MORPHOPHYSIOLOGY I
Human Anatomy & Physiology I

Semester Credits: 4
In-class Hours: 48
Out-of-Class Hours: 96
Level: 1st year

OVERVIEW

Morphophysiology I introduces students to the study of anatomy and physiology of the human body. Interaction between anatomy and function focuses on the Skeletal, Muscular and Integumentary systems. The course also considers ethics and values in the study of the human body.

SUBJECT CHARACTERISTICS

WHAT IS IT?	It is an action based on scientific reasoning so that the student knows the structural organization of living beings physiology both physical and chemical processes which occurs in living organisms.
WHAT NEEDS DOES IT RESOLVE?	Resolves that the student has knowledge of basic functions such as reproduction, respiration, metabolism, and all physiological processes that take place in the body that determine the health-disease process.
WHAT COMES AFTER?	The students know the importance of anatomy and physiology as inseparable sciences and assess their application in the development of new knowledge relating them to their application in nursing.
WHAT PROBLEMS DOES IT ANSWER?	It is concerned that students have the knowledge of the function and structure of the human body which can describe nursing interventions to achieve outcomes based on this knowledge.
WHAT RELATIONSHIPS EXISTS?	The Morphophysiology is one of the basic life sciences, and is related to medicine and other branches of biology.

GENERAL OBJECTIVES

Knowing the macroscopic and microscopic structure of the human body by developing skills in the fundamental anatomical and physiological aspects of the human being that will serve for use in clinical areas during the development of relevant subjects as well as in their professional practice.

SPECIFICS

1. Discover the general characteristics of the basic structure of the human body.
2. Recognize and characterize the major gross and microscopic structures of the human body.
3. Learn, discover and identify physical and chemical processes that occur in living organisms as well as all structures organs and systems that make up the normal human body.

4. Know and explain the general functions of the functional anatomy
5. Demonstrate a high sense of ethics, responsibility, and self-training through ongoing research.

EDUCATIONAL OBJECTIVES

1. Adequately describe histological and anatomical images that can be applied in the health care of the general population.
2. Apply knowledge of human physiology to be related to the daily activities with society defining the health-disease process allowing for the prevention of diseases.
3. Apply anatomical and physiological knowledge of the organs and systems that make up the human body for the proper performance of ones duties as a member of the health team.

INSTRUCTIONAL OBJECTIVES

- Initiate students into a research project related to human anatomy and physiology within the framework of their abilities and focusing on real situations that can be applied.
- Teach the student to apply the appropriate methodology to identify anatomical and pathological alterations that allow for appropriate nursing actions.
- Discuss the results of research findings obtained by using different criteria that was based on the students knowledge, develop critical thinking.

COURSE SKILLS

- Discover the general characteristics of the basic structure of the human body to properly interpret histological and anatomical images along with knowledge of the human being from the standpoint of the cell, tissue, and organ.
- Morphophysiology recognizes and characterizes the major macroscopic structures of the human body to understand the changes caused by various diseases.
- Meet, describe and identify the physical and chemical processes that occur in living organisms, as well as all structures, organs, and systems that make up the normal human body to identify disorders in the human body.
- Learn and explain the general functions of the functional anatomy, learning course materials based on ones career.
- Demonstrate a high sense of ethics and responsibility and self-learning capacity through ongoing research.

COURSE CONTENT

KNOWLEDGE	**SKILLS**	**VALUES**
UNIT I: Intro		
1.1 Concepts of Anatomy and Physiology 1.2 Anatomical planes and lines 1.3 Position anatomical quadrants abdominal 1.4 Anatomical terms, splitting the human body, body cavities. 1.5 Internal organization of the human body . chemical level . cell level . tissue level . organ level	Easily name anatomo-physiological terminology and recognize the organization of the human body for use in nursing actions.	Ethic Responsibility Strength

