Republic of the Philippines

Department of Education

DepEd Complex, Meralco Avenue, Pasig City

STRENGTHENED SENIOR HIGH SCHOOL CURRICULUM

HUMAN MOVEMENT 1

(BASIC ANATOMY IN SPORTS AND EXERCISE)

Grade 11

Course Description:

This course covers the fundamental structure and function of the human body. Learners will explore key anatomical systems, including skeletal, muscular, cardiovascular, nervous, and respiratory systems, among others. Emphasis will be placed on understanding the relationships between different body parts and their roles in maintaining overall health and functionality to develop a foundational knowledge essential for careers in health sciences.

Elective: Academic
Prerequisite: None
Time Allotment: 80 hours for one semester, 4 hours per week
Schedule: First Semester

QUARTER 1

<table>
<tr><td>CONTENT STANDARD</td><td colspan="2">The learners demonstrate understanding of the basic structure and processes of the human body in relation to fitness, exercise, and health to optimize human movement.</td></tr>
<tr><td>PERFORMANCE STANDARD</td><td colspan="2">The learners perform basic functional movement patterns in relation to fitness, exercise, and health to optimize human movement.</td></tr>
<tr><td colspan="2">LEARNING COMPETENCIES</td><td>CONTENT</td></tr>
<tr><td colspan="2">1. explain the basic structure of the human body</td><td>Human Structure and Processes
• Foundation of Gross Structure/Human Anatomy
• Foundation of Function/Human Physiology</td></tr>
<tr><td colspan="2">2. describe the function and interaction of body systems in relation to fitness and exercise</td><td><table><tr><th>Major Components and Functions of the Human Movement Systems:</th><th>Body Responses and Adaptations to Exercise</th></tr><tr><td>• The Nervous System</td><td rowspan="3">• Balance, Stability, and Coordination
• Heart rate
• Fatigue
• Energy System
• Structure, Types, and Muscle groups
• Growth and maturation</td></tr><tr><td>• The Cardio Respiratory System</td></tr><tr><td>• The Musculoskeletal System</td></tr></table></td></tr>
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3. execute basic movement patterns using different anatomical terms and movement descriptors	Anatomical Terms
	• Definition and Importance of Anatomical Terms
	• Standard Anatomical Position
	• Planes of Motion (Sagittal, Frontal, Transverse)
	• Axes of Rotation (Mediolateral, Anteroposterior, Longitudinal)
	
	Directional Terms in Anatomy
	• Superior vs. Inferior
	• Anterior (Ventral) vs. Posterior (Dorsal)
	• Medial vs. Lateral
	• Proximal vs. Distal
	• Superficial vs. Deep
	
	Movement Descriptors and Joint Actions
	• Linear and Angular Movements
	• Primary Movements
	  ○ Flexion vs. Extension
	  ○ Abduction vs. Adduction
	  ○ Rotation (Internal & External)

QUARTER 2

CONTENT STANDARD	The learners demonstrate understanding of the basic human movement patterns in relation to fitness, exercise, and health to optimize human movement.
PERFORMANCE STANDARD	The learners perform basic human movement patterns in relation to fitness, exercise, and health to optimize human movement.

LEARNING COMPETENCIES	CONTENT
1. analyze the various movement patterns of the upper extremity segments	Movement Analysis of the Upper Extremities • Shoulders • Elbow • Wrist

	• Hand • Fingers
2. analyze the various movement patterns of the lower extremity segments	Movement Analysis of the lower Extremities • Hips • Knees • Ankle • Foot
3. execute basic movement patterns using different anatomical terms and movement descriptors	Analysis of Basic Movement Patterns • Walking • Running • Jumping • Throwing

GLOSSARY

Anatomical Terms It is the language of anatomy that describes the location, orientation, and movement of body parts and structures.

Autonomous Stage It is the final stage, where movements are accurate, consistent, and efficient. The learner is able to perform the movement with little or no cognitive processing

Balance It refers to an individual's ability to maintain their line of gravity within their Base of support (BOS). It can also be described as the ability to maintain equilibrium, where equilibrium can be defined as any condition in which all acting forces are cancelled by each other resulting in a stable balanced system.

Cardiovascular System It is the transportation of oxygen, nutrients and hormones throughout the body and elimination of cellular metabolic waste

Coordination It is the ability to select the right muscle at the right time with proper intensity to achieve proper action.

Directional Terms It describes the positions of structures relative to other structures or locations in the body.

Energy Systems It is defined as the physical and societal elements that ensure that society has at its disposal a range of different energy forms that facilitate its functioning.

Fatigue	It is defined as physical and/or mental weariness resulting from exertion, that is, an inability to continue exercise at the same intensity with a resultant deterioration in performance.
Functional Anatomy	It is a field that uses basic structural knowledge provided in Human Anatomy to develop an understanding of the functional significance of the structures of the musculoskeletal system.
Growth	It is a change in body size, body composition or dimensions of a specific region of the body (Joyce and Lewindon, 2014). The body tissue grows and so the body changes.
Heart rate	It refers to the number of times the heart beats per minute, and is directly related to the workload being placed on the heart.
Human Anatomy	It is often defined as the study of structures in the human body. Anatomy focuses on the description of form, or how body structures at different levels look.
Human Movement	It is the movement produced by the human body due to the contraction of muscles and bending of bone joints. Human movements are controlled by the nervous system. Hence, the human movement incorporates the use of muscles, ligaments, joints, and bones. Kinesiology is the field that deals with the study of human movements.
Human Movement Analysis	It is the study of human motion through the use of various techniques such as biomechanics, kinesiology, and motion capture technology. A method of analysis refers to the systematic approach used to study, interpret, and evaluate a subject, phenomenon, or process.
Human Movement System	It is a system of physiological organ systems that interact. to produce movement of the body and its parts.
Human Physiology	It studies the "nature" of the human body, nature in the sense of how structures at different levels work. Physiology focuses on function, or how structures at different levels work.
Lower Extremities	It refers to the part of the body that includes the hip, thigh, knee, leg, ankle, and foot. It consists of bones, muscles, tendons, ligaments, nerves, and blood vessels that work together to provide support, stability, and mobility for daily activities.
Maturation	It is the progression of the human body towards adulthood. The rate and timing of maturation can be highly variable, and even different systems can mature at different times. For example the skeletal system will mature at a much later date than the reproductive system (Lloyd and Oliver, 2014).

Movement Assessment	It evaluates a person's ability to perform functional movements, often focusing on mobility, stability, strength, coordination, and overall movement patterns. It is used in various fields, such as physical therapy, sports science, and fitness training, to identify movement deficiencies, imbalances, or risks of injury.
Musculoskeletal System	It is a Mechanical support, posture and locomotion.
Skeletal system	It is composed of bones and cartilages.
Stability	It is the ability of the body to maintain postural equilibrium and support joints during movement.
Torso	It is the main part of the body that contains the chest, abdomen, pelvis, and back. Most of the body's organs and the backbone are found in the torso. It is also called trunk.
Upper Extremities	These are the forelimbs of an upright-postured tetrapod vertebrate, extending from the scapulae and clavicles down to and including the digits, including all the musculature and ligaments involved with the shoulder, elbow, wrist and knuckle joints.
Voluntary movement	It refers to intentional and goal-directed actions initiated and controlled by the higher centers of the brain, particularly the motor cortex, basal ganglia, and cerebellum. This theory explains how the brain plans, initiates, and executes purposeful actions, such as picking up an object or writing.

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