

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: RSPC 408 Department: Respiratory Care

Course Title: Respiratory Care 6 Semester: Spring Year: 1999

Objectives/Competencies

Course Objective	Competencies
1. The Heart: Students will be able to describe anatomy, blood flow, wave forms, cardiac cycle and cardiac performance as it relates to the heart.	1. Describe the anatomy of the heart. 2. Explain the blood flow and intrachamber pressures. 3. Describe the different waveforms. 4. Describe the cardiac cycle. 5. Explain control of cardiac performance.
2. Hemodynamic Parameters: Students will be able to discuss normal values, how to measure and interpret as it relates to hemodynamic parameters.	1. Explain the normal values hemodynamic parameters. 2. Describe how to measure hemodynamic values. 3. Explain the interpretation of the values.
3. Central Venous, arterial pressure and pulmonary artery pressure monitoring: Students will be able to describe methods sites, waveforms, measure, advantages, disadvantages, insertion techniques, catheters and complications related to CVP, PA, PAW.	1. Explain methods of determining arterial blood pressure. 2. Describe specific sites of arterial cannulation. 3. Describe the arterial waveform. 4. Explain, describe and measure CVP. 5. Describe insertion techniques. 6. Explain and describe PA and PAW pressure monitoring. 7. Explain advantages and disadvantages of PA and PAW pressure monitoring.

Course Objective	Competencies
<p>4. Cardiac output and mixed venous oxygen saturation: Students will be able to describe methods, calculations, procedures, clinical application as it relates to cardiac output and mixed venous O2 SAT.</p> <p>5. Basic monitoring equipment for hemodynamic measurement: Students will be able to define principles, hazards and safety methods as it relates to basic monitoring equipment for hemodynamic measurement.</p> <p>6. Electrocardiogram: Students will be able to describe terminology, anatomy, wave formation twelve leads, calculations and various tracings related to electrocardiogram.</p>	<p>8. Describe right sided heart pressure measurements. 9. Describe left sided heart pressure measurements. 10. Describe types of catheters. 11. Recognize complications of monitoring.</p> <p>1. Describe methods of calculating cardiac output. 2. Describe procedural reviews of cardiac output. 3. Explain clinical application of fixed venous oxygen saturation.</p> <p>1. Explain the principles of pressure recording devices. 2. Recognize hazards. 3. Apply safety methods.</p> <p>1. Explain basic terminology. 2. Explain basic heart anatomy and function. 3. Describe the P wave, QRS complex, Q wave, R and S wave, and T wave. 4. Explain twelve separate leads. 5. Describe how to figure out rate in reading an ECG. 6. Recognize arrhythmias (Abnormal rhythms). 7. Explain various ECG tracings: a. Sinus arrhythmia. b. Sinus tachycardia. c. Sinus bradycardia d. Paroxysmal atrial tachycardia.</p>

Course Objective	Competencies
<p>7. Cardiovascular Pharmacology: Students will be able to describe mechanism of action, indications, dosage and precautions as it relates to cardiovascular pharmacology.</p>	<ul style="list-style-type: none"> e. Atrial flutter. f. Atrial fibrillation. g. AV block. h. Junctional premature beats. i. Premature ventricular contraction. j. Ventricular tachycardia. k. Ventricular fibrillation. l. Ventricular asytole. <ul style="list-style-type: none"> 1. Describe the mechanism of action. 2. List the indications. 3. List the dosage. 4. Describe the precautions. <ul style="list-style-type: none"> a. Lidocaine b. Procainamide c. Bretylium d. Verapamil and diltiazem e. Adenosine f. Epinephrine g. Nor epinephrine h. Dopamine i. Dobutamine j. Isoproterenol k. Amrinone l. Digitalis m. Propranolol n. Metoprolol

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	<ul style="list-style-type: none">o. Atenololp. Esmololq. Sodium nitroprussider. Nitroglycerins. Furosemide