. systems and device level	
UNIT II: Osteology	
2.1 Definition and generalities of bone tissue, histological characteristics of bone cells. 2.2 Shape of bones, formation and growth of bones. 2.3 Classification of bones. Cartilage tissue. Skeleton 2.4 Head: bones of the skull and face. 2.5 Tronco bones of the rib cage and spine 2.6 Huesos of the upper limbs and shoulder girdle 2.7 Bones of the lower limbs and pelvic girdle.	Recognize topographically the different bones of the human body according to their different classifications in the laboratory.
UNIT III: Arthrology	
3.1 Definition, generalities 3.2 Classification joints. 3.3 Diarthrosis, description of the synovial 3.4 Clasificación: 3.5 Classification of Sinartrosis amphiarthrosis	Describe and locate the different joints and actively linking them with the skeletal system in the laboratory

UNIT IV: Myology	
4.1 Definition, general muscle tissue. Muscle fibers and connective tissue. 4.2 Classification of muscles. Muscle attachments. Tendons, fascia, ligaments and fascia. 4.3 Properties of muscles. Muscle groups and their functions. 4.4 Muscles of the head. 4.5 Neck muscles. 4.6 Trunk muscles 4.7 Upper limb muscles 4.8 Lower limb muscles.	Compare the ratio of muscle to other body structures in the models used in class.

UNIT V: Integumentary	
5.1- Skin generalities 5.2- Skin layers 5.3- Epidermis 5.4- Dermis 5.5- Cutaneous receptors 5.6- Annexes of the skin	Identify and recognize the various macroscopic and microscopic structures of the skin and its annexes, relating to its function

METHODOLOGY

In the development of the course is the study of man, the structures and functions of the organs and systems of the human body as a whole. Developing skills in topographic anatomy and physiology, this knowledge is essential for a Nurse Technician, ensuring the achievement of the thematic objectives and the general objectives of training.

In this process the teacher must structure a task system allowing the student to collect the appropriate knowledge which will enable them to apply it in their professional life. To which must be:

Develop the teaching and learning process in the preparation of Nurse Technicians to promote continued research with teacher assistance.

Apply the methods of collecting information learned in Morphophysiology I and apply them in the field.

Develop professional skills and modes of action in the student appropriate to their knowledge of every topic and link them with the functions and activities of Nurse Technician, also integrating previous subjects.

It is recommended that study guides be made to guide students in their self-preparation prior to the development of the subject.

The course will use the workshop conference, seminars, workshop, laboratory practical classes, self-preparation, and literature review. The conference workshop must teach using dialogue appropriately. To conduct workshops, seminar workshops, and group discussion where the student has an active role, it is necessary that the teacher prepare and distribute in a timely manner all study materials.

The problem-oriented teaching methods will be used to induce reflective thinking and promote the autonomy of the student, with emphasis on essential content and the integration of previous content in the development of the different Units.

EVALUATION PROCESS

The evaluation of students will be continuous, comprehensive and objective, considering the contents CONCEPTS (theory), PROCEDURAL (practices) and ATTITUDE (performance and participation in classroom theory, practical and group work), through which we can obtain information to determine the degree of achievement obtained according to ones competencies. Assessments will be input to track the evolution of the student in the cognitive aspects. That will comprise 60% of the grade for the course.

The final assessment will comprise 40% of the final grade, using a theoretical evaluation.

TECHNIQUES	INSRUMENTS	OPERATIVE INDICATORS	STANDARDS
Observation Interview	Guide observation Guide interview	Level results Level responses	Effectiveness Efficiency

Poll Testing	Questionnaire Written, oral or practical	Level analysis Level of knowledge, skills and values	Relevance Optimization Impact

11. BIBLIOGRAPHY

AUTHOR	TITLE	YEAR	EDITION
TORTORA	Principles of Anatomy and Physiology	2011	11th
JORGE VIDAL	ANATOMY, PHYSIOLOGY AND HYGIENE	2008	33rd Buenos Aires
WILLIAMS Y LIPPINCOTT	ANATOMY		
LEXUS	ATLAS OF THE HUMAN BODY, ANATOMY, PHYSIOLOGY AND PATHOLOGY	2011	1st