

**INTERAMERICAN UNIVERSITY OF PUERTO RICO
METROPOLITAN CAMPUS
SCIENCE AND TECHNOLOGY FACULTY
CARMEN TORRES DE TIBURCIO NURSING DEPARTMENT**

SYLLABUS

I GENERAL INFORMATION

Course title	:	FUNDAMENTALS OF ADULT CARE I
Code and Number	:	NURS 1231
Credits	:	SIX (6)
Academic Term	:	
Teacher	:	
Office Location and Hours	:	
Office telephone	:	(787) 250-1912 Ext. 2159, 2202
Email	:	

II. DESCRIPTION

Discussion of the acute and chronic dysfunctions of health related to functional health patterns: perception and health management, nutritional-metabolic and elimination. It includes the anatomical, physiopathological, microbiological, biochemical, and environmental concepts that affect human functioning. Integration of communication, administration, care management, research and nursing process skills for client care. Requirements: NURS 1111, 1112 and 1130. Concurrent with NURS 1232.

III. OBJECTIVES

TERMINAL OBJECTIVES

It is expected that, at the end of the program, the student will be able to:

1. Know the nursing process as an instrument for decision-making clinical decisions offering safe and quality care. (AASN)
2. Know the use of nursing interventions to prevent disease and promote, protect, maintain and restore health. (BSN)

GENERAL OBJECTIVES

1. Use the nursing process to make decisions that reflect critical thinking skills while providing safe, effective care, efficient, timely and equitable to the adult and elderly patient/client with acute and chronic dysfunctions related to the functional patterns of health: Perception and Management of Health, Nutritional Metabolic and Elimination. (Nursing process)
2. Offer humanistic care centered on the adult and elderly patient/client, their family and care providers that promote a continuous healing relationship

- considering their needs, values, preferences and their cultural and spiritual beliefs. (Humanistic Care)
3. Demonstrate competence in evidence-based therapeutic interventions with its scientific rationale that integrates the basic concepts and fundamentals of anatomy and physiology, pathophysiology, microbiology, physics, biochemistry, and environmental concepts that affect human functioning in adults and older adults for the promotion, maintenance and restoration of health in structured settings. (Health Illness)
 4. Effectively use verbal, nonverbal, and technological communication while discussing case studies and implementing small group discussion, or other learning strategies, to promote teamwork skills with the adult and older client. (Communication, IT and TeamSTEPPS)
 5. Apply evidence-based knowledge during rational clinical decision-making methods by providing the best nursing care to young and old adult patients/clients within the context of their family. (Scientific Inquiry, Evidence-Based Practice).
 6. Demonstrate effective management and leadership skills as a member of the interdisciplinary health team to facilitate safety and quality improvement for adult and elderly patients/clients. (Management, TeamSTEPPS and Safety)
 7. Demonstrate responsibility and commitment to their personal development and professional learning throughout life. ("Accountability" (Obligation) Management and leadership)

IV. COURSE CONTENT

Unit I: Introduction to Medical-Surgical Nursing

- A. Physiopathological and environmental concepts and principles in the application of the nursing process to perioperative patients/clients.
 1. Security
<http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/>.
 2. Institute for Health Care Improvement (IHI)
Interventions to save patients' lives and prevent harm -
<http://www.ihio.org/Engage/Initiatives/Completed/5MillionLivesCampaign/Pages/default.aspx>
 3. Institute of Medicine: Core Competencies for Health Professionals <https://qsen.org/competencies/>
 - a. QSEN Competencies
 - 1) Client Centered Care
 - 2) Team work and collaboration
 - 3) Evidence-based practice
 - 4) Quality improvement
 - 5) Security
 - 6) Informatics

- B. Health situations
 - 1. Security
 - 2. Situations in health care in hospitals
 - 3. Care at the end of life
 - 4. Cultural Competence www.thinkculturalhealth.org
 - 5. Patient Education
 - 6. New vital sign – Literacy in Health
 - a. Patient education
 - b. Education of the disease process

