



INDIAN MEDICAL ASSOCIATION INDIAN MEDICAL ASSOCIATION



Certificate Course Phlebotomy Technician



Introduction

Phlebotomy is a part of Medical Laboratory Technology. Medical Laboratory Technology deals with analyses of samples, diagnosis, equipments and tools. In a simple word, Phlebotomy deals with collecting blood samples from patients, storing samples safely, labelling samples, and more.

Benefit of Phlebotomy Technician Course

The Phlebotomy Technician program includes theory and hands-on instruction. The program will teach students the concepts of Phlebotomy & Infection Control, Healthcare issues, Human Anatomy & Physiology, Phlebotomy Equipments & Tools, Phlebotomy Procedures and Phlebotomy Fundamental Essentials.

Phlebotomy Technician course provides students knowledge to work in a laboratory, hospital, nursing homes, physicians offices, private clinics, Blood Bank, Diagnostic centres, infusion centres, blood donation centres, etc. Phlebotomy Technician provides a unique view of allied health care and general medicine.

Phlebotomy - Definition

Phlebotomy Technician also known as a Phlebotomist can assist a medical laboratory technician, pathologists, help doctors or medical practitioners, health care providers and also work as a Lab Assistant, Mobile Phlebotomist, Clinical Assistant, Medical Assistant, Haematology Technician, etc. They can work with nurses, physicians, EMTs and even surgeons also. Thus they may become a KEY part of the **Health Care System**

They are responsible for collecting and preparing blood samples for laboratory testing, patient histories and to save make a difference patients lives by collecting blood samples, plasma, etc.

Phlebotomy Technician is a job oriented training course and students may consider this short term training program as an excellent career in the medical field to interact with the community.



COURSE DETAIL

Name of the Course	:	Certificate in Phlebotomy Technician
Fee of course	:	Rs.15,000/- only for full course
Selection Criteria	:	Written test followed by Interview

ELIGIBILITY CRITERIA

Candidates passed 10 + 2 from and Board/ CBSE/ ICSE board or Pre-University examination with 40% percent marks in science stream.

AGE

A candidate seeking admission to Phlebotomy course should have 17 years of age, as on 31st, December of the year of admission but not more than 25 years at the time of admission. Age relaxation of 5 years for SC/ST candidates and 3 years for OBC candidates is admissible.

DURATION OF THE COURSE

The duration of the Courses shall be Six Months.

MEDIUM OF INSTRUCTION

English shall be the medium of instruction for all the study and for the examination of Course.

ATTENDANCE

A candidate is required to attend **at least 75 percent of total classes** conducted in year in all subjects prescribed for the year, separately, in theory and practical/clinical postings to become eligible to appear for the. The Principals should notify at their college the attendance details at the end of each term without fail, under intimation to the Institute.

1. 80% attendance in theoretical
2. 90% in Practical Training for qualifying to appear for the final examination.



SNO	CHAPTER	CONTENTS
1	Roles of Phlebotomists	<ul style="list-style-type: none">➤ Define the term phlebotomy.➤ List the reasons for blood collection.➤ List the duties and responsibilities of a phlebotomist.➤ Describe personal characteristics that are important in a phlebotomist➤ Appropriate use of laboratory related medical terminology in daily activities with colleagues, patients and family.
2	Health Care Settings	<ul style="list-style-type: none">➤ Demonstrate knowledge of the health care delivery system and associated medical terminology.➤ Discuss the roles of the clinical laboratory personnel and their qualifications for these professional positions.➤ List the types of laboratory procedures performed in the various sections of the laboratory.➤ Visit of hospitals/medical centres/diagnostic centres and discuss various types of laboratories in the hospital.➤ Describe the diagnostic centres and medical lab facilities at different levels
3	Clerical duties	<ul style="list-style-type: none">➤ Describe the test request process, identify the types of requisitions, and list the information required on a requisition.➤ Describe how to verify fasting and other patient status requirements, and what to do when these requirements have not been met.➤ List the methods used to confirm the patient's identity for a variety of situations and patient age groups.➤ Explain how the phlebotomist should handle ID discrepancies and the procedure for a "missing" ID band.➤ List the items required on Specimen collection containers and requisitions.



