

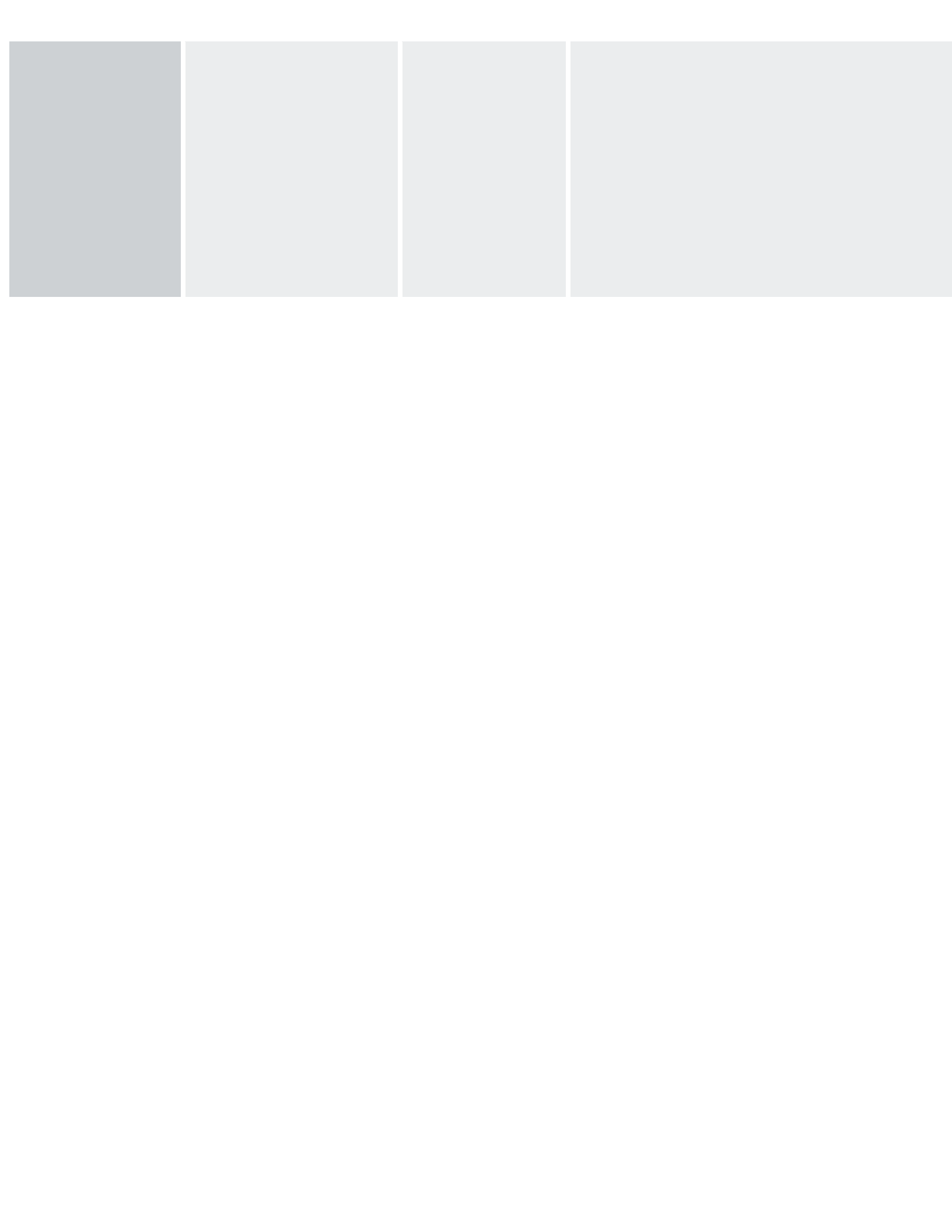


Certified EKG/Phlebotomy Technician

curriculum

This course provides an introduction to the theory, techniques, and roles of a phlebotomist and electrocardiogram (EKG) technician. Students learn phlebotomy skills, including skin puncture, venipuncture, blood collection, and quality assurance. Additional topics include infection control, medical terminology, quality assurance, principles of venipuncture, specimen handling, basic hematology, and basic anatomy of the venous system. Students learn about the cardiovascular system as it related to the performance of an EKG. Students gain knowledge in basic EKG tracing, rate, rhythm, common heart abnormalities, and the use and function of the EKG machine.