Unit II: Management of perioperative patients/clients

- A. Physiopathological and environmental concepts and principles in the application of the nursing process to perioperative patients/clients
 - 1. PREOPERATIVE PHASE
 - a. Types and purpose of surgery
 - b. Physical, psychological, and social responses of client/family/significant others
 - c. Application of the nursing process
 - 1) Introduction to the Universal Protocol for the Prevention of Wrong Sites, Wrong
 - 2) Procedures and Wrong Person Surgery™- from the Joint Commission (JC)-
https://www.jointcommission.org/-/media/tjc/documents/standards/universal-protocol/up_poster1pdf.pdf
 - 3) World Health Organization Surgical Safety Checklist
http://www.who.int/patientsafety/safesurgery/tools_resources/SSSL_Checklist_finalJun08.pdf
 - 4) Medication Therapy Monitoring
 - 2. INTRAOPERATIVE PHASE
 - a. Surgical environment (Operating Room-OR)
 - b. Members and functions of the operating room (OR) team
 - c. Communication between team members
 - d. Types of anesthesia
 - e. Security
 - f. Application of the nursing process
 - 3. POST-OPERATIVE PHASE
 - a. Post Anesthesia Care Unit (PACU)
 - b. Pain control
 - 1) Clinical Guidelines for Pain Relief – American Society of PeriAnesthesia Nursing

ASPAN)<http://www.aspan.org/ClinicalPractice/ClinicalGuidelines/PainandComfort/tabid/3256/Default.aspx>

- c. Infection control
 - 1) Post-Operative Complications
 - a) Nausea & vomiting – Application of the nursing process

Unit III: I Immune System

- A. Physiopathological and environmental concepts and principles in the application of the nursing process to patients/clients with dysfunctions of the Immune System
 - 1. Common acute and chronic dysfunctions
 - a. Burns
 - 1) Septic shock
 - b. Hypersensitivity reactions
 - 1) Anaphylactic shock
 - c. Acquired Immune Deficiency Syndrome (AIDS)
 - 2. Risk factors, prevention, diagnostic tests, critical laboratory values and treatment.
 - 3. Application of the nursing process
- B. Physiopathological and environmental concepts and principles in the application of the nursing process to patients/clients with alterations in cell growth (cancer).**
 - 1. Common acute and chronic dysfunctions
 - 2. Definition of basic concepts – National Cancer Institute - <http://www.cancer.gov/>
 - 3. Benign and malignant neoplasms
 - a. Risk factors, prevention, diagnostic tests, critical laboratory values and treatment.
 - b. Signs of deterioration (ABCD rule in self-examination of moles)
 - 4. Application of the nursing process

Unit IV: Endocrine System Nutritional-Metabolic health pattern

- A. Physiopathological and environmental concepts and principles in the application of the nursing process to patients/clients with dysfunctions of the Endocrine System**
 - 1. Common health problems
 - a. Diabetes mellitus (type I and II)
 - 1) Risk factors, prevention, diagnosis (critical laboratory values) and treatment
 - a) American Diabetes Association – Information for <http://www.diabetes.org/iii.Guidelines> –

New guidelines in Diabetes 2019-

<https://www.intramed.net/contentover.asp?contentid=93549>

- b. Hiccups and hyperthyroidism
- c. Hiccups and hyperparathyroidism
 - 1) Risk factors, prevention, diagnostic tests, critical laboratory values and treatment.
- d. Application of the nursing process

Unit V: Gastrointestinal System

A. Physiopathological and environmental concepts and principles in the application of the nursing process to patients/clients with dysfunctions of the Gastrointestinal System

- 1. common health problems
 - a. Esophageal varices
 - b. Gastritis
 - c. Peptic and duodenal ulcer
 - d. Cholecystitis and cholelithiasis
 - e. Hepatitis
 - f. Hepatic cirrhosis
 - g. Pancreatitis
 - h. Obesity
- 2. Risk factors, prevention, diagnostic tests, critical laboratory values and treatment.
- 3. Application of the nursing process
- 4. Practical Guide: "American Gastroenterological Association - <https://www.gastro.org/practice-guidance/practice-updates>

HEALTH PATTERN: ELIMINATION

Unit VI: Urinary System

- A. Physiopathological and environmental concepts and principles in the application of the nursing process to patients/clients with dysfunctions in fluid and electrolyte balance and acid-base imbalances
 - 1. Common health problems
 - a. Hyper and hyponatremia
 - b. Hyper and hypokalemia
 - c. Dehydration and edema
 - 2. Risk factors, prevention, diagnostic tests, critical laboratory values and treatment.
 - 3. Application of the nursing process

B. Physiopathological and environmental concepts and principles in the application of the nursing process to patients/clients with dysfunctions of the urinary system.

