#### JSS College of physiotherapy

#### **Department of Movement Science**

## MPT -I Unit Plan

## **January: 2024**

Aim: To cover the different basic concepts related to movement and its dysfunction (anatomy, physiology, growth development, motor control)

## Specific objective: To be competent researcher in fundamental areas of physiotherapy practice

## **Topics being addressed**

a. Growth and development of all systems

b. Anatomy - embryology, gross anatomy

c. Functional anatomy and physiology related to nerve, cardio vascular, respiratory, gastro intestinal, renal, endocrine, CNS, motor system

d. Energy systems.

e. Biochemical processes involving energy systems, nutrition and its role in health, oxygen transport, aerobic and anaerobic systems.

f. Physical and anatomical parameters of movement during function and physical activity.

# Note: SDL: Self-Directed Learning and assignments are given at the end of the unit plan

DATE	8-9	9-1	1-2	2-3	3-4	4-5	5-6:30
	(Library)SDL						(Library) SDL
1/1/2024	Growth and	Clinical	L	Clinical	Clinical	Clinical	Growth and development of all
	development of all	postings	U	postings	postings	postings	systems
	systems		Ν				
2/1/2024	Growth and	Clinical	С	Clinical	Clinical	Clinical	Growth and development of all
	development of all	postings	Η	postings	postings	postings	systems
	systems						
3/1/2024	Growth and	Clinical	B	Clinical	Clinical	Clinical	Growth and development of all
	development of all	postings	R	postings	postings	postings	systems
	systems		E				
			Α				
			K				
4/1/2024	Growth and			CASE	CASE	Clinical	Growth and development of all
	development of all			DISCUSS	DISCUSSIO	postings	systems
	systems			ION	Ν		
5/1/2024	Growth and	Clinical			Clinical		Growth and development of all
	development of all	postings			postings	Clinical	systems
	systems					postings	

6/1/2024	Growth and	Clinical		Clinical postings	Saturday		
0/1/2024	development of all systems	postings	L U N C		Saturday		
8/1/2024	Anatomy – embryology, gross anatomy	Clinical postings	H B	Clinical postings	Clinical postings	Clinical postings	Anatomy – embryology, gross anatomy
9/1/2024	Anatomy – embryology, gross anatomy	Clinical postings	R E A K	CASE DISCUSS ION	CASE DISCUSSIO N	Clinical postings	Anatomy – embryology, gross anatomy
10/1/2024	Anatomy – embryology, gross anatomy	Clinical postings	L	Clinical postings	Clinical postings	Clinical postings	Anatomy – embryology, gross anatomy
11/1/2024	Anatomy – embryology, gross anatomy	Clinical postings	U N C H B R	CASE DISCUSS ION	CASE DISCUSSIO N	Clinical postings	Anatomy – embryology, gross anatomy

			A K				
12/1/2024	Anatomy – embryology, gross anatomy	Clinical postings		Clinical postings	Clinical postings	Clinical postings	Anatomy – embryology, gross anatomy
13/1/2024	Anatomy – embryology, gross anatomy	Clinical postings		Saturday	1	1	1
			L U N C				
15/1/2024	Functional anatomy and physiology related to nerve, cardio vascular, respiratory, gastro intestinal, renal,	Clinical postings	B R E A K	Clinical postings	Clinical postings	Clinical postings	Functional anatomy and physiology related to nerve
16/1/2024	Functional anatomy and physiology related to nerve,	Clinical postings		Clinical postings	Clinical postings	Clinical postings	Functional anatomy and physiology related to nerve

17/11/2023	Functional			Clinical	Clinical		Clinical	Functional anatomy and
	anatomy and	Clinical		postings	postings		postings	physiology related to cardio
	physiology related	postings						vascular, respiratory,
	to cardio							
	vascular,							
	respiratory,							
18/1/2024	Functional	Clinical		CASE	CASE		Clinical	Functional anatomy and
	anatomy and	postings		DISCUSS DISC		SSIO	postings	physiology related to cardio
	physiology related			ION	Ν			vascular, respiratory,
	to cardio							
	vascular,							
	respiratory							
19/1/2024	Functional	Clinical						
Saturday	anatomy and	postings		Clinical postings Cl		Clini	Clinical	Functional anatomy and physiology
	physiology related					cal	postings	related to gastro intestinal, renal,
	to gastro			posti			gastro	
	intestinal, renal,					ngs		
20/1/2024	Functional	Clinical	L	Saturday				
	anatomy and	postings	U					
	physiology related		Ν					
	to gastro		С					
	intestinal, renal,		Η					
22/1/2024	Functional	Clinical		Clinical	Clinical		Clinical	Functional anatomy and
	anatomy and	postings	B	postings	postings	5	postings	physiology related to renal,
	physiology related		R					endocrine
	to renal, endocrine		E					