Units	Modules	Clinical Lab Skills	Takeaways
Unit 1 Introduction to Phlebotomy & Infection Control	<ul style="list-style-type: none"> Introduction & Duties to Phlebotomy Technician Occupational safety and health hazard administration OSHA Healthcare safety hazards Chain of infection Modes of transmission Breaking the chain of infection Hand hygiene Personal protective equipment Standard precautions What are blood borne pathogens 	<ul style="list-style-type: none"> Laboratory Departments Contact precautions Droplet precautions Airborne precautions Types and functions of PPE Selecting PPE Order of donning and removing PPE Post-exposure to bloodborne pathogens Bloodborne pathogen standards 	<ul style="list-style-type: none"> Describe the role of a phlebotomy technician Identifying potentially infectious patients Describe hazards faced by the workers Describe standard precautions Discuss and demonstrate the use of biohazard container in phlebotomy Discuss and describe bloodborne pathogen standards. Identify special considerations in phlebotomy Explain chain of infection Discuss modes of infection transmission Explain breaking of chain of infection Demonstrate hand hygiene Identify and demonstrate the personal protective equipment Demonstrate the correct order of wearing personal protective equipment Discuss post exposure to blood borne pathogens.
Unit 2 Legal Issues in Healthcare	<ul style="list-style-type: none"> Civil law, Tort law Negligence vs. malpractice Basic elements of negligence Types of damages Criminal law, sources of laws, consent & its types, patient abuse & types Patients' rights American with Disabilities Act (ADA) 		<ul style="list-style-type: none"> Discuss negligence versus malpractice Discuss the standard of care Discuss the basics elements of negligence Discuss and identify patients' rights Explain good Samaritan law Explain scope of practice Discuss and demonstrate patient consents and its types Discuss American with disabilities act (ADA).



Unit 3

Introduction to Human Anatomy & Physiology

- Vascular system
- Human Blood & Connective Tissue
- Formed Elements & Proportion of Blood
- Red blood cell (RBC)
- White blood cells (WBC)
- Platelets
- Blood plasma
- Antibody and antigen
- Blood vessels
- Arterial system: Function & Structure
- Vasodilation
- Vasoconstriction
- Venous system: Function & Structure
- Capillaries: Function
- Veins for phlebotomy
- Human Anatomy: Introduction to:
 - Heart
 - Integumentary system
 - Pulmonary System
 - Skeleton System
 - Nervous System
 - Urinary System
 - Digestive System
 - Endocrine System

- Discuss functions of human body systems.

Unit 4

Medical Terminology I

- Describe where medical terminology comes from, and discuss the difference between decodable and Non-decodable terms.
- Describe how to decode terms using the check, assign, reverse and define (CARD) method.
- Use the rules given to build, spell, and pronounce healthcare terms

- Identify and discuss basic medical terminologies

Unit 5
Phlebotomy Equipment & Supplies

- Phlebotomy equipment & supplies
- Tourniquet
- Alcohol pads
- Gauze
- Bandage
- Needles Needle holder
- Sharps container
- Evacuated blood collection tubes & tube inversion technique
- Blood specimens in Phlebotomy
- Tube additives
- Blood collection color coded tubes
- Order of draw
- Dermal puncture
- Understanding capillary blood
- Equipment & supplies required for dermal puncture
- Capillary tubes
- Lancet
- Centrifuge

- Specimen processing
- Dermal puncture order of draw

- Identify phlebotomy equipment used for performing phlebotomy
- Identify phlebotomy supplies used for performing phlebotomy
- Describe correct specimen transport, handling, and processing procedures
- Apply the knowledge learned to fulfill the job responsibilities of an entry-level phlebotomy technician.

Unit 6
Phlebotomy Procedures I & II

- Capillary tube blood collection procedure
- Venipuncture using a multi sample needle (method)
- Venipuncture using a butterfly needle (method)
- Venipuncture using a syringe (method)
- 10 sticks of butterfly/finger/regular venipuncture on a mannequin/training arm with 100% accuracy

- Gloves removal
- Bleeding time competency
- Glucose testing competency
- Blood smear
- Phlebotomy Practice on mannequin training arm
- Practicing on a fellow student or volunteer by performing 10 each on each other or volunteer
- Perform the final butterfly, finger, and regular venipuncture, with 100% accuracy

- Discuss latex allergy and prevention.
- Identify and demonstrate gloves removal techniques
- Identify and demonstrate bleeding time competency
- Identify and demonstrate glucose testing competency
- Identify and demonstrate capillary tube blood collection procedure.
- Identify and demonstrate preparing a blood smear
- Identify and demonstrate venipuncture using a multi sample needle (method)
- Identify and demonstrate venipuncture using a butterfly needle (method)
- Identify and demonstrate venipuncture using a syringe (method)
- Demonstrate proficiency by successfully performing a minimum of two instructor supervised venipuncture on a mannequin with 100% proficiency
- Demonstrate techniques of performing venipuncture

Unit 7
Phlebotomy Fundamental
Essentials

- Venipuncture complications
- Areas of concerns
- Specimen labeling
- Specimen handling (light, time & temperature)
- Specimen transporting
- Blood Collection from Pediatric and Neonates
- Blood Collection for Legal Purposes
- Stool Specimen Collection
- Sputum Specimen Collection
- Throat Swab Specimen Collection
- Blood Donation Procedure
- Blood Donation Procedure
- Incident Report

