

Department:

Practical Nursing

Course Description:

This course focuses on the care of adult clients experiencing common medical/surgical health alterations with predictable outcomes. Emphasis is placed on the care of clients with alterations in cognition and sensation, mobility, elimination, immunity and hematology, and reproduction. Principles related to pharmacology and emergency preparedness are also addressed.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Describe how to perform a focused assessment on adult clients with common alterations in health related to selected body systems.
2. Develop a relationship-centered plan of care that incorporates current evidence and includes cultural, spiritual, and developmentally appropriate interventions for clients with commonly occurring health alterations that have predictable outcomes.
3. Describe the role of members of the health care team in regard to clients with commonly occurring health alterations that have predictable outcomes.
4. Apply a basic level of knowledge of pathophysiology, pharmacology, and nutrition, as well as evidence-based practice, to the care of adult clients with commonly occurring health alterations that have predictable outcomes.
5. Articulate verbal and nonverbal communication strategies that are used to promote caring, therapeutic relationships with clients and their families, as well as professional relationships between members of the healthcare team.
6. Describe how information technology is used to access evidence, mitigate error, and communicate relevant information to members of the health care team.
7. Describe teaching strategies that can be used to reinforce the health education needs of clients with commonly occurring health alterations that have predictable outcomes.
8. Describe strategies that provide quality care in a safe environment for clients, self, and others.
9. Discuss how organizational, time management, and priority-setting skills are used when providing care to adult clients.
10. Describe the role of the practical nurse in maintaining personal and professional accountability for the delivery of standard-based, ethical and legal care to clients with commonly occurring health alterations that have predictable outcomes.

Course Content:

- A. Acid-Base Balance
 1. Recognize alterations in the laboratory values of arterial pH, CO₂, HCO₃, and O₂ indicative of respiratory and metabolic acidosis or alkalosis.

2. F. Differentiate between the clinical manifestations indicative of respiratory and metabolic acidosis or alkalosis.
 3. Apply knowledge of pathophysiology when planning care for clients with respiratory or metabolic acidosis or alkalosis.
 4. Identify priority actions for clients with respiratory and metabolic acidosis or alkalosis.
 5. Recognize the indications for administration of potassium supplements, Kayexalate, and sodium bicarbonate.
- B. Alterations in Cognition and Sensation
1. Recognize components of a focused assessment that should be included when collecting data on adults who have an alteration in cognition and sensation.
 2. Apply knowledge of anatomy, physiology, pathophysiology, nutrition, and developmental variations when helping to plan care for adults who have an alteration in cognition and sensation.
 3. Identify priority actions for adults who have an alteration in cognition and sensation.
 4. Apply knowledge of the actions, potential side effects, and nursing implications when administering medications to adults who have an alteration in cognition and sensation.
 5. Recognize alterations in laboratory values related to alterations in cognition and sensation.
 6. Discuss the correct use and functioning of therapeutic devices that support cognition and sensation.
 7. Describe the role of the nurse in providing quality care to adults who have an alteration in cognition and sensation.
 8. Identify health care education and safety needs for adults who have an alteration in cognition and sensation.
 9. Exemplars:
 - a. Trauma related disorders (head injuries, spinal cord injuries)
 - b. Degenerative neurological disorders (Parkinson's disease, Alzheimer's disease, dementias, multiple sclerosis)
 - c. Abnormal cell proliferation disorders (brain tumors)
 - d. Ischemic disorders (TIA, cerebrovascular accident)
 - e. Multiple etiological disorders (migraines, cluster)
 - f. Vision related disorders (cataracts, glaucoma, macular degeneration)
 - g. Hearing related (hearing loss – conductive, sensorineural; vertigo)
 10. Pharmacology
 - a. Disease modifying drugs for MS (immunomodulators, immunosuppressants, glatiramer acetate)
 - b. Migraine drugs (ergot alkaloids, serotonin reuptake antagonists, beta blockers)
 - c. Centrally acting muscle relaxants
 - d. Osmotic diuretics
 - e. Dopaminergics
 - f. Cholinesterase inhibitors
 - g. Topical agents for glaucoma (beta blockers, cholinergic agonists)
 - h. NMDA receptor antagonists
 - i. Carbonic anhydrase inhibitors
 11. Nutrition
 - a. Dysphagia diets (pureed, ground, soft, modified general diets)
 - b. Commercial thickeners
 - c. Nutritional supplements and tube feedings
- C. Alterations in Immunity and Hematology

