

# Virginia Western Community College

## PNE 110

### PRACTICAL NURSING IN HEALTH AND DISEASE I

#### Prerequisites

Admission to the Practical Nursing Program

#### VWCC Discipline Specific Course Description

Studies the pathophysiology, signs and symptoms, prescribed medical and surgical treatments, and appropriate nursing care for the patient with selected disorders. Part I of II.

**Semester Credits: 5**

**Lecture Hours: 5**

#### Required Materials

Laptop, WiFi access, Elsevier Evolve Course Resources

#### Required Textbook

Stromberg, Holly K., (2026.) Medical-Surgical Nursing Concepts and Practices, (6<sup>th</sup> Ed.), Elsevier, St. Louis,

ISBN: 978044312102

Giddens, Jean Foret, (2025). Concepts for Nursing Practice, (4<sup>th</sup> Ed.) Elsevier, St. Louis, ISBN: 978-0-323-08982-5

#### Reference Textbooks:

Morris, Deborah C., (2022). Calculate with Confidence, (8<sup>th</sup> Ed.), Elsevier, St. Louis ISBN: 978-0-323-69695-1

Willihnganz, Michelle & Gurevutz, Samuel L., (2026) Clayton's Basic Pharmacology for Nurses, (20<sup>th</sup> Ed.), Elsevier, St. Louis, ISBN: 9780443126994

Williams, Patricia, (2026) Fundamentals Concepts and Skills for Nursing (7<sup>th</sup> Ed.), Elsevier, St. Louis, ISBN: 9780443245237

#### Note to Instructors

### VWCC AND DISCIPLINE SPECIFIC OUTCOMES

#### Course Objectives

After completion of this course, the student will be able to:

1. **SAFETY** - Demonstrate knowledge of causes of disease and illness, including microorganisms and communicable diseases, biochemical agents, cellular abnormalities, trauma, genetic transmission, and participation in high-risk activities.

2. **SAFETY** - Categorize signs and symptoms of selected disorders.
3. **SAFETY** - Relate expected diagnostic studies and pharmacological interventions including the nursing implications for each, with an emphasis on patient safety and comfort.
4. **SAFETY** - Apply age-related considerations when planning patient care and medication administration.
5. **PATIENT-CENTERED CARE** – Apply knowledge of concepts to individualized care for the patient to meet identified needs and to prevent complications.
6. **CRITICAL THINKING** - Apply critical thinking to prioritize and plan care for patients with selected medical-surgical disorders utilizing case studies and group activities.
7. **TEAMWORK** - Analyze the role of the practical nurse as a member of the interdisciplinary health care team in care planning, health promotion, disease prevention, and patient safety while collaborating with healthcare personnel from all disciplines.
8. **INFORMATICS** - Relate the use of technology and information management tools to support safe patient care.
9. **EVIDENCE-BASED PRACTICE** - Use reliable sources for locating evidence-based information related to selected medical-surgical topics. Examine standardized nursing care plans using critical thinking, clinical reasoning, and evidence-based practice.
10. **CULTURE** – Recognize and provide care with sensitivity and respect for human diversity, and cultural needs.

## VWCC AND DISCIPLINE SPECIFIC TOPICAL DESCRIPTIONS

### Course Outline

#### Unit 2: Medical-Surgical Patient Care Problems

##### Concepts: Fluid and Electrolytes #6 & Acid-Base #7

- A. Ch. 3: Fluids, Electrolytes, Acid-Base Balance, and Intravenous Therapy
  1. Distribution and Regulation of Body Fluids
  2. Osmolality
  3. Fluid Imbalances
  4. Electrolytes
  5. Acid-Base System
  6. Acid-Base Imbalances
  7. Intravenous Fluid therapy
  8. Nursing Management
- B. Ch. 4: Care of Preoperative and Intraoperative Surgical Patients
  1. Surgery
  2. Technological Approaches in Surgery
  3. Autologous Blood for Transfusion
  4. Bloodless Surgery
  5. Perioperative Nursing Management