- Tourniquet test
- Rejection of Specimen
- Test requisition
- Blood Sugar Tests
- Blood Cultures
- Urine Specimen Collection

- Discuss phlebotomy complication
- Discuss the areas of concerns on phlebotomy
- Demonstrate techniques of performing dermal puncture
- Identify sites of venipuncture.
- Discuss and demonstrate tourniquet test.
- Discuss on how to avoid hemolysis
- Discuss and demonstrate proper specimen handling techniques
- Discuss and demonstrate proper specimen transporting
- Discuss the precautions to be considered
- Identify and discuss rejection of specimen
- Identify phlebotomy test requisition
- Discuss and demonstrate blood collection from pediatric and neonates
- Discuss and demonstrate blood sugar tests.
- Discuss and demonstrate blood cultures
- Discuss and demonstrate blood collection for legal purposes
- Discuss and demonstrate urine specimen collection
- Discuss and demonstrate stool specimen collection
- Discuss and demonstrate sputum specimen collection
- Discuss and demonstrate throat swab specimen collection
- Describe incident report
- Demonstrate proper documentation skills

Unit 8
Medical Terminology II

- The heart: What is the heart
- Pericardium: The layer or sac that surrounds the heart.
- Myocardium: The middle layer.
- Endocardium: The innermost layer.
- Epicardium: The top layer.
- Conduction System of the Heart
- How does the conduction system work?
- Myocardial infarction: Commonly known as a heart attack
- Myocardial ischemia: Angina

- Opportunity to learn the structure of the heart
- Trace the evolution of cardiology
- Development of the roles of cardiologist and EKG technician in the nineteenth and twentieth centuries

Unit 9
Introduction to EKG

- Myocardial ischemia:
Angina
- The Medical Assistant's Role in
Electrocardiography and
Pulmonary Function Testing
- Equipment used by the EKG
Technician
- The scope of the EKG
practice
- Legal issues and
concerns of the
medical (EKG)
technician

- The ability to define Electrocardiography and how is it used as a diagnostic tool
- The ability to describe the heart including its structure functions.

<p>Unit 10 Anatomy & Physiology</p>	<ul style="list-style-type: none"> • Medical terminology • The conduction system of the heart • The structure and function of the cardiovascular system 		<ul style="list-style-type: none"> • Identification of the anatomic structures of the cardiovascular system and the pathway of circulation through the heart to the tissues of the body • Recognition of the unique properties of cardiac cells that provide for their electrical and mechanical activity.
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<p>Unit 11 Safety and Health</p>	<ul style="list-style-type: none"> • Safety considerations during the Cardiovascular Examination • The importance of infection control • OSHA (Occupational Safety and Health Administration); universal precautions • Cleaning and maintenance of the equipment 		<ul style="list-style-type: none"> • The exam will require a basic understanding of the role of the EKG technician and the moral and legal considerations of the health care profession.
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<p>Unit 12 EKG Practice on Mannequin</p>	<ul style="list-style-type: none"> • The EKG Machine <ul style="list-style-type: none"> ▶ EKG Leads • Performing an EKG: <ul style="list-style-type: none"> ▶ Preparation for the EKG Procedure ▶ Identifying Anatomical Landmarks ▶ Applying the Electrodes and Leads • Safety and Infection Control • Operating the EKG machine • Checking the EKG Tracing • Troubleshooting Artifacts and other Problems 	<ul style="list-style-type: none"> • Practice on Mannequin 	<ul style="list-style-type: none"> • Demonstrate proficiency by successfully performing a minimum of two instructor supervised EKG's on a mannequin with 100% proficiency
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<p>Unit 13 EKG Live Practice</p>	<ul style="list-style-type: none"> • Practicing Electrocardiography on a volunteer • Reading a Lead II EKG Strip: <ul style="list-style-type: none"> • Sinus Rhythms • Ectopic Beats • Atrial Dysrhythmias • Junctional Rhythms • Ventricular Dysrhythmias • Asystole 	<ul style="list-style-type: none"> • EKG Live Practice 	<ul style="list-style-type: none"> • Demonstrate proficiency by successfully performing a minimum of two instructor supervised EKG's on a live patient volunteer with 100% accuracy
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Unit 14

Career Development Skills And Job Seeking

- Skills and Strategies
- Certification Exam Preparation
- Create a resume and cover letter.
- Interview Skills
- EKG/Phlebotomy NHA Certification Exam preparation

- Practice interview skills during a mock interview
- Skills and Strategies
- Complete an online profile and

- Explain job search methods
- Create a resume and cover letter
- Evaluate business performance and potential using financial statements
- Create a thank-you note for an interview
- Describe personality traits important to employers
- Explain common human resource hiring