1. Recognize components of a focused assessment that should be included when collecting data on adults who have an alteration in immunity and hematology.
2. Apply knowledge of anatomy, physiology, pathophysiology, nutrition, and developmental variations when helping to plan care for adults who have an alteration in immunity and hematology.
3. Identify priority actions for adults who have an alteration in immunity and hematology.
4. Apply knowledge of the actions, potential side effects, and nursing implications when administering medications to adults who have an alteration in immunity and hematology.
5. Recognize alterations in laboratory values related to alterations in immunity and hematology.
6. Discuss the correct use and functioning of therapeutic devices that support immunity and hematology.
7. Describe the role of the nurse in providing quality care to adults who have an alteration in immunity and hematology.
8. Identify health care education and safety needs for adults who have an alteration in immunity and hematology.
9. Exemplars:
 - a. Immunosuppression disorders (HIV/AIDS)
 - b. Hypersensitivity reactions (allergies, anaphylaxis)
 - c. Infectious and inflammatory disorders (rheumatoid arthritis)
 - d. Autoimmune disorders (Myasthenia gravis, systemic lupus erythematosus)
 - e. Coagulation disorders (Idiopathic thrombocytopenic purpura, Heparin-induced thrombocytopenia, Disseminated intravascular coagulation)
 - f. Hematologic disorders/RBC & platelets (anemias, DIC)
 - g. Hematologic disorders/WBC & lymphatic (Agranulocytosis, multiple myeloma, lymphedema, lymphomas)
10. Pharmacology
 - a. Antihistamines
 - b. Antiretroviral drugs (NRTIs, NNRTIs, PIs, fusion inhibitor)
 - c. Immunosuppressants (calcineurin inhibitors, cytotoxic, antibodies)
 - d. Corticosteroids, Glucocorticoids
 - e. Nonsteroidal anti-inflammatory drugs (NSAIDs – first and second generation)
 - f. Disease modifying anti-rheumatic drugs (DMARDs – I, II, III, IV)
 - g. Antimetabolites (folic acid analogs)
 - h. Anti-platelets
 - i. Anticoagulants
 - j. Low-dose heparin
 - k. Thrombolytics
 - l. Iron, Vitamin B12, folic acid supplements
11. Nutrition
 - a. Low purine diet
 - b. High calorie, high protein diet

D. Alterations in Mobility

1. Recognize components of a focused assessment that should be included when collecting data on adults who have an alteration in mobility.
2. Apply knowledge of anatomy, physiology, pathophysiology, nutrition, and developmental variations when helping to plan care for adults who have an alteration in mobility.
3. Identify priority actions for adults who have an alteration in mobility.
4. Apply knowledge of the actions, potential side effects, and nursing implications when

administering medications to adults who have an alteration in mobility.

5. Recognize alterations in laboratory values related to alterations in mobility.
6. Discuss the correct use and functioning of therapeutic devices that support mobility.
7. Describe the role of the nurse in providing quality care to adults who have an alteration in mobility.
8. Identify health care education and safety needs for adults who have an alteration in mobility.
9. Exemplars:
 - a. Trauma related disorders (complex fractures & immobilizing interventions, fat emboli)
 - b. Ischemia related disorders (amputations)
 - c. Infectious and inflammatory disorders (osteomyelitis)
 - d. Degenerative musculoskeletal disorders (osteoporosis, osteoarthritis and joint replacement)

E. Alterations in Reproduction

1. Recognize components of a focused assessment that should be included when collecting data on adults who have an alteration in reproduction.
2. Apply knowledge of anatomy, physiology, pathophysiology, nutrition, and developmental variations when helping to plan care for adults who have an alteration in reproduction.
3. Identify priority actions for adults who have an alteration in reproduction.
4. Apply knowledge of the actions, potential side effects, and nursing implications when administering medications to adults who have an alteration in reproduction.
5. Recognize alterations in laboratory values related to alterations in reproduction.
6. Discuss the correct use and functioning of therapeutic devices that support reproduction.
7. Describe the role of the nurse in providing quality care to adults who have an alteration in reproduction.
8. Identify health care education and safety needs for adults who have an alteration in reproduction.
9. Exemplars:
 - a. Hormonal disorders (menstrual disorders, menopause)
 - b. Impaired functioning/sexual (erectile dysfunction, decreased libido)
 - c. Structural abnormality (rectocele, sycotocele)
 - d. Abnormal cell proliferation disorders (fibroadenomas of the breast, breast cancer, fibroid tumors of the uterus, uterine cancer, cervical cancer, benign prostatic hypertrophy, prostatic cancer, testicular cancer)

10. Pharmacology

- a. Selective Estrogen Receptor Modulators (SERMs)
- b. Hormone Replacement Therapy (HRT)
- c. Antibiotics (penicillin, cephalosporins, tetracycline, quinolones, carbapenems)
- d. PDE5 inhibitors
- e. Testosterone
- f. Vaginal lubricants
- g. Cancer fighting drugs: Cytotoxic agents, Hormonal agents, Biologic response modifiers, Targeted drugs
- h. Medications for nausea and vomiting associated with chemotherapy: Serotonin antagonists, Dopamine antagonists, Cannabinoids

F. Alterations in Elimination

1. Recognize components of a focused assessment that should be included when collecting data on adults who have an alteration in elimination.
2. Apply knowledge of anatomy, physiology, pathophysiology, nutrition, and

developmental variations when helping to plan care for adults who have an alteration in elimination.

