Paramedic Prep Schedule: Arrhythmia Recognition / 12 Lead ECG / Pharmacology
June 27, 2023 through August 8, 2023

Date	Topic	Times	Faculty
6-27-23 TU-1	Introduction to Cardiology - Cardiac Monitoring – Reading An ECG / Measurement Practice	**1800-2200**	
7-5-23 W-2	Sinus Rhythms – Pacing – Meds (02 - ASA – Nitro – MS – Fentanyl – atropine – epinephrine – NaHCO3 / Atrial Rhythms - Adenosine - Amiodarone	**1800-2200**	
7-12-23 W-3	Junctional Rhythms / Heart Blocks (Pacing) / Cardiac scenario's	**1800-2200**	
7-19 23 W-4	Ventricular rhythms - Lidocaine – Defibrillation / AHA Guidelines and Cardiac Arrest devices (Autopulse - Resq-pod - Lucas – ETCO2) / VF – pVT Science of CPR / ROSC / Cardiac Rhythm review / Scenario's	**1800-2200**	
7-25-23 TU-5	Introduction to 12 Interpretation - Cardiac Assessment / Ischmia – Injury – Infarct / RVI	**1800-2200**	
7-26-23 W - 6	Axis Determination / Practice 12 Leads / Tachyarrhythmias / V-Tach	**1800-2200**	
8-1-23 TU – 7	Fascicular Blocks / STEMI Equivalents	**1800-2200**	
8-8-23 TU - 8	Practice 12 Leads	**1800-2200**	

Course Coordinator / Lead Instructor – Fidel O. Garcia (C) 970-210-0466 (O) 970-254-8135

This class is designed to prepare the student for taking a paramedic class

The class is 32 hours

Cost for the class is $400.00

Arrhythmia Recognition Class - Course Description

The Arrhythmia Recognition Class (ARC) will be offered in a multiple session progressive style program.

This class is designed for the care provider in a clinical setting to identify clinical significance when caring for a patient. Not all rhythms will look the same, as such we will focus on understanding the criteria for each specific rhythm rather than teaching pattern recognition.

Below is the description for the class.

Arrhythmia Recognition Class:

ECG interpretation is a skill that requires an understanding of cardiac A&P to truly understand what you will identify when looking at a cardiac monitor. This class is designed to allow the participant to take an active role through discussion and rhythm strip interpretation

We will begin with a standard Chest Pain Protocol and progress into an overview of Cardiac A & P to include flow of blood through the heart, the conduction pathway, actional potential of a cardiac cell and coronary artery distribution to the heart.

We will then progress into the cardiac monitor, waves and measurements that are imperative to correctly interpret an ECG rhythm

The participants will practice the "5 Step Approach" of rhythm interpretation on ECG strips that will be supplied

ECG interpretation will be identified in six different areas of the heart.

This class will be focused on going through each type of rhythm to include: Sinus – Atrial – Junctional - Heart Block – Ventricular – Paced rhythms using the 5 Step Approach to interpretation.

Each section will cover causes, S / S that may be noted to identify a symptomatic patient.

We will also present an in depth treatment approach with an extensive review of cardiology pharmacology to prepare you for managing a patient

The student will be very involved as we will interpret a large number of rhythms that will be supplied for ECG practice. The participant will utilize assessment skills and ECG interpretation to develop a specific treatment plan for the patient. We will cover pharmacology, electrical therapy and airway management interventions to allow for the best outcome for the patient. There will be an in depth discussion on the physiology of CPR and the importance of providing high quality CPR during resuscitation to increase survival for the arrested patient

The new and experienced provider will benefit from the hands on approach to rhythm interpretation from a large library of ECG's.

Whether you are an experienced provider or new to ECG interpretation the class is designed to allow all participants to gain information that will be new or a relevant review of information that may have been forgotten.

Objectives:

After completion the participant will be able to:

1) List the steps of the "Chest Pain Protocol".
2) Label the flow of blood through the heart.
3) List the parts of the conduction system in order and describe the importance of each part.
4) Understand the action potential of a cardiac cell.
5) Describe the normal parameters for waves and measurements on an ECG strip.
6) Successfully measure and identify the measurements on a rhythm strip using the "5 Step Approach".
7) Identify rhythms correctly using criteria for each specific rhythm
8) Differentiate from the six types of rhythms we will cover.
9) List the S / S noted that allow the provider to identify a patient who hemodynamically compromised.
10) Identify ECG rhythms that cause hemodynamic instability.
11) Identify the correct pharmacologic intervention for the compromised patient.
12) Describe the pharmacology of specific medications for a given situation to include the following: classification, action, indications, contraindications, side effects, dose, route and how supplied.
13) Describe the indication and correct use of electrical therapy in a given situation to include: Defibrillation, Cardioversion and Transcutaneous Pacing
14) Develop a treatment plan for the patient in an acute setting who is hemodynamically compromised to include: Airway management – Venous access – Fluid therapy – Pharmacology – Electrical therapy
15) Understand the physiology of CPR and why it is imperative to provide high quality CPR for improved outcome and survival of the arrested patient

12 Lead Interpretation Class - Course Description

The 12 Lead Interpretation Class will be offered in a four session progressive style program.

This class is designed for the care provider in a clinical setting to identify clinical significance when caring for a patient. 12 lead interpretation can be a challenge. The class will be designed to maximize participant interaction with use of multiple rhythm strips to assist with interpretation

Below are the descriptions for the class.

12 Lead Interpretation:

ECG interpretation is a skill that requires an understanding of cardiac A&P to truly understand what you will identify when looking at a cardiac monitor. This class is designed to allow the participant to take an active role through discussion and 12 lead interpretation

We will begin with a brief overview of Cardiac A & P, then progress into 12 lead acquisition goals, proper lead placement, and finish with waves – patterns and measurements that are imperative to correctly interpret a 12 lead ECG

We will include Right Ventricular and Posterior Involvement

A large portion of this class will be based on identifying: Ischemia – Injury – Infarction, noting ACS imitators and intervention for a pt with an ACS.

We will cover axis determination, VT – AVNRT – AVRT – SVT with abberancy.

The class will include a large number of 12 lead cases to include everything that has been covered as well as cases involving electrolyte disturbances and new guidelines for STEMI equivalents

Whether you are an experienced provider or new to ECG interpretation the class is designed to allow all participants to gain information that will be new or a relevant review of information that may have been forgotten.

Objectives:

After completion the participant will be able to:

1) Perform an in depth cardiac assessment on your patient
2) List the reason to perform a 12 lead ECG on a patient
3) Perform correct lead placement for 12 lead acquisition
4) Identify the criteria for Ischemia – Injury – Infarct patterns on the 12 lead ECG
5) Identify 12 Lead "ACS Imitators"
6) Describe the normal parameters for waves and measurements on an ECG strip.
7) Develop a treatment plan for the patient in the setting of an ACS
8) List the reason to perform a 13 or 15 lead on a patient
9) Perform correct lead placement for a 13 or 15 lead ECG
10) Identify the criteria for RVI
11) Determine axis on a 12 lead ECG using the 2 lead approach
12) Identify criteria for AVNRT – AVRT – VT
13) Understand criteria to differentiate VT from SVT with abberancy
14) Identify the criteria for STEMI equivalent patterns
15) Identify findings that may be due to electrolyte emergencies
16) Interpret and develop a treatment plan for patients with noted 12 lead ECG abnormalities in case presentations

Intended audience: Any allied health professional that will be in a position to accurately interpret an ECG for a patient.