

# ANANDA CHANDRA COLLEGE

(GOVERNMENT SPONSORED)

AFFILIATED TO: UNIVERSITY OF NORTH BENGAL

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Ref. No.

March 13, 2025

## NOTIFICATION

This is for information to all concerned that the Department of Physiology and the Department of Zoology at Ananda Chandra College, Jalpaiguri, will be offering an Add-on Course in "Medical Laboratory Technology" from March 2025 to May 2025 (36 hours duration).

The registration link for the aforementioned Add-on Course is:

<https://forms.gle/HKzX9bRjMjPqPmXi8>

Heads of all Bioscience Departments are requested to circulate the registration link and flyer among all students.

- The last date for registration is March 18, 2025 (12 midnight).
- The list of provisionally selected candidates will be published on March 19, 2025, on the departmental notice board of the Department of Physiology & Zoology.
- Provisionally selected candidates must deposit a fee of Rs. 200/- in cash at the designated bank branch by March 22, 2025.

Bank name : Indian Overseas Bank  
Branch : Collegepara, Jalpaiguri 735101  
Branch code : 1828  
A/c No. : 182802000000004  
A/c type : Current  
IFSC : IOBA0001828

- The final selection list will be published on March 24, 2025 on the departmental notice board of the Department of Physiology & Zoology.

Classes will commence on & from March 27, 2025, at the Department of Physiology from 12:00 noon onwards.

*Debashis Das*

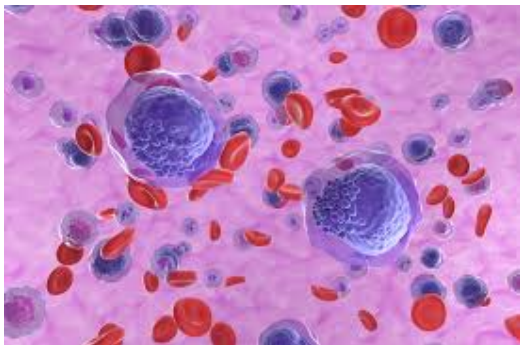


(Dr. Debashis Das)  
Principal

Principal  
Ananda Chandra College  
Jalpaiguri

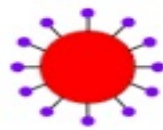


# Add-on Course MEDICAL LABORATORY TECHNOLOGY



## Blood types

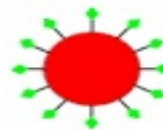
Type A



Anti-B



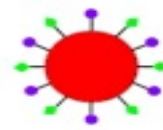
Type B



Anti-A



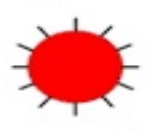
Type AB



None



Type O



Anti-A



Anti-B



# BLOOD

Groups Chart



# BROCHURE

Add-on Course

## MEDICAL LABORATORY TECHNOLOGY

*Jointly organized by*

Department of Physiology, Ananda Chandra College, Jalpaiguri

&

Department of Zoology, Ananda Chandra College, Jalpaiguri

## MEDICAL LABORATORY TECHNOLOGY

Course Coordinator :

Dr. Bikramjit Raychaudhury  
HoD, Dept. of Physiology

Dr. Tanmay Datta  
HoD, Dept. of Zoology

Contact :  
8013686951

In collaboration with  
IQAC, Ananda Chandra College

Course Duration

36 Hours

## Prolouge

*“Learning never exhausts the mind.”— Leonardo da Vinci*

Perhaps no other man better epitomizes a multidisciplinary approach to life than this multi-faceted genius. The young impressionable minds entering our portals after school choose a field of study influenced by parental/peer opinions often not knowing where their true forte lies. Our perspective is limited by our knowledge horizon, expand it and it will transform your mind. This Institution has been offering ADD-ON zero credit courses with a view to broadening their perspectives and perhaps in some cases discover their true vocation.

Understanding the importance of multidisciplinary education in fostering holistic development and adaptability in students, the National Education Policy (NEP) 2020 has made multidisciplinary courses, a compulsory part of the curriculum.

It is envisaged that professionally qualified graduates with a sound knowledge of their core disciplines and expertise in a concerned skill will have more openings in service, industry and self-employment sectors.

The objective of Add-on courses is to ensure that graduates who pass out after completing these courses would have knowledge, skills and aptitude for gainful employment in the wage sector in general and also encourage entrepreneurship and turn our next generation from job seekers to job-creators.

To meet this challenge Ananda Chandra College has started offering short-term skill enhancing add-on courses that not only have utility for job, self-employment but also lead to a holistic growth and empowerment of the students.