6. The Surgical Team
7. The Surgical Suite
8. Anesthesia
9. Potential Intraoperative Complications
- C. Ch. 5: Care of the Postoperative Surgical Patients
  1. Immediate Postoperative Care
  2. Nursing Management
  3. Discharge Planning
  4. Community Care

#### **Unit 4: Respiratory System**

##### **Concepts: Gas Exchange #18**

- A. Ch. 12: The Respiratory System
  1. Overview of Anatomy and Physiology of the Respiratory System
  2. Causes of Respiratory Disorders
  3. Respiratory Disorders
  4. Nursing Management
  5. Common Respiratory Patient Care Problems
- B. Ch. 13: Care of Patients with Disorders of the Upper Respiratory System
  1. Disorders of the Nose and Sinuses
  2. SARS-CoV-2/COVID-19
  3. Obstruction and Trauma
  4. Community Care
- C. Ch. 14: Care of Patients with Disorders of the Lower Respiratory System
  1. Respiratory Infectious Diseases
  2. Restrictive Pulmonary Disorders
  3. Obstructive Pulmonary Disorders
  4. Pulmonary Vascular Disorders
  5. Chest Injuries
  6. Lung Disorders
  7. Common Therapeutic Measures
  8. Community Care

#### **Unit 7: Cardiovascular System**

##### **Concepts: Perfusion #16**

- A. Ch. 17: The Cardiovascular System
  1. Overview of Anatomy and Physiology of the Cardiovascular System
  2. Cardiovascular Disease
  3. Evaluation
  4. Common Problems of Patients with Cardiovascular Disorders
- B. Ch. 18: Care of Patients with Hypertension and Peripheral Vascular Disease
  1. Hypertension
  2. Nursing Management
  3. Arteriosclerosis and Atherosclerosis
  4. Peripheral Vascular Disease

5. Nursing Management
  6. Nursing Management
  7. Nursing Management
  8. Venous Disorders
  9. Nursing Management
  10. Nursing Management
  11. Community Care
- C. Ch. 19: Care of Patients with Cardiac Disorders
1. Disorders of the Heart
  2. Nursing Management
  3. Inflammatory and Infectious Diseases of the Heart
  4. Cardiomyopathy
  5. Cardiac Valve Disorders
- D. Ch. 20: Care of Patients with Coronary Artery Disease and Cardiac Surgery
1. Coronary Artery Disease
  2. Surgical and Nonsurgical Treatment Options
  3. Community Care

#### **Unit 12: Endocrine System**

##### **Concepts: Hormonal Regulation #12 & Glucose Regulation #13**

- A. Ch. 35: The Endocrine System
1. Anatomy and Physiology of the Endocrine System
  2. The Endocrine System
  3. Nursing Management
- B. Ch. 36: Care of Patients with Pituitary, Thyroid, Parathyroid, and Adrenal Disorders
1. Disorders of the Pituitary Gland
  2. Disorders of the Thyroid Gland
  3. Disorders of the Parathyroid Gland
  4. Disorders of the Adrenal Gland
  5. Community Care
- C. Ch. 37: Care of Patients with Diabetes and Hypoglycemia
1. Nursing Management
  2. Community Care

#### **Unit 15: Emergency and Disaster Management**

##### **Concepts: Thermoregulation #8**

- A. Ch. 44: Care of Patients in Disasters and Bioterrorism Attacks
1. Disaster Preparedness and Response
  2. Preparing for Chemical, Nuclear, or Biological Disasters
  3. Active Shooter
  4. Debriefing
- B. Ch. 45: Care of Patients with Emergent Conditions, Trauma, and Shock
1. Prevention of Accidents
  2. First Aid and Good Samaritan Laws
  3. Psychological and Social Emergencies

4. Emergency Care
5. Metabolic Emergencies
6. Injuries caused by Extreme Heat and Cold
7. Poisoning
8. Bites and Stings
9. Electrical Injuries and Burns
10. Shock

[TITLE IX STATEMENT](#)

[ADA STATEMENT](#)