23/1/2024	Functional	Clinical	Α			Clinical	Functional anatomy and
	anatomy and	postings	K			postings	physiology related to renal,
	physiology related						endocrine
	to renal, endocrine						
24/1/2024	Functional	Clinical		Clinical	Clinical	Clinical	Functional anatomy and
	anatomy and	postings		postings	postings	postings	physiology related to renal,
	physiology related						endocrine
	to renal, endocrine						
25/1/2024	Functional			CASE	CASE	Clinical	Functional anatomy and
	anatomy and	Clinical		DISCUSS	DISCUSSIO	postings	physiology related to CNS, motor
	physiology related	postings		ION	Ν		system
	to CNS, motor						
	system						
27/1/2024	Functional	Clinical					
Saturday	anatomy and	postings		Saturday			
	physiology related						
	to CNS, motor						
	system				Γ	T	
29/1/2024	Functional	Clinical		Clinical	Clinical	Clinical	Functional anatomy and
	anatomy and	postings		postings	postings	postings	physiology related to CNS, motor
	physiology related						system
	to CNS, motor						
	system						
30/1/2024	Functional	Clinical	L	Clinical	Clinical	Clinical	Functional anatomy and
	anatomy and	postings	U	postings	postings	postings	physiology related to CNS, motor
	physiology related		Ν				system

	to CNS, motor system		C H				
31/1/2024	Functional anatomy and physiology related to CNS, motor system	Clinical postings	B R E A K	CASE DISCUSS ION	CASE DISCUSSIO N	Clinical postings	. Functional anatomy and physiology related to CNS, motor system

PRINCIPAL (MOVEMENT SCIENCE) HOD

### **Assignments-1**

Topic Title: Growth and Development of All Systems

**Objective:** To gain a comprehensive understanding of the growth and development of all systems in the human body.

#### **Instructions:**

- 1. Research and write a detailed report on the growth and development of all systems in the human body, including the musculoskeletal, cardiovascular, respiratory, gastrointestinal, renal, endocrine, and central nervous systems.
- 2. Discuss the various stages of growth and development of each system, including embryonic, fetal, neonatal, and postnatal stages.
- 3. Analyze the factors that influence the growth and development of each system, including genetic, environmental, and lifestyle factors.
- 4. Evaluate the impact of growth and development on the function of each system, including the role of physical activity and exercise.
- 5. Provide recommendations for optimizing growth and development of each system, including strategies for promoting healthy lifestyle habits.

### Assignments-2

### Topic Title: Anatomy – Embryology, Gross Anatomy

**Objective:** To gain a comprehensive understanding of the anatomy and embryology of the human body.

### **Instructions:**

- 1. Research and write a detailed report on the anatomy and embryology of the human body, including the musculoskeletal, cardiovascular, respiratory, gastrointestinal, renal, endocrine, and central nervous systems.
- 2. Discuss the various stages of embryonic development, including fertilization, implantation, and organogenesis.
- 3. Analyze the structure and function of each system, including the role of each system in maintaining homeostasis.
- 4. Evaluate the impact of anatomical variations on the function of each system, including the role of physical activity and exercise.
- 5. Provide recommendations for optimizing the health and function of each system, including strategies for promoting healthy lifestyle habits.

#### **Assignments-3**

**Topic Title:** Functional Anatomy and Physiology Related to Nerve, Cardiovascular, Respiratory, Gastrointestinal, Renal, Endocrine, CNS, Motor System

**Objective:** To gain a comprehensive understanding of the functional anatomy and physiology of the human body.

#### **Instructions:**

- 1. Research and write a detailed report on the functional anatomy and physiology of the human body, including the musculoskeletal, cardiovascular, respiratory, gastrointestinal, renal, endocrine, and central nervous systems.
- 2. Discuss the structure and function of each system, including the role of each system in maintaining homeostasis.
- 3. Analyze the factors that influence the function of each system, including genetic, environmental, and lifestyle factors.
- 4. Evaluate the impact of anatomical variations on the function of each system, including the role of physical activity and exercise.
- 5. Provide recommendations for optimizing the health and function of each system, including strategies for promoting healthy lifestyle habits.

### **Submission Guidelines:**

- 6. The report should be typed and double-spaced, with 12-point font and 1-inch margins.
- 7. The report should be between 10-15 pages in length, excluding references and appendices.
- 8. All sources should be properly cited using Vancouver format.
- 9. The report should be submitted electronically in PDF format.