## Add-on Course

Add on courses are introduced in order to boost up a student's academic engagement, motivation to cultivate knowledge, morale and also to enhance potentials for employability. We have taken due care to design the course content and frame the course structure in concoction with the regular UG course, so that students can continue with any add on course simultaneously. Keeping in view NEP-2020 and its prescribed guidelines, the add-on courses are structured in a way that would complement a student's regular course.

Ananda Chandra College works with the vision to produce competent students to face current scenario and emerging trends with ease through skillful value added courses. Value Added Courses are offered to all the students, which is intended to provide an additional learner centric, graded skill, which is

oriented to technical and non-technical training. The courses enhance the ability of students in their respective domains and progress up in communication skills too. It bridges the gap between academia and the knowledge beyond academia. We foresee the world into which our students are going to step into and offer them a plethora of value-added certificate courses from varied departments for their holistic development. Courses offered are chosen based on current trends, relevance and value by all the departments. The students are also awarded a certificate on their successful completion of the course.

## Add-on Course in Medical Laboratory Technology

Medical Laboratory Technology course is the branch of medical science. This helps to perform laboratory investigations related to the diagnosis, treatment, and prevention of disease.

Medical Laboratory Technology is also commonly known as Clinical laboratory science. It is an allied health profession that is concerned with the diagnosis, treatment and prevention of disease using clinical laboratory tests.

The Medical laboratory technologists are trained for the laboratory testing and procedures. They play a vital role in the diagnosis, treatment and prevention of disease. In this course classroom instruction and laboratory training are there.

### Objectives

1. To fulfill the manpower need of pathological laboratories and blood bank.
2. To carry out routine laboratory tests such as blood count, stool, sputum examination, bacteriological, serological and biochemical tests.
3. To carry out medical laboratory work in various Departments of medical and sciences colleges

**Intake Capacity** : 50 (Fifty)

**Eligibility Criteria** : Students currently pursuing an undergraduate degree (Hons./Programme/Major/MDC) in any branch of Biological Science from Ananda Chandra College, Jalpaiguri.

**Admission criteria** : "First come first serve basis"

**Duration:** 36 Hours (Starting from March to May, 2025)

**Syllabus Outline:** Human Physiology, Clinical Biochemistry, Clinical Pathology, Histopathology & Cytopathology, Clinical Microbiology, Haematology, Laboratory Instrumentation etc.

**Course Fee** : Rs. 200/- (Two Hundred only)

**Medium of Instruction** : English

### ***Job opportunities***

1. Blood Bank Assistant
2. Laboratory assistant in pathological Laboratory

## **Course Curriculum**

The curriculum covers the foundational aspects of medical lab technology, advanced diagnostic techniques and specialized practices. Key subjects include:

***Introduction to Medical Lab Technology:*** This module introduces students to the role of laboratory technology in healthcare.

***Human Anatomy and Physiology:*** Students learn the basic structure and functions of the human body.

***Clinical Biochemistry:*** This module focuses on the chemical analysis of biological fluids to diagnose diseases.

***Hematology:*** Hematology introduces students to the study of blood and its components.

***Microbiology:*** Microbiology focuses on identifying pathogens responsible for infections.

***Laboratory Safety and Quality Control:*** This module ensures students are well-versed in maintaining a safe and efficient lab environment.

***Pathology:*** Pathology involves the study of diseases and their effects on the body.

## **Introduction about Certificate in Medical Laboratory Technology**

***Certificate in Medical Laboratory Technology:*** A Certificate in Medical Laboratory Technology is a specialized educational program designed by the Dept. of Physiology, Ananda Chandra College to equip individuals with the essential knowledge, skills and competencies required to work as medical laboratory technicians or technologists in healthcare settings. This certificate program focuses on preparing students to perform laboratory tests, analyse samples and assist physicians and healthcare professionals in diagnosing, treating and monitoring diseases and conditions.

### ***Key Components of the Certificate Program:***

***Foundational Knowledge:*** Participants are introduced to the fundamental principles of medical laboratory science, including anatomy, physiology, biochemistry, microbiology, and immunology. This foundational knowledge forms the basis upon which more specialized skills are developed.

***Laboratory Techniques and Procedures:*** Practical training is an integral component of the program, enabling students to acquire hands-on experience in performing a wide range of laboratory tests and procedures. This includes specimen collection, sample processing, microscopy, culture techniques, molecular diagnostics, and advanced laboratory instrumentation.

*Quality Assurance and Safety:* The program emphasizes the importance of quality assurance, safety protocols, and regulatory compliance in medical laboratories. Students learn how to maintain accurate records, adhere to standard operating procedures, ensure patient confidentiality, and implement safety measures to minimize risks and maintain the integrity of laboratory operations.

