

Al-Al Bayt University
Princess Salma Faculty of Nursing
Adult Health nursing

Course Title :Critical Care Nursing

Course Number :1001421

Credit Hours :2

Pre requisite :

Placement :

Instructor: ,

Course Description :

General objectives :

Objectives:

At the end of this course the student will be able to:

1. Integrate a specific theoretical knowledge related to nursing, pathophysiology, pharmacology, and medical technology to understand physiological and psychosocial responses to critical health disruptions.
2. Develop a system to evaluate health status, identify responses to critical health disruptions, and define learning needs of critically ill patients and their families.
3. Integrate knowledge from nursing and other disciplines to formulate nursing intervention strategies for patients experiencing critical health disruptions.
4. Analyze research results and its implication in the area of critical care that relate to current practice.
5. Evaluate the value of collaboration in the care of the critical ill, and those with system specific disorders.
6. Reflect on legal and ethical issues related to critical nursing.

Course outline :

Introduction to Critical

Time: . Introduction to the course concepts of critical care nursing Practice. Bioethical Issues in Critical Care

- Briefly explain the way in which ethics assists in reaching answers to moral dilemmas
- Name the ethical principles most relevant to the withholding or withdrawing of life-sustaining treatment and the patient self-determination
- Explain the basic difference between the two major ethical systems: consequentialism and nonconsequentialism
 - Discuss the terms moral uncertainty, moral distress, and moral dilemma
- Name the two guidelines that provide the nurse with basic directions needed to address ethical issues

Cardiovascular System

. Alterations in Core Body Systems :

A. Cardio vascular alterations.

1. Anatomy and physiology
 - Briefly describe the characteristics of cardiac muscle cell
 - Explain the difference between electrical events and mechanical events in the heart

- Define depolarization
- Describe the normal conduction system of the heart
- State the formula of calculating cardiac output
- Briefly explain the role of the parasympathetic and sympathetic nervous systems in the regulation of the heart rate
- State the three factors involved in the regulation of stroke volume
- Define preload and afterload

. 2. Assessment: Cardiovascular

- Discuss four important considerations in preparing a patient for a cardiac examination
- Locate the four areas of auscultation on the anterior chest wall
- Discuss the mechanisms responsible for the production of the first and second heart sounds and the phases of the cardiac cycle these sounds represent
- Discuss the clinical significance of the third and fourth heart sounds and their timing in the cardiac cycle.
- Describe each type of murmur, its timing in the cardiac cycle, and the area on the chest wall where it is most easily auscultated

3. CVS laboratory and diagnostic test

- Describe the role of enzyme studies in diagnosis an acute myocardial infarction
- Compare and contrast the usefulness of creatine kinase(CK) and lactate dehydrogenase(LDH) isoenzyme studies
- List possible etiologies of serum CK and LDH elevations other than acute myocardial infarction_ischemia
 - Interpret CK and LDH isoenzyme studies when providing patient care
- Describe four current techniques used for diagnostic purposes in cardiology
- Outline the patient and family teaching appropriate to prepare the patient for exercise ECG studies
- Explain the preparation neces

Respiratory System

B. Pulmonary alteration

1. Anatomy and physiology

- Explain the components of total lung capacity
- Describe the mechanics of respiration
- Define lung compliance
- Compare and contrast perfect ventilation and perfusion with decreased ventilation and perfusion
- Outline the process of gas diffusion through the alveoli and into the blood and tissues
- State the importance of oxygen saturation when assessing the effectiveness of respiration
- Describe the key feature of oxygen dissociation curve
- list two brain stem centers that regulate respiration
- describe the compensatory mechanisms that control respiration

2. Assessment:

- List five questions to use when gathering history data
- Describe four procedures and possible findings used in respiratory physical examination
- Compare and contrast mixed venous and arterial samples for oxygen, carbon dioxide, pH and oxygen saturation
- List the normal values for arterial blood gases
- Describe the procedure for obtaining ABGs
- Given an example, perform a basic analysis of acid-base interpretation
- Describe the process by which negative pressure is generated
- List several indications for chest tube placement
- Compare and contrast the one, two, and three-bottle chest drainage systems
- Discuss the nursing interventions necessary to prevent complications due to chest tube drainage systems
- Describe the nursing actions required to maintain chest tube patency
- State three potential complications due to chest tube stripping

2 Respiratory Failure

- Define respiratory failure
- Identify three potential events affecting events affecting different body systems that can lead to respiratory failure
- Discuss five indications for mechanical ventilation
- Compare and contrast the function of a manual resuscitator bag to a mechanical ventilator
- Discuss three different types of mechanical ventilator
- Discuss three different

Neurological System

C. Nervous system

1. Anatomy and physiology

- List the cellular units of the nervous system
- Briefly explain the physiology of a nerve impulse
- List two functions of cerebrospinal fluid
- Explain the functions of thalamus
- Define the reticular activity system
- Briefly define the sensory system and the motor system
- List and explain three cord reflexes
- Explain the physiology of pain and the gate theory of pain regulation

2. Assessment

- Discuss the value of gathering neurological data in an orderly and objective manner
- Correlate such data over time
- Recognize those patterns of assessment findings that imply a significant change in pathology for patient care
- Relate the procedure of selected neurodiagnostic tests to nursing implication for patient care
- Evaluate the effect of neurological dysfunction on the patient's living patterns
- Define brain death

3. Management modalities

Intracranial pressure monitoring (ICP)

- Identify four indications for intracranial pressure
- List four techniques for obtaining ICP measurement
- Define cerebral perfusion pressure (CPP)
- Describe three interventions used to promote adequate cerebral blood flow (CBF) in the presence of increased intracranial pressure (ICP)
- List three possible nursing diagnosis for the patient with ICP and describe the nursing interventions for each diagnosis

4. Head injury

- Identify possible mechanisms of head injury associated with trauma
- Describe various types of head injuries and their associated symptomatology
- Explain the pathophysiology of potential
- Discuss the rationale for medical and nursing management in the therapy of the head-injured patient

5. Cerebrovascular disease & cerebral aneurysms

- Name three common clinical manifestations of a right hemispheric stroke
 - Name three common clinical manifestations of a left hemispheric stroke
- describe three

Evaluation methodology :

First Exam.....25

Second Exam.....25

Final Exam.....50

References :

*Critical Care Nursing 3ed , Saunders Company,

Course Schedule :

Topic	Hours
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No Information Available...