

Course Objective	Competencies
5. Air Compressors	
6. Air/Oxygen Proportioners (Blenders)	
7. Oxygen Hoods and Oxygen Tents	
8. Air Entrainment Devices and Masks	
9. Nasal Cannula and Transtracheal Oxygen Catheters	
10. Oxygen Masks: Simple Oxygen Mask, Partial Rebreathing Mask, Non-Rebreathing Mask, and Face Tent	
11. Tracheostomy Appliances: Mask/Collar and Brigg's Adapter/T-Adapter	
12. Patient Assessment: Evaluate the patient's respiratory care plan and make any recommendations for changes, as needed:	<ol style="list-style-type: none"> 1. Change the oxygen percentage. 2. Change the flow of oxygen 3. Change the method of administering the oxygen.
13. Oxygen Therapy Continued	<ol style="list-style-type: none"> 1. List the Pathology of hypoxia: Anoxic, Anemic, Stagnant, Histotoxic. 2. List the effects and causes of hypoxia: Hypoventilation, V/Q mismatch, shunt. 3. List the hazards of oxygen therapy: O₂-induced hypoventilation, Absorption atelectasis, O₂ toxicity, RLF.

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<p>14. Bedside Measuring and Monitoring Devices: Analyze arterial blood.</p>	<ol style="list-style-type: none"> 1. Select the appropriate blood gas analyzer. 2. Put the equipment together, make sure it works properly, and identify any problems with it. 3. Perform blood gas analysis.
<p>15. Pulse Oximetry</p>	<ol style="list-style-type: none"> 1. Check the patient's chart for previous pulse oximetry (SPO2) results. 2. Make a recommendation to perform pulse oximetry. 3. Get an appropriate pulse oximeter and related equipment. 4. Put the equipment together, make sure that it works properly and identify and fix any problems with it. 5. Perform pulse oximetry on your patient. 6. Interpret your patient's pulse oximetry value.
<p>16. Perform the following types of bedside spirometry: Bedside Measuring Equipment:</p> <ol style="list-style-type: none"> a. Water b. Mercury c. Andaneroid-Type Manometers (Pressure Gauges) 	<ol style="list-style-type: none"> 1. Measure and interpret the patient's tidal volume at the bedside. 2. Measure and interpret the patient's inspiratory-to-expiratory ratio at the bedside. 3. Measure and interpret the patient's minute volume at the bedside. 4. Calculate and interpret the patient's alveolar ventilation at the bedside. 5. Measure and interpret the patient's vital capacity as the bedside. 6. Measure and interpret the patient's peak flow at the bedside.

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<p>17. Inspiratory and/or expiratory force meters (Pressure Gauges)</p>	<p>7. Measure and interpret the patient’s maximum inspiratory pressure at the bedside.</p> <ul style="list-style-type: none"> a. Get the necessary equipment for the procedure. b. Put the equipment together, make sure that it works properly, and identify and fix any problems with it. <p>1. Get the necessary equipment for the procedure.</p> <p>2. Put the equipment together, make sure that it works properly, and identify and fix any problems with it.</p>
<p>18. Respirometers</p>	<p>1. Get the necessary equipment for the procedure.</p> <p>2. Put the equipment together, make sure that it works properly, and identify and fix any problems with it.</p>
<p>19. Cardiopulmonary Resuscitation</p>	<p>1. Establish that the patient is unresponsive and needs CPR.</p> <p>2. Call out for help.</p> <p>3. Open the airway.</p> <p>4. Determine that the patient is not breathing.</p> <p>5. Ventilate the patient’s airway.</p> <p>6. Add supplemental oxygen.</p> <p>7. Determine pulselessness.</p> <p>8. Perform external chest compressions.</p>
<p>20. CPR Equipment:</p> <ul style="list-style-type: none"> a. Manual Resuscitator (Bag-valve) b. Mouth-to-Valve Mask Resuscitator c. Pneumatic (Demand Valve) 	<p>1. Get the necessary equipment for the procedure.</p> <p>2. Put the equipment together, make sure that it works properly, and identify and fix any problems with it.</p>

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	<ul style="list-style-type: none">d. Dalton's Lawe. General Gas Law <p>3. Define Diffusion:</p> <ul style="list-style-type: none">a. Fick's Lawb. Graham's Lawc. Henry's Law