1502     | Skillx                                   |        |   |   |           |
|    |             | <b>TOTAL</b>                             |        |   |   | <b>23</b> |

### SEMESTER-II

| Sl. | Course Code | Subject                              | Period |   |   | Credit    |
|-----|-------------|--------------------------------------|--------|---|---|-----------|
|     |             |                                      | L      | T | P |           |
| 1   | XBM2001     | General Microbiology-II              | 3      | - | - | 3         |
| 2   | XBM2002     | Pathology-II                         | 3      | - | - | 3         |
| 3   | XBM2003     | Biochemistry-II                      | 3      | - | - | 3         |
| 4   | XBM2004     | Fundamentals Of Computer Science     | 3      | - | - | 3         |
| 5   | XBM2005     | Human Anatomy And Physiology- II     | 3      | - | - | 3         |
| 6   | XBM2101     | Pathology-II (P)                     | -      | - | 3 | 2         |
| 7   | XBM2102     | General Microbiology-II (P)          | -      | - | 3 | 2         |
| 8   | XBM2103     | Biochemistry-II (P)                  | -      | - | 3 | 2         |
| 9   | XBM2104     | Human Anatomy And Physiology- II (P) | -      | - | 3 | 2         |
| 10  | XBM12501    | Seminar & GD                         | -      |   |   |           |
| 11  | XBM2502     | Skillx                               |        |   |   |           |
|     |             | <b>Total</b>                         |        |   |   | <b>23</b> |

### 2<sup>ND</sup> YEAR: SEMESTER III

| Sl. | Course Code | Subject                                  | Period |   |    | Credit |
|-----|-------------|--|--------|---|----|--------|
|     |             |  | L      | T | P  |        |
| 1   | XBM3001     | Hematology & Blood Banking-I (Theory)    | 3      | 1 | -  | 3      |
| 2   | XBM3002     | Clinical Biochemistry-I (Theory)         | 3      | - | -  | 3      |
| 3   | XBM3003     | Basic And Clinical Pharmacology (Theory) | 3      | - | -- | 3      |

|    |         |  |   |   |   |           |
|----|---------|--|---|---|---|-----------|
| 4  | XBM3004 | Health Education And Health Communication (Theory) | 3 | - | - | 3         |
| 5  | XBM3005 | Biomedical Waste Management (Theory)               | 3 | - | - | 3         |
| 7  | XBM3101 | Hematology & Blood Banking-I (Practical)           | - | - | 3 | 2         |
| 8  | XBM3102 | Clinical Biochemistry-I (Practical)                | - | - | 3 | 2         |
| 9  | XBM3501 | Seminar & GD                                       |   |   |   |           |
| 10 | XBM3502 | Skillx   |   |   |   |           |
|    |         | <b>TOTAL</b>                                       |   |   |   | <b>19</b> |

#### SEMESTER-IV

| Sl. | Course Code | Subject   | Period |   |   | Credit    |
|-----|-------------|---|--------|---|---|-----------|
|     |             |   | L      | T | P |           |
| 1   | XBM4001     | Hematology & Blood Banking-II (Theory)                | 3      | - | - | 3         |
| 2   | XBM4002     | Clinical Biochemistry-II (Theory)                     | 3      | - | - | 3         |
| 3   | XBM4003     | Bacteriology, Immunology And Parasitology (Theory)    | 3      | - | - | 3         |
| 4   | XBM4004     | Community Medicine (Theory)                           | 3      | - | - | 3         |
| 5   | XBM4101     | Hematology & Blood Banking-II (Practical)             | 3      | - | - | 3         |
| 6   | XBM4102     | Clinical Biochemistry-II (Practical)                  | -      | - | 3 | 2         |
| 7   | XBM4103     | Bacteriology, Immunology And Parasitology (Practical) | -      | - | 3 | 2         |
| 8   | XBM4501     | Seminar & GD  | -      | - | 3 | 2         |
| 9   | XBM4502     | Skillx  |        |   |   |           |
|     |             | <b>TOTAL</b>  |        |   |   | <b>21</b> |

#### 3<sup>rd</sup> YEAR: SEMESTER V

| Sl. | Course Code | Subject   | Period |   |   | Credit    |
|-----|-------------|---|--------|---|---|-----------|
|     |             |   | L      | T | P |           |
| 1   | XBM5001     | Virology, Mycology And Applied Microbiology (Theory)    | 3      | - | - | 3         |
| 2   | XBM5002     | Histopathology And Cytopathology Techniques (Theory)    | 3      | - | - | 3         |
| 3   | XBM5003     | Histotechnology (Theory)                                | 3      | - | - | 3         |
|     | XBM5004     | Clinical Enzymology And Automation (Theory)             | 3      | - | 3 | 3         |
| 4   | XBM5101     | Virology, Mycology And Applied Microbiology (Practical) | -      | - | 3 | 2         |
| 5   | XBM5102     | Histopathology And Cytopathology Techniques (Practical) | -      | - | - | 2         |
| 6   | XBM5501     | Seminar & GD  |        |   |   |           |
| 7   | XBM5502     | Skillx  |        |   |   |           |
|     |             | <b>TOTAL</b>  |        |   |   | <b>16</b> |

### SEMESTER-VI

| Sl. | Course Code | Subject   | Period |   |   | Credit    |
|-----|-------------|---|--------|---|---|-----------|
|     |             |   | L      | T | P |           |
|     | XBM6001     | Diagnostic Molecular Biology (Theory)                     | 3      | - | - | 3         |
| 1   | XBM6002     | Essentials Of Medical Pharmacology (Theory)               | 3      | - | - | 3         |
| 2   | XBM6003     | Biomedical Techniques, Lab Management And Ethics (Theory) | 3      | - | - | 3         |
| 3   | XBM6101     | Diagnostic Molecular Biology (Practical)                  | -      | - | 3 | 2         |
| 4   | XBM6102     | Hospital Training   |        |   |   | 6         |
| 5   | XBM6501     | Seminar & GD  |        |   |   |           |
| 6   | XBM6502     | Skillx  |        |   |   |           |
|     |             | <b>TOTAL</b>  |        |   |   | <b>17</b> |

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