- 1. common health problems
 - a. Acute and chronic kidney failure
 - 1) Publications - American Society of Nephrology <http://www.asn-online.org/>
 - b. Glomerulonephritis

2. Risk factors, prevention, diagnostic tests, critical laboratory values and treatment.
3. Application of the nursing process

INTEGRATED SCIENCES

Unit I: Introduction to Medical-Surgical Nursing

A. Anatomical, physiological, biochemical, microbiological, environmental concepts and functions related to safety in the use of central lines, urinary catheter, and nasogastric tube.

1. Center line

- a. Anatomy Landmark Considerations for Central Line Cannulation
- b. Infection and microorganism related to antisepsis and venous catheter

2. urinary catheters

- a. Male and female urogenital anatomy for bladder catheterization
- b. Uropathogens and catheter-related colonization

3. Nasogastric tube

- a. Anatomy for nasogastric tube insertion
- b. Aspiration of NGT secretions for pH measurement

Unit II: Management of perioperative patients/clients

A. Anatomical, physiological, biochemical, microbiological and environmental, pathophysiological concepts and functions related to patient/client management (pre, intra and postoperative)

1. Anatomy and Physiology related to the management of perioperative patients/clients.
2. Principles and fundamentals of biochemistry related to the management of patients/clients (pre, intra and postoperative)
3. Concepts and fundamentals of microbiology related to patient/client management (pre, intra and postoperative)
4. Physics concepts related to the skin

Unit III: Immune System

A. Anatomical, physiological, pathophysiological, biochemical and microbiological concepts of the Immune System.

1. Principles and fundamentals of anatomy and physiology of the Immune System
 - a. SystemLymphatic
 - b. Immune system
2. Principles and fundamentals of biochemistry in relation to the Immune System
3. Principles and fundamentals of microbiology related to the immune system

B. Anatomical, physiological, biochemical, microbiological,

pathophysiological, environmental concepts and functions related to the development of cancer.

1. Principles and fundamentals of anatomy and physiology related to the development of cancer
2. Principles and foundations of Biochemistry related to cancer development
3. Principles and fundamentals of Microbiology related to the development of cancer

Unit IV: Endocrine System

A. Anatomical, physiological, biochemical, microbiological, pathophysiological, environmental concepts and functions related to the endocrine system.

- 1. Principles and fundamentals of anatomy and physiology related to the endocrine system**
 - a. Organization of the endocrine system
 - b. Functions of the endocrine system
 - c. Classification of hormones
 - d. Endocrine organs, Endocrine glands and their related hormones in humans
- 2. Concepts and fundamentals of biochemistry related to the endocrine system**
 - a. Chemical communication of the glands
- 3. Concepts and fundamentals of microbiology related to the endocrine system**
 - a. Susceptibility to infections in patients with diabetes mellitus: bacterial infections

Unit V: Gastrointestinal System

A. Anatomical, physiological, biochemical, microbiological, pathophysiological, environmental concepts and functions related to the gastrointestinal system.

- 1. Principles and fundamentals of anatomy and physiology related to the gastrointestinal system:**
 - a. The functions of the gastrointestinal system
 - b. Description of the organs of the GI tract
 - c. digestion process
 - d. Liver
 - e. Pancreas
 - f. Gallbladder
- 2. Principles and fundamentals of Biochemistry related to the gastrointestinal system:**
 - a. Chemical composition of saliva and teeth
 - b. Digestion hormones – gastrin, secretin and CCK
 - c. Composition of Hydrochloric Acid (HCl)
 - d. Chemical composition of bile

- e. Digestive and pancreatic enzymes
 - f. digestive hormones
 - g. Chemicals in intestinal juice
 - h. Cycle of citric acid (Krebs cycle) in the metabolism of CHO, lipids and proteins
 - i. Catabolism and anabolism of Glucose- Regulation of blood glucose by different mechanisms
 - j. protein metabolism
 - k. Liver biochemistry:
- 3. Microbiology concepts related to the gastrointestinal system**
- a. Normal microflora of the GI tract
 - b. Most common bacteria that affect the GI tract
 - c. H. pylori bacteria
 - d. Most common viruses that affect the GI tract