*Clinical Rotation:* Many certificates in Medical Laboratory Technology programs include clinical rotations or practicum experiences, allowing students to gain real-world experience working in clinical laboratories, hospitals, diagnostic centers, or research facilities under the supervision of experienced professionals.

## Syllabus of a Certificate in Medical Laboratory Technology

A Certificate in Medical Laboratory Technology (MLT) typically covers various aspects of laboratory sciences, preparing students for entry-level positions in medical laboratories. The curriculum includes theoretical knowledge and practical skills necessary for laboratory testing and analysis.

### *Basic Sciences:*

- Physiology
- Biochemistry
- Microbiology
- Immunology

### *Clinical Laboratory Techniques:*

- Laboratory safety and regulations
- Specimen collection, handling, and processing
- Quality control and assurance in laboratory procedures
- Laboratory mathematics and calculations

### *Haematology:*

- Blood cell morphology
- Hematological disorders
- Blood typing and cross-matching

### *Clinical Chemistry:*

- Principles of chemical analysis
- Tests for various biochemical parameters (e.g., glucose, cholesterol, enzymes)

### *Microbiology and Immunology:*

- Identification of microorganisms (bacteria, viruses, fungi, parasites)
- Culture techniques and sensitivity testing
- Serological tests for infectious diseases

### *Histotechnology:*

- Preparation of tissue samples for microscopic examination
- Staining techniques for tissue and cellular components

### *Clinical Laboratory Management:*

- Laboratory information systems
- Inventory management
- Ethical and legal considerations in laboratory practices

## Programme Outcomes

Upon successful completion, students will be well-equipped to work in hospitals, diagnostic centers, research labs, and other healthcare institutions. This course provides a strong foundation for a career in medical lab technology and opens doors to various advanced opportunities in the healthcare sector.

## Assessment/Examination

Step 1 –Written Examination (MCQ)

Step – Viva-voce

## Evaluation

After the completion of course, examination will be taken for 100 marks. On the basis of marks obtained in examination the result will be prepared.

The gradation system for the declaration of results will be as follows:

## Grading System

Level	Excellent	Very Good	Good	Above Average	Average	Below Average	Poor	Fail
Grade	A <sup>+</sup>	A	B <sup>+</sup>	B	C	D	E	F
Marks Range	90-100	80-89	70-79	60-69	50-59	40-49	33-40	0-32

## Certification

After passing all the examinations listed above a student will be given a certificate from Ananda Chandra College, Jalpaiguri.

### FACULTIES

Department of Physiology, Ananda Chandra College, Jalpaiguri

Department of Zoology, Ananda Chandra College, Jalpaiguri

Department of Microbiology, Ananda Chandra College, Jalpaiguri

### GUEST SPEAKERS

Dr Rajen Haldar, Asst. Prof., Dept. of Physiology, University of Calcutta, Kolkata

Dr. Smritiratan Tripathy Assistant Professor & HoD, Berhampore Girls' College, Berhampore, Murshidabad

Dr. Anindita Chakraborty, Asst. Prof., Dept. of Physiology, ABN Seal College, Cooch Behar

Shri Samiran Mondal, Asst. Prof., Dept. of Physiology, Jhargram Raj College, Midnapore

Shri Amit Kumar Sarkar, Research Scholar, Assam Don Bosco University, Tepesia, Assam

Shri Pratip Das, Jalpaiguri Govt. Medical College, Jalpaiguri





# CERTIFICATE

Add-on Course on  
MEDICAL LABORATORY TECHNOLOGY (MLT)



*Organized by*  
**Department of Physiology & Department of Zoology**  
**Ananda Chandra College, Jalpaiguri**

A Govt. Aided General Degree College affiliated to University of North Bengal

This is to certify that Mr. / Mrs. / Smt. .... has participated and completed his/her Add-on course on MLT jointly conducted by the Department of Physiology & Department of Zoology in collaboration with IQAC, Ananda Chandra College, Jalpaiguri held on March to May 2025 and obtained Grade.....

**Principal**  
**Dr. Debashis Das**  
Ananda Chandra College

**Coordinator, IQAC**  
**Dr. Paramita Dasgupta**  
Ananda Chandra College

**Course Coordinator**  
**Dr. Bikramjit Raychaudhury**  
Dept. of Physiology  
Ananda Chandra College

**Course Coordinator**  
**Dr. Tannay Datta**  
Dept. of Zoology  
Ananda Chandra College

Date : 01.06.2025