4	Medical Terminology	<ul style="list-style-type: none">➤ List the common medical word roots, prefixes & suffixes, and state their definition.➤ List the abbreviations commonly associated with laboratory tests.➤ Relate body positions, directional terms and planes of the body to phlebotomy.
5	Venipuncture Equipment:	<ul style="list-style-type: none">➤ List and describe the use of various types of equipment needed for venipuncture blood collection.➤ Describe when to wear gloves and when they should be changed.➤ Compare and contrast the various types of antiseptics and disinfectants and describe their uses.➤ Discuss the various types of wastes generated by phlebotomy and list their proper waste containers.➤ Identify and describe the various types of tourniquets, the reason for their use, proper placement and maximum time allowed.➤ Describe the various types of needles, their parts, sizing by gauge and length, common use, and safety features.➤ Describe the color coding used to quickly identify the presence or absence of additives.
6	Body Systems (Structure and Function of Human Body)	<ul style="list-style-type: none">➤ List the eleven major body systems.➤ Explain the organisation of body cells, tissues, organs, organ systems, membranes and glands in the human body.➤ Describe cell and various types of tissues, different types of organ systems, different types of body fluids, secretions and excretions, structure and functioning of human body systems.➤ Know which laboratory tests are associated with the different body systems.
7	Blood Components	<ul style="list-style-type: none">➤ Differentiate between serum and plasma.➤ Describe the categories of tube additives used in blood collection, list the various additives in each category, and describe how each additive works.



<p>8</p>	<p>Venipuncture</p>	<ul style="list-style-type: none">➤ Describe how to prepare patients for testing, how to answer inquiries concerning tests, and what to do if a patient objects to a test.➤ List methods used to locate veins that are not prominent.➤ List the effects of tourniquet, pumping first, and heating on venipuncture.➤ Describe proper needle insertion and withdrawal techniques including direction, angle, depth and aspiration for venipuncture.➤ List the correct order of steps for performing the venipuncture procedure with an evacuated tube system, the syringe system, and the butterfly system.➤ List common causes for the failure to obtain blood.➤ Describe the principle behind, and list the order of draw for the evacuated tube system and the syringe system.➤ Describe post puncture care of the patient.
<p>9</p>	<p>Skin Puncture</p>	<ul style="list-style-type: none">➤ Describe the various features needed on skin puncture lancets and micro collection devices.➤ Discuss the purpose and methodology for puncture site warming.➤ List the indications / advantages for performing Skin Punctures in pediatric and adult populations.➤ Identify laboratory tests that have a different reference values when collected by skin puncture.➤ List acceptable and unacceptable sites for Skin Puncture on adult and pediatric patients.➤ Describe the correct order of steps in the performance of a Skin Puncture.➤ Describe the labeling of micro collection specimens.➤ List the tests most commonly done on skin puncture specimens.
<p>10</p>	<p>Arterial Specimens</p>	<ul style="list-style-type: none">➤ State the primary reason for performing an arterial puncture procedure.➤ Identify the sites that can be used for arterial



		<p>puncture, the criteria used for the selection of the site, and the advantages and disadvantages of each site.</p> <ul style="list-style-type: none">➤ List the additional equipment and supplies needed for arterial puncture.➤ Describe patient assessment and preparation procedures.➤ List the correct order of steps in performing arterial blood gas collection on both an artery and a capillary site.➤ List complications associated with arterial puncture, identify factors that may affect the integrity of the blood gas sample, and describe the criteria for sample rejection.➤ Identify how heparin prevents blood from clotting.
11	Lab Safety	<ul style="list-style-type: none">➤ Discuss the biohazard, sharps, chemical, fire, electrical and radiation hazards that a phlebotomist might encounter and identify the safety procedures associated with each hazard.➤ Identify the symbols for: Radiation Hazard, Sharps Hazard, Chemical Hazard, Biohazard, Fire Hazard, Electrical Hazard, Radiation Hazard, and Physical Hazard.➤ List the common work related injuries in the laboratory setting, including latex allergies, and their prevention techniques.➤ List the causes of stress in the work environment and discuss the coping skills and techniques used to deal with stress in the work environment.
12	Complications	<ul style="list-style-type: none">➤ Describe measures used to ensure patient safety in various patient settings, i.e., inpatient, out patient pediatrics, emergency situations, etc.
13	Infection Control	<ul style="list-style-type: none">➤ List the components of the chain of infection and the safety precautions that break the chain.➤ Identify and discuss the modes of transmission for infectious diseases and the methods for prevention.➤ Identify and properly label Bio hazardous specimens.➤ Discuss key points of the Blood borne Pathogens Standard, including changes required by the