Unit VI: Urinary System

- A. Anatomical, physiological, biochemical, microbiological, pathophysiological, environmental concepts and functions related to the urinary system, fluids and electrolytes**
- 1. Principles and fundamentals of anatomy and physiology related to fluids and electrolytes**
 - 2. Basic concepts of biochemistry related to fluid and electrolyte balance**
 - a. Compartment of body fluids
 - b. Mechanisms that maintain total body fluid homeostasis
 - c. Chemical composition and distribution of electrolytes in body fluids
 - d. Mechanism of action of aldosterone and ECF homeostasis
 - e. Homeostasis of the total body water of the organism
 - f. Hydroelectrolytic regulation mechanism
 - g. Starling's law of capillaries
 - h. Mechanism of regulation of the movement of water and solutes between the ECF and the LIC
 - i. ADH hormone and ECF homeostasis
 - j. Mechanisms that control the pH of body fluids
 - k. Acid base balance

V. ACTIVITIES

1. Assessment
2. Development and discussion of care plans
3. Group discussion
4. Independent studies
5. Study guides
6. Supplemental reading
7. Questions and answers

8. Videos

VI. EVALUATION

Criteria	Points	Percent
Partial exam #1	100	20%
Partial exam #2	100	20%
Comprehensive Final Exam # 3	100	20%
Assignments and/or Quizzes and/or oral presentations with criteria of evaluation. Study guides, illustrations, portfolio and/or modules.	100	20%
contact hours	100	10%
ATI	100	10%
	600%	100%

VII. SPECIAL NOTES

A. Auxiliary services or special needs

All students who require auxiliary services or special assistance must request these at the beginning of the course or as soon as they know that they need them, through the proper registry, in the Guidance Office with Dr. María de los Ángeles Cabello at email mcabello@metro.inter.edu

B. Honesty, fraud, and plagiarism

Dishonesty, fraud, plagiarism, and any other inappropriate behavior in relation to academic work constitutes major infractions sanctioned by the General Student Regulations. The major infractions, as stated in the General Student Regulations, may have as a consequence, suspension from the University for a definite period greater than one year or the permanent expulsion from the University, among others sanctions.

C. Use of electronic devices

Cellular telephones and any other electronic device that could interrupt the teaching and learning processes or alter the environment leading to academic excellence will be deactivated. Any urgent situation will be dealt with, as appropriate. The handling of electronic devices that allow students to access, store or send data during evaluations or examinations is prohibited.

D. Compliance with the Provisions of Title IX

The Federal Higher Education Act, as amended, prohibits discrimination because of sex in any academic, educational, extracurricular, and athletic activity or in any other program or function, sponsored or controlled by a higher education institution, whether or not it is

conducted within or outside the property of the institution if the institution receives federal funds.

In harmony with current federal regulations, in our academic unit an Assistant Coordinator of Title IX has been designated to offer assistance and orientation in relation to any alleged incident constituting discrimination because of sex or gender, sexual harassment or sexual aggression. The Assistant Coordinator, Mr. George Rivera, can be reached by phone at (787) 250-1912 extension 2147, or by e-mail grivera@metro.inter.edu.

The Normative Document Titled **Norms and Procedures to Deal with Alleged Violations of the Provisions of Title IX** is the document that contains the institutional rules to direct any complaint that appears to be this type of allegation. This document is available in the Web site of Inter American University of Puerto Rico (www.inter.edu).

VII. EDUCATIONAL RESOURCES

Brunner & Suddarth's. (2018) Textbook of Medical – Surgical Nursing.
Lippincott, Williams & Wilkins, 14th ed.
Patton & Thibodeau. (2018). Anatomy and Physiology. 10th Edition. Elsevier, Mosby

Swisher, Patton & Thibodeau. (2018). Study Guide for Anatomy and Physiology. 10TH Edition, Mosby

Format review - Dr. Solmarie Rodríguez DNP/2022 oct2022/MRV