3. Identify priority actions for adults who have an alteration in elimination.
4. Apply knowledge of the actions, potential side effects, and nursing implications when administering medications to adults who have an alteration in elimination.
5. Recognize alterations in laboratory values related to alterations in elimination.
6. Discuss the correct use and functioning of therapeutic devices that support elimination.
7. Identify health care education and safety needs for adults who have an alteration in elimination.
8. Describe the role of the nurse in providing quality care to adults who have an alteration in elimination.
9. Exemplars:
 - a. Infectious and inflammatory disorders (esophagitis, GERD, gastroenteritis, peptic ulcer disease, irritable bowel syndrome, inflammatory bowel disease, ulcerative colitis; pancreatitis, cholecystitis, hepatitis, cirrhosis, appendicitis)
 - b. Structural disorders (esophageal varices, diverticulitis, intestinal obstruction, hernia)
 - c. Abnormal cell proliferation disorders (esophageal cancer, colorectal cancer, liver cancer)
 - d. Infectious and inflammatory disorders (cystitis, urethritis, pyelonephritis; glomerulonephritis, acute kidney injury, chronic kidney disease)
 - e. Renal calculi (urolithiasis)
 - f. Abnormal cell proliferation (Kidney cancer, bladder cancer)
10. Pharmacology
 - a. Proton pump inhibitors
 - b. Prostaglandin analogs
 - c. Mucosal protectant
 - d. IBS specific drugs
 - e. Antidiarrheals
 - f. Prokinetic agents
 - g. Hepatitis vaccinations
 - h. Laxatives, stool softeners
 - i. H₂ receptor antagonist
 - j. Antacids
 - k. Erythropoietic growth factors
 - l. Antibiotics (sulfonamides, trimethoprim, amoxicillin, tetracycline, antiprotozoal)
 - m. Urinary tract antiseptics
 - n. Anticholinergics (for overactive bladder)
11. Nutrition
 - a. High carbohydrate and calories, moderate fat and protein diet
 - b. Limited fat, high protein, high carbohydrate diet
 - c. Dietary measures to decrease esophageal reflux
 - d. Low fiber, low lactose, high protein, high calorie diet, high fiber
 - e. Fiber supplements
 - f. Low sodium, low potassium, low protein diet
 - g. Low purine diet
 - h. Avoidance of bladder irritants
 - i. Cranberry juice

G. Emergency Preparedness

1. Discuss issues related to an internal threat, natural disaster, or a mass casualty

- situation.
 - 2. Review prepared security plans and chain of responsibility for emergency situations.
 - 3. Define the term triage and its related steps.
 - 4. Determine priorities when evacuating clients from a client care setting.
- H. Intermediate and advanced Nursing Skills
- 1. Review principles related to selected skills
 - 2. Practice client care skills using proper technique while ensuring safety.
 - a. Enteral Tubes and Feeding
 - b. Continuous Bladder Irrigation, Sterile Catheter Insertion, Colostomy Care
 - c. Drug Calculation

Learning Assessments:

Course competencies will be evaluated by the use of tests, quizzes, worksheets, reflection papers, nursing journal reviews, library research, individual projects, and group projects.

Instructional Materials:

Textbooks: Williams, L. & Hopper, P. (2022). *Understanding Medical Surgical Nursing* (7th ed.). Philadelphia, PA: F.A. Davis Company. ISBN-13: 978-1-7196-4458-7

Doenges, M. & Moorhouse, M. (2019). *Nursing Care Plans: Guidelines for Individualizing Client Care Across the Life Span* (11th ed.). Philadelphia, PA: F.A. Davis Company. ISBN-13: 978-0-8036-6086-1

Polan, E., Taylor, D., (2023). *Journey Across the Life Span: Human Development and Health Promotion* (7th Ed.). Philadelphia, PA: F.A. Davis Company. ISBN 13: 978-1-7196-4591-1

Watkins, C. (2025). *Pharmacology Clear and Simple: A Guide to Drug Classifications and Dosage Calculations*, (5th Ed.). Philadelphia, PA: F. A. Davis Company. ISBN 13:978-1-7196-4474-1

Online: ATI Comprehensive Testing and Review Package for PNs

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students **must** complete the “Disabilities Self-Identification Form” on our [Disability Services website](#).

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.

A Note on Harassment, Discrimination and Sexual Misconduct

Highland Community College seeks to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX, and College policy prohibit harassment, discrimination and sexual misconduct. Highland Community College encourages anyone experiencing harassment, discrimination or sexual misconduct to talk to report to the Vice President for Student Services, the Human Resources Director or complete an [online report](#) about what happened so that they can get the support they need and Highland Community College can respond appropriately.

There are both confidential and non-confidential resources and reporting options available to you. Highland Community College is legally obligated to respond to reports of sexual misconduct, and therefore we cannot guarantee the confidentiality of a report, unless made to a confidential resource. Responses may vary from support services to formal investigations. As a faculty member, I am required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. For more information about policies and resources or reporting options, please review our [Equity Grievance Policy](#).