		<p>Needle stick Safety and Prevention Act.</p> <ul style="list-style-type: none">➤ List the personal protective equipment required for phlebotomists and describe their function.➤ List the procedural order for proper infection control techniques, such as hand washing, gowning, gloving, masking, and double bagging.➤ Differentiate between sterile and aseptic techniques.➤ Hand washing process➤ Importance of PPPE and proper uses of PPE➤ Vaccinations of common infection diseases.
14	Specimen Processing	<ul style="list-style-type: none">➤ Describe the phlebotomist's role in collecting and / or transporting specimens to the laboratory.➤ List the general criteria for suitability of a specimen for analysis, and the reasons for specimen rejection or recollection.➤ List common tests that must be chilled immediately after collection.➤ List common tests that are affected by exposure to light.➤ Describe the potential clerical and technical errors that may occur during specimen processing.➤ Discuss safety rules for specimen processing and the safe operation of a centrifuge.➤ Discuss regulations for the transport of blood and blood containing body fluids.➤ Identify basic metric units and prefixes used in the laboratory.➤ Read both Fahrenheit and Celsius temperature charts.➤ Define military time and convert from traditional 12-hour clock to 24-hour clock.
15	Non-Blood Requirements	<ul style="list-style-type: none">➤ Match the different types of non blood body fluids with their description.➤ List the appropriate instructions for patients in the proper collection and preservation for various samples, including, urine, sputum, and stools.



		<ul style="list-style-type: none">➤ Select correct patient collection containers for the various non blood samples.➤ Contrast the different types of urine specimen collections.➤ List the most common tests performed on urine, stool, semen, CSF and other body fluids.➤ Differentiate between tests done on the Physical Exam, Chemical Exam, Microscopic Exam and Microbiology Examination of Urine.➤ List common reasons for performing a Urine Drug Test.➤ List the common problems associated with Urine Pregnancy testing
16	Lab Regulations Issue	<ul style="list-style-type: none">➤ Describe the Regulations and describe their impact on laboratories.➤ Discuss the role of CAP and NAPBL in the regulation and accreditation of laboratories.➤ Identify the different types of Lab testing complexity as defined by NABL, GLP norms, PNDT Act, ISO norms.➤ Describe the sanctions or penalties imposed for noncompliance.➤ Describe the personnel standards for laboratory testing personnel as defined by NABL, GLP norms, PNDT Act, ISO norms.➤ Identify the different categories of laboratory documentation.➤ Identify common deficiencies found in the phlebotomy area during laboratory inspections.
17	Legal & Ethical Issues	<ul style="list-style-type: none">➤ Define the different terms used in the medico legal aspect for phlebotomy.➤ Describe the various types of patient consent.➤ List policies and protocol designed to avoid medico legal problems.➤ Discuss the major points of phlebotomist's responsibility for maintaining confidentiality of privileged information on individuals.➤ Describe when and how to complete Incident reports.➤ Give examples of how phlebotomists could be



		<p>involved in medical malpractice law suits.</p> <p>➤ List ways to avoid lawsuits.</p>
18	Basic Computer Knowledge	<ul style="list-style-type: none">➤ Application of computers in Clinical Laboratory.➤ Differentiate between the hardware and software➤ Definition of Input and Output devices with examples.➤ Fundamental knowledge of operating systems and their functions.➤ Latest Software version such as Windows 2010 and its utilities.➤ Basic operations of Microsoft office 2000 – MS Word, MS Excel, PowerPoint Presentation.➤ Data entry, Data processing and Laboratory Information Systems (LIS).➤ Communication between laboratories and users➤ Internet facility and it's use.
19	Bio Safety and Waste Management	<ul style="list-style-type: none">➤ Importance of proper and safe disposal of bio-medical waste and treatment.➤ Categories of bio-medical waste.➤ Segregation, storage and safe disposal of biomedical waste.➤ Treatment of bio-medical waste➤ Colour Coding System