Virginia Western Community College
NSG 252
Complex Health Concepts
Semester 4

Prerequisites: NSG 210: Health Care Concepts I; NSG 211: Health Care Concepts II, Nursing Elective
Co-requisites: NSG 230: Advanced Professional Nursing Concepts; NSG 270: Nursing Capstone
Pre/co requisite*:* PHI 220: Ethics

Course Description
Focuses on nursing care of diverse individuals and families integrating complex health concepts. Emphasizes clinical judgment, patient-centered care and collaboration.
Lecture 4 hours. Total 4 hours per week.

Semester Credits: 4 **Lecture Hours: 4** **Lab/Clinical/Internship Hours: 0**

Required Materials

1. CoursePoint for Concepts 6 book library year 2 – **ISBN: 9781975226374**
2. Leadership. Lippincott - **ISBN: 9781975155292**
3. Kaplan

Supplementary Materials:

Kaplan Resources

Course Student Learning Outcomes
Upon completing the course, the student will be able to:

1. Provide patient-centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations of individuals with complex health needs.
2. Practice safe nursing care that minimizes risk of harm across systems and client populations with complex health needs.
3. Integrate clinical judgement in the management of care for multiple, complex clients across the lifespan.
4. Practice professional behaviors that encompass the legal/ethical framework while incorporating self-reflection, leadership, and a commitment to recognize the value of life-long learning
5. Manage client care through quality improvement processes, information technology, and fiscal responsibility to meet client needs and support organizational outcomes.
6. Demonstrate principles of collaborative practice within nursing and interdisciplinary teams fostering mutual respect and shared decision-making to achieve optimal outcomes of care.
7. Manage the principles of pharmacology to the identified concepts for clients with complex conditions across the lifespan.
8. Manage the appropriateness, accuracy, and client responses to pharmacology principles for clients

with complex conditions.

Topical Description

Major topics to be included:

1. Fluid & Electrolyte Concept

Fluid and electrolyte principles
Risk factors related to altered fluid and electrolyte levels
Prevention of altered fluid and electrolyte levels
Fluid and electrolyte diagnostic testing
Clinical judgement related to altered fluid and electrolyte levels
Exemplars*:* acute & chronic renal failure
Pharmacology: Erythropoietin stimulating agents, Phosphate binders

2. Acid-Base Concept

Acid-base principles
Risk factors related to altered acid-base balance
Prevention of altered acid-base balance
Acid-base diagnostic testing
Clinical judgement related to altered acid-base balance
Exemplars*:* metabolic acidosis and alkalosis, respiratory acidosis and alkalosis
Pharmacology: Sodium Bicarbonate

3. Intracranial Regulation Concept

Intracranial regulation principles
Risk factors related to altered intracranial regulation Prevention of altered intracranial regulation
Intracranial regulation diagnostic testing
Clinical judgement related to altered intracranial regulation
Exemplars*:* Cerebral Vascular Accident (CVA), seizures: child & adult

Pharmacology: Anti-epileptic drugs (Phenytoin, Valproic acid, levetiracetam, Lamotrigine, Topiramate, Gabapentin, Lacosamide), Anticoagulants, HMG-CoA reductase inhibitors, Tissue Plasminogen activator (tPa), antihypertensive medications, Benzodiazepines (ex. Lorazepam, clonazepam), Barbiturates (ex. Phenobarbital), Skeletal Muscle relaxants (ex. Cyclobenzaprine) Osmotic diuretic (mannitol)

4. Mobility Concept

Mobility principles
Risk factors related to altered mobility
Prevention of altered mobility
Mobility diagnostic testing
Clinical judgement related to altered mobility
Exemplars*:* spinal cord injury (adult), spina bifida (pediatric), Parkinson's diseas

- **Exemplars: Spinal cord injury (adult), Spina bifida (pediatric): Chiari Malformation & Hydrocephalus, and Parkinson's disease**

Pharmacological: antiparkinsonian
Pharmacological: antiparkinsonian drugs

5. Inflammation Concept
   Inflammatory principles
   Risk factors related to altered inflammation Prevention of altered inflammation
   Inflammation diagnostic testing
   Clinical judgement related to altered inflammation
   Exemplars*:* hepatitis, cirrhosis, pancreatitis
   - **Pharmacology: Osmotic laxatives (ex. Lactulose), Narcotics (ex. Hydromorphone), Proton Pump Inhibitors (ex. Pantoprazole), Octapeptides (ex. Octreotide), insulin, Antiemetics, Antibiotics, Antifungals, Albumin**

6. Infection Concept
   Infection principles
   Risk factors related to infection Prevention of infection
   Infection diagnostic testing
   Clinical judgement related to infection
   Exemplars*:* sepsis across the lifespan
   - **Pharmacology: Vasopressors, Antibiotics**

7. Tissue Integrity Concept
   Tissue integrity principles
   Risk factors related to altered tissue integrity
   Prevention of altered tissue integrity
   Tissue integrity diagnostic testing
   Clinical judgement related to altered tissue integrity
   Pharmacological interventions: topical treatment of burns
   Exemplars: burns
   - **Pharmacology: Fluid resuscitation. Proton pump inhibitors, Silver sulfadine cream and other tropical creams**

8. Perfusion Concept
   Perfusion principles
   Risk factors related to altered perfusion Prevention of altered perfusion
   Perfusion diagnostic testing
   Clinical judgement related to altered perfusion
   Hemodynamic monitoring
   Chest tube management
   Pharmacological interventions: anti-arrhythmic drugs, thrombolytic drugs, adrenergic drugs, anticholinergic drugs
   Exemplars: shock/Multiple Organ Dysfunction Syndrome (MODS), arrhythmias, congenital defects (infant/child)

   - **Pharmacology: Cardiac Glycoside (Digoxin), Calcium Channel Blockers (ex.**

Adenosine), Digoxin immune fab, ASA, Beta Blockers, Thrombolytics, Angiotensin Converting Enzyme inhibitors, Angiotensin II receptor blockers Vasodilators (nitrates), Epinephrine, Antidysrhythmic (ex. Lidocaine, Amiodarone) Muscarines antagonist (atropine), Tissue Plasminogen Activator (tPa), Heparin, Beta-1 agonist (Dobutamine), Inotrope (ex. Dopamine), Vasopressor (ex. Norepinephrine), Diuretics (Loop, Potassium sparing, Thiazide) Opioids (ex. Morphine), Albumin

9. Gas Exchange Concept

Gas exchange principles
Risk factors related to altered gas exchange
Prevention of altered gas exchange
Gas exchange diagnostic testing
Clinical judgement related to altered gas exchange
Ventilation: mechanical, continuous positive airway pressure, bilevel airway pressure
Exemplars*:* Acute Respiratory Distress Syndrome (ARDS), pneumothorax

- **Pharmacology: Neuromuscular blocking agents, Corticosteroids, Xanthine**

Note to Instructors