Training Program for ECG staff

Day 1: Introduction and Fundamentals

Morning Session: Understanding ECG Basics

1. **Welcome and Introduction (30 min)**
   - Overview of the training program
   - Goals and objectives
   - Icebreaker activity
2. **The Cardiovascular System (1 hour)**
   - Anatomy and physiology of the heart
   - Electrical conduction system of the heart
   - Introduction to cardiac cycles and heart rhythm
3. **Introduction to ECG (1.5 hours)**
   - Definition and purpose of an ECG
   - Basic principles of ECG: electrical activity, depolarization, and repolarization
   - Overview of ECG waveform components (P wave, QRS complex, T wave)
4. **Break (15 min)**
5. **ECG Lead Placement and Electrode Types (1 hour)**
   - Standard 12-lead ECG system and its components
   - Proper placement of electrodes and leads
   - Discussion on different types of electrodes and their uses

Lunch Break (1 hour)

Afternoon Session: Basic ECG Operation

1. **ECG Machine Operation (1.5 hours)**
   - Introduction to ECG machines: components and settings
   - Calibration and maintenance of ECG machines
   - Hands-on practice with ECG machines
2. **Reading and Interpreting Basic ECGs (1 hour)**
   - Identifying and measuring basic waveform components
   - Introduction to normal ECG patterns and intervals
3. **Break (15 min)**
4. **Practical Exercise (1 hour)**
   - Hands-on practice with ECG machines
   - ECG lead placement and recording
5. **Q&A and Recap (30 min)**
   - Review of key concepts
   - Open session for questions and clarification

Day 2: Advanced Concepts and Interpretation

Morning Session: Advanced ECG Interpretation

1. **Review of Day 1 and Introduction to Day 2 (30 min)**
   - Quick review of key concepts
   - Overview of advanced topics for the day
2. **ECG Rhythms and Arrhythmias (2 hours)**
   - Common arrhythmias: atrial fibrillation, ventricular tachycardia, etc.

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  - Rhythm strip interpretation
  - Clinical significance of various arrhythmias
3. **Break (15 min)**
4. **ECG Artifacts and Troubleshooting (1 hour)**
   - Types of ECG artifacts and their causes
   - Troubleshooting common issues
   - Best practices for minimizing artifacts

Lunch Break (1 hour)

Afternoon Session: Practical Skills and Application

1. **Hands-On ECG Interpretation (2 hours)**
   - Interactive ECG interpretation exercises
   - Case studies and real-life scenarios
   - Group discussions and problem-solving
2. **Break (15 min)**
3. **Introduction to Holter Monitoring (1 hour)**
   - Overview of Holter monitors and their applications
   - Basic principles of Holter monitoring and analysis
4. **Practical Exercise: ECG Interpretation (1 hour)**
   - Participants analyze ECG strips and identify arrhythmias
   - Discussion of findings and feedback

Day 3: Clinical Application and Professionalism

Morning Session: Clinical Application

1. **Review of Day 2 and Introduction to Day 3 (30 min)**
   - Quick review of advanced topics
   - Overview of clinical application and professionalism
2. **Patient Interaction and Communication (1 hour)**
   - Best practices for interacting with patients
   - Ensuring patient comfort and understanding
3. **ECG Documentation and Reporting (1.5 hours)**
   - Proper documentation of ECG findings
   - Reporting and communicating results to healthcare providers
4. **Break (15 min)**
5. **Case Study and Simulation (1.5 hours)**
   - Detailed case studies with simulated scenarios
   - Team-based approach to diagnosis and decision-making

Lunch Break (1 hour)

Afternoon Session: Evaluation and Feedback

1. **Final Practical Assessment (1.5 hours)**
   - Comprehensive hands-on assessment covering lead placement, ECG recording, and interpretation

2. **Professional Development and Certification (30 min)**
    - Overview of certification requirements and professional development opportunities
    - Discussion of career pathways for ECG technicians
3. **Closing Remarks and Evaluation (30 min)**
    - Final Q&A
    - Feedback collection from participants
    - Distribution